

# Regional rivers water quality monitoring programme data report 2021

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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 26<sup>th</sup> since the implementation of the regional rivers monitoring programme (RERIMP) in 1993<sup>1</sup>. A major redesign of the programme was implemented in 2018 to incorporate 10 new sites - from the Healthy Rivers Plan Change I. The RERIMP report series remain the same.

This report follows the format of the previous data report (Salu 2021). Copies of reports as described in the list of references (page 45) can be obtained by contacting Waikato Regional Council (the Library) on 0800 800 401 or 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 110 locations across the Waikato region, and includes:

- year 2021 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 2021. 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

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

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

<sup>1</sup>Refer to Appendix I for description of guideline and standards values used. These guidelines and standards are also defined on the Waikato Regional Council Internet site [www.waikatoregion.govt.nz](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 and ten sites were sampled monthly by Waikato Regional Council. A further three 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. Sampling locations within each water quality zone are shown on Table 2.

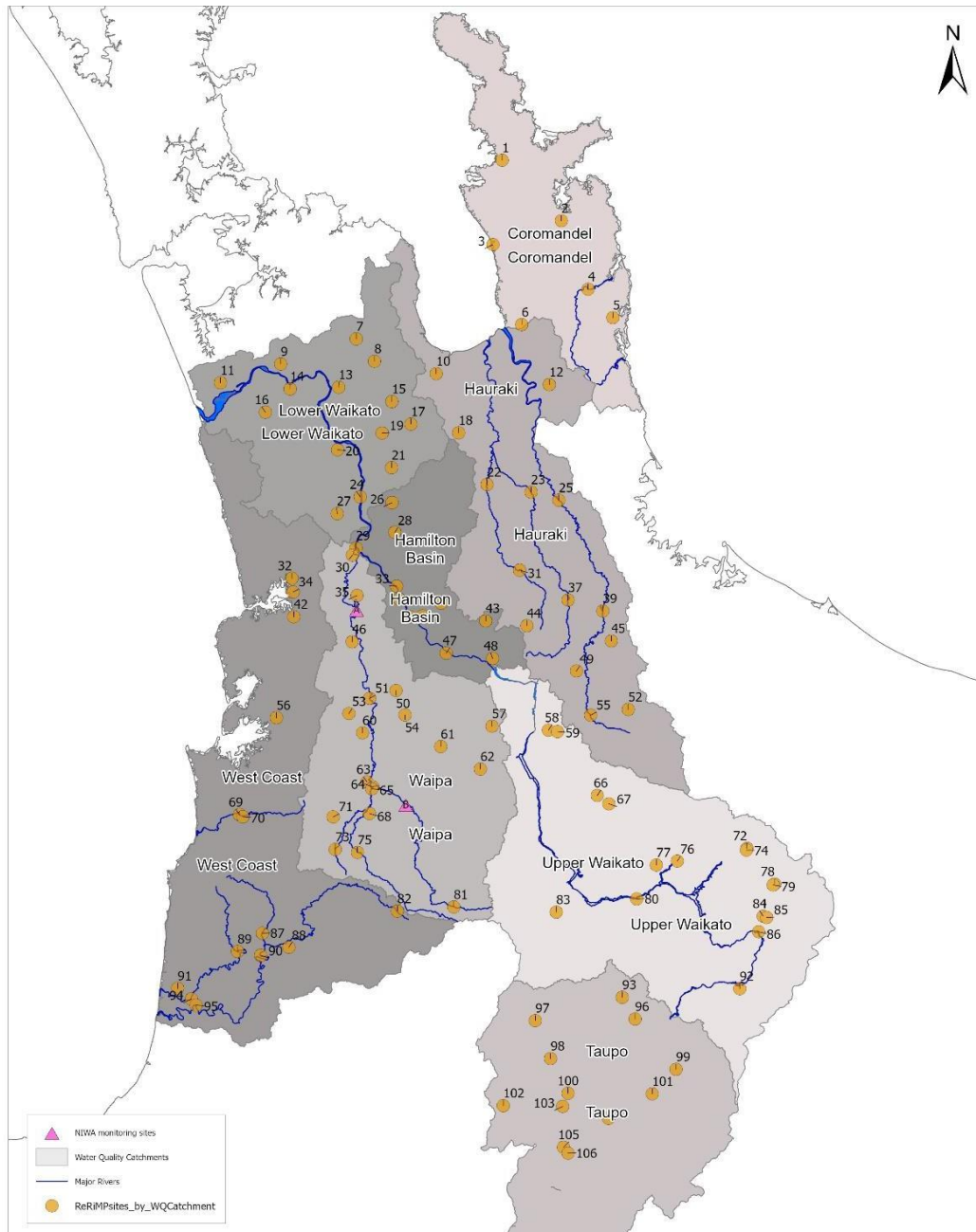


**Table 2: Waikato Regional Council's sampling locations**

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

Map No.	Location name	Location number	Location coordinate
<b>Tributaries to the lower Waikato River</b>			
18	Waerenga Stm at Taniwha Rd	1098-1	1802756, 5860005
46	Waitawhiriwhiri Stm at Edgecumbe Street	1236-2	1799902, 5816915
9	Whakapipi Stm at SH22 Bridge	1282-8	1770704, 5874826
87	Whakauru Stm at U/S SH1 Bridge	1287-7	1851510, 5766456
13	Whangamarino River at Island Block Rd	1293-7	1784968, 5869103
16	Whangamarino River at Jefferies Rd Bridge	1293-9	1798066, 5865561
26	Whangape Stm at Rangiriri-Glen Murray Rd	1302-1	1784703, 5853683
64	Karapiro Stm at Hickey Rd Bridge	230-5	1822883, 5802300
42	Kirikirihoa Stm at Tauhara Drive	253-4	1799248, 5820070
36	Komakorau Stm at Henry Rd	258-4	1798800, 5833361
76	Little Waipa Stm at Arapuni – Putaruru Rd	335-1	1836614, 5784613
35	Awaroa Stm (Rotowaro) at Sansons Br–Rotowaro-Huntly	39-11	1784661, 5837950
53	Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	398-1	1802506, 5812573
86	Mangamingi Stm (Tokoroa) at Paraonui Rd Bridge	407-1	1848650, 5768522
52	Mangaone Stm at Annebrooke Rd Bridge	417-7	1805661, 5812778
11	Awaroa River (Waiuku) at Otua Rd Bridge opp Moseley Rd	41-9	1755860, 5870203
49	Mangaonua Stm at Hoeka Rd	421-10	1810244, 5815925
57	Mangaonua Stm (a.k.a Waitakaruru Stm) at Te Miro Rd	421-16	1821181, 5811525
8	Mangatangi River at SH2 Maramarua	453-6	1793779, 5875482
7	Mangatawhiri River at Lyons Rd at Buckingham Bridge	459-6	1789293, 5881001
34	Mangawara Stm at Rutherford Rd Bridge	481-7	1798115, 5840673
62	Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	488-1	1811449, 5803595
27	Matahuru Stm at Waiterimu Rd Br	516-5	1798000, 5849274
15	Ohaeroa Stm at SH22 Bridge	612-9	1773012, 5868668
17	Opuatia Stm at Ponganui Rd	665-5	1766922, 5862941
77	Pokaiwhenua Stm at Arapuni-Putaruru Rd	786-2	1838866, 5784259
32	Lake Waahi Outlet at Te Ohaaki Bridge	1097-1*	1790273, 5842096
21	Northern Outlet Canal at Downstream of Control Gate	3021-3*	1795678, 5857803
<b>West coast</b>			
41	Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	1167-4	1773441, 5822030
54	Waitetuna River at Te Uku-Waingaro Rd	1247-2	1773923, 5812566
114	Awakino River at Gribbon Rd	33-6	1760059, 5730104
120	Awakino River at SH3 Awakau Rd Junction	33-9	1748705, 5718389
116	Manganui River at Off Manganui Rd	410-4	1745321, 5721017
112	Mangaotaki River at SH3 Bridge	428-3	1766193, 5734587
90	Marokopa River at Speedies Rd (Off Te Anga Rd)	513-3	1760521, 5763807
121	Mokau River at Awakau Rd	556-2	1749850, 5716869
107	Mokau River at Mangaokewa Rd (Off SH30)	556-5	1799420, 5740045
115	Mokau River at Totoro Rd Recorder	556-9	1765756, 5729127
113	Mokauiti Stm at Three Way Point – Aria	557-5	1772711, 5731165
43	Ohautira River at Waingaro - Te Uku Rd	616-1	1773746, 5818631
74	Oparau River at Langdon Rd (Off Okupata Rd)	658-1	1769651, 5787687
91	Tawarau River at Off Speedies Rd	976-1	1761387, 5763275
<b>Inflows to Lake Taupo</b>			
135	Tokaanu Stm at Off SH41 Turangi	1045-3	1841470, 5680399
123	Waihaha River at SH32	1106-4	1833389, 5713044
125	Waitahanui River at Blake Rd	1226-1	1868051, 5701057
119	Whangamata Stm (Kinloch) at Whangamata Rd	1300-1	1854803, 5718799
124	Whanganui Stream at Lakeside Lake Taupo	1301-1	1837143, 5703708
128	Whareroa Stream at Lakeside Lake Taupo	1318-4	1841456, 5695161
134	Tokaanu Power Station Tailrace Canal at SH41 Bridge	1491-1	1840329, 5681866
129	Hinemaiaia River at SH1	171-5	1862185, 5695020
130	Kuratau River at SH41 Moerangi	282-4	1825502, 5692096
131	Kuratau River at Te Rae Street	282-5	1840133, 5691927
122	Mapara Stm at Off Mapara Rd (Whakaipo Reserve)	504-2	1857975, 5713452
132	Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	971-5	1851416, 5688991

\*New site, no 5-year median value.



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

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

Created by: Andrew Hoffmann  
 Date: 9/06/2020  
 Version: 2  
 File: REQ158119\_

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**Figure 1: Monitoring locations**

## 2.2 Sample collection

Sample collection occurs monthly. Due to a Covid 19 lockdown, river and stream sampling was suspended for up to three months in 2021. The 110 locations sampled by Waikato Regional Council staff were divided between 9 sampling runs up to November 2020. From December 2020 twelve sites in the Taupo catchment were transferred to Tūwharetoa Māori Trust board (TMTB), under Waikato Regional Councils section 33 contract agreement with TMTB. The runs are sampled in the same order each month, and by the same group of field staff. Sampling is assigned to either the first, 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 weeks 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 ArcGIS Pro and interpolate points tool. To present the spatial contour plots the spatial interpolation procedure was used to estimate the variable at unsampled locations, using weighted sums of the variable at neighbouring sample points. The procedure is designed to minimize the variance of the estimation errors. In some cases, artificial sites were used at points downstream of lowland sample sites to show a catchment flow-through effect.

## 2.5 Reports

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

The data contained in these regional rivers reports is updated to the LAWA and 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> and [Land, Air, Water Aotearoa \(LAWA\) - River 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 2021 and provides the spatial contour plots using water quality data from four parameters, based on median values for the last five years. Summaries of these additional tests are included in this report. Section 3.2 compares the results with water quality guidelines and standards for compliance.

## 3.1 Regional rivers monitoring programme

### 3.1.1 Summary statistics

Table 3: Sample statistics for 2021

Location	Absorbance (340nm) (/cm)							17-21 median
	Count	Mean	Median	Min	Max	IQR	Skew	
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.018	0.018	0.010	0.025	0.005	0.03	0.017
Kauaeranga River at Smiths Cableway/Recorder	10	0.015	0.014	0.006	0.026	0.011	0.34	0.014
Ohinemuri River at Karangahake	10	0.017	0.016	0.009	0.026	0.009	0.46	-
Ohinemuri River at Queens Head	10	0.017	0.016	0.008	0.030	0.011	0.67	0.014
Ohinemuri River at SH25 Br	10	0.014	0.014	0.007	0.018	0.004	-0.66	0.012
Tairua River at Morrisons Br Hikuai	10	0.016	0.016	0.010	0.026	0.005	0.97	0.015
Tapu River at Tapu-Coroglen Rd	10	0.011	0.010	0.006	0.024	0.003	2.05	0.010
Waiau River at E309 Rd Ford	10	0.020	0.018	0.012	0.038	0.008	1.28	0.017
Waitekauri River at U/S Ohinemuri Conflu	10	0.012	0.012	0.007	0.016	0.004	-0.33	0.011
Waiwawa River at SH25 Coroglen	10	0.025	0.019	0.010	0.060	0.018	1.38	0.019
Wharekawa River at SH25	10	0.019	0.018	0.012	0.028	0.007	0.63	0.018
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.047	0.023	0.018	0.128	0.060	1.28	0.019
Oraka Stm at Lake Rd	11	0.019	0.013	0.009	0.042	0.020	1.14	0.013
Piako River at Kiwitahi	10	0.054	0.048	0.024	0.100	0.035	0.89	0.046
Piako River at Paeroa-Tahuna Rd Br	10	0.075	0.065	0.050	0.109	0.036	0.62	0.078
Piakonui Stm at Piakonui Rd	10	0.040	0.038	0.024	0.065	0.012	0.85	0.032
Waihou River at Okauia	10	0.014	0.011	0.007	0.029	0.009	1.08	0.013
Waihou River at Te Aroha	10	0.019	0.017	0.009	0.034	0.011	0.55	0.015
Waihou River at Whites Rd	11	0.006	0.001	0.001	0.056	0.000	3.31	0.001
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.063	0.048	0.037	0.137	0.036	1.60	0.040
Waiomou Stm at Matamata-Tauranga Rd	10	0.022	0.021	0.013	0.032	0.016	0.09	0.019
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.069	0.059	0.037	0.149	0.046	1.41	0.064
Waitoa River at Landsdowne Rd Br	10	0.049	0.042	0.023	0.081	0.032	0.50	0.039
Waitoa River at Mellon Rd Recorder	10	0.051	0.052	0.037	0.066	0.010	0.16	0.044
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	0.053	0.051	0.016	0.122	0.040	1.09	0.038
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.023	0.019	0.014	0.040	0.008	1.39	0.019
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.068	0.071	0.043	0.108	0.031	0.45	0.047
Kirikiri Stm at Tauhara Dr	11	0.065	0.067	0.052	0.074	0.011	-0.55	0.052
Komakorau Stm at Henry Rd	11	0.117	0.125	0.073	0.162	0.043	-0.30	0.127
Little Waipa Stm at Arapuni - Putaruru Rd	10	0.020	0.013	0.005	0.061	0.023	1.59	0.011
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	0.257	0.161	0.100	0.660	0.326	1.21	0.240
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	0.030	0.028	0.019	0.044	0.012	0.40	0.026
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	0.061	0.058	0.037	0.105	0.020	1.21	0.048
Mangaonua Stm at Hoeka Rd	10	0.054	0.054	0.036	0.072	0.016	0.15	0.041
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.031	0.032	0.020	0.042	0.006	-0.03	0.029
Mangatangi River at SH2 Maramarua	9	0.049	0.040	0.027	0.113	0.026	1.88	0.045
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.035	0.024	0.017	0.088	0.028	1.68	0.022
Mangawara Stm at Rutherford Rd Br	11	0.119	0.103	0.076	0.168	0.081	0.14	0.137
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	0.147	0.107	0.081	0.310	0.060	1.48	0.122
Matahuru Stm at Waiterimu Road Below Confluence	11	0.094	0.075	0.052	0.139	0.062	0.22	0.084
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	0.046	0.049	0.031	0.068	0.014	0.57	-
Ohaeroa Stm at SH22 Br	9	0.049	0.039	0.025	0.111	0.035	1.47	0.027
Opuatia Stm at Ponganui Rd	9	0.047	0.036	0.028	0.084	0.038	0.87	0.028
Pokaiwhenua Stm at Puketurua	11	0.023	0.016	0.011	0.056	0.019	1.42	0.016
Waahi Stm at Te Ohaki Rd	11	0.057	0.048	0.042	0.090	0.023	0.96	-
Waerenga Stm at Taniwha Rd	9	0.047	0.036	0.025	0.087	0.040	0.88	0.027
Waitawhiriwhiri Stm at Edgecumbe Street	11	0.129	0.117	0.080	0.250	0.044	1.74	0.114
Whakapipi Stm at SH22 Br	9	0.046	0.040	0.032	0.086	0.016	1.84	0.032
Whakauru Stm at U/S SH1 Br	11	0.037	0.029	0.017	0.081	0.025	1.25	0.026
Whangamarino River at Island Block Rd	9	0.126	0.092	0.058	0.260	0.115	0.80	0.126
Whangamarino River at Jefferies Rd Br	9	0.059	0.052	0.040	0.106	0.020	1.85	0.044
Whangape Stm at Rangiriri-Glen Murray Rd	9	0.076	0.070	0.047	0.107	0.021	0.13	0.069

IQR = Inter quartile range - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	0.038	0.039	0.019	0.057	0.019	-0.18	-
Kaniwhaniwha Stm at Wright Rd	11	0.032	0.032	0.015	0.059	0.014	0.70	0.026
Mangaohoi Stm at South Branch Maru Rd	11	0.007	0.007	0.005	0.011	0.004	0.57	0.007
Mangaokewa Stm at Lawrence Street Br	10	0.046	0.043	0.032	0.069	0.026	0.63	0.035
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	0.088	0.074	0.058	0.153	0.041	1.28	0.084
Mangapu River at Otorohanga	11	0.039	0.034	0.025	0.057	0.020	0.71	0.030
Mangarama at Gadsby Rd	10	0.055	0.054	0.018	0.106	0.042	0.60	-
Mangarapa Stm at Otorohanga Rd	11	0.036	0.033	0.023	0.076	0.014	2.12	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.020	0.020	0.013	0.027	0.003	0.04	0.020
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.019	0.011	0.006	0.055	0.017	1.54	0.008
Moakururu Stm at Warratah Farm Bridge	11	0.026	0.020	0.015	0.070	0.015	2.45	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.164	0.151	0.068	0.330	0.134	0.73	0.173
Puniu River at Bartons Corner Rd Br	11	0.029	0.028	0.020	0.044	0.006	1.00	0.028
Puniu River at Wharepapa Rd Bridge	11	0.022	0.023	0.003	0.035	0.005	-1.23	-
Waipa River at Mangaokewa Rd	10	0.072	0.062	0.039	0.144	0.027	1.69	0.049
Waipa River at Ngaruawahia Br	11	0.041	0.042	0.029	0.060	0.017	0.50	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.036	0.033	0.024	0.050	0.012	0.48	0.029
Waipa River at SH3 Otorohanga	11	0.036	0.028	0.023	0.078	0.019	1.77	0.027
Waitomo Stm at SH31 Otorohanga	11	0.033	0.029	0.020	0.059	0.021	0.96	0.020
Waitomo Stm at Tumutumu Rd	11	0.025	0.019	0.011	0.073	0.019	2.01	0.013
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	0.037	0.031	0.016	0.100	0.027	1.74	0.026
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.043	0.033	0.021	0.121	0.023	2.14	0.029
Mangakara Stm (Reporoa) at SH5	11	0.027	0.022	0.017	0.053	0.016	1.41	0.019
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.011	0.011	0.006	0.017	0.006	0.19	0.012
Otamakokore Stm at Hossack Rd	11	0.057	0.040	0.020	0.135	0.068	1.12	0.038
Pueto Stm at Broadlands Rd Br	11	0.012	0.010	0.008	0.024	0.002	2.54	0.010
Tahunaatara Stm at Ohakuri Rd	11	0.048	0.032	0.022	0.107	0.047	1.15	0.034
Torepatutahi Stm at Vaile Rd Br	11	0.014	0.012	0.009	0.023	0.005	1.14	0.013
Waiotapu Stm at Campbell Rd Br	11	0.007	0.005	0.004	0.021	0.004	2.31	0.006
Waiotapu Stm at Homestead Rd Br	11	0.027	0.024	0.020	0.050	0.009	2.10	0.025
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	0.023	0.015	0.009	0.064	0.026	1.43	0.013
Whirinaki Stm at Corbett Rd	11	0.013	0.003	0.001	0.083	0.006	2.79	0.004
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.019	0.017	0.005	0.051	0.017	1.57	0.007
Awakino River at SH3 Awakau Rd Junction	10	0.026	0.019	0.009	0.067	0.018	1.79	0.013
Manganui River at Off Manganui Rd	10	0.016	0.013	0.008	0.036	0.008	1.82	0.009
Mangaotaki River at SH3 Br	10	0.024	0.020	0.013	0.057	0.010	2.33	0.016
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.027	0.019	0.015	0.061	0.021	1.40	0.016
Mokau River at Awakau Rd	10	0.051	0.044	0.031	0.097	0.023	1.40	0.033
Mokau River at Mangaokewa Rd (Off SH30)	10	0.061	0.052	0.041	0.107	0.026	1.30	0.046
Mokau River at Totoro Rd Recorder	10	0.042	0.039	0.021	0.073	0.023	0.81	0.031
Mokauiti Stm at Three Way Point - Aria	10	0.073	0.071	0.039	0.116	0.035	0.38	0.054
Ohautira Stm at Waingaro Te Uku Rd	11	0.032	0.026	0.015	0.065	0.021	1.17	0.022
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.034	0.023	0.015	0.088	0.032	1.43	0.018
Tawarau River at Off Speedies Rd	11	0.025	0.019	0.014	0.062	0.018	1.84	0.016
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.046	0.047	0.023	0.079	0.017	0.44	0.037
Waitetuna River at Te Uku-Waingaro Rd	11	0.036	0.036	0.018	0.064	0.018	0.73	0.028
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.014	0.013	0.011	0.021	0.004	1.39	0.013
Kuratau River at SH41 Moerangi	11	0.022	0.021	0.016	0.032	0.005	1.16	0.020
Kuratau River at Te Rae Street T10	11	0.022	0.023	0.006	0.036	0.009	0.12	0.020
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.047	0.031	0.024	0.152	0.023	2.71	0.037
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.009	0.007	0.006	0.018	0.003	1.76	0.007
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.006	0.006	0.004	0.009	0.002	0.91	0.006
Tokaanu Stm at Off SH41 Turangi	11	0.001	0.001	0.001	0.004	0.000	2.81	0.001
Waihaha River at SH32	11	0.011	0.010	0.007	0.017	0.004	1.16	0.009
Waitahanui River at Blake Rd	11	0.004	0.003	0.002	0.015	0.003	2.52	0.003
Whangamata Stm (Kinloch) at Whangamata Rd	11	0.007	0.005	0.003	0.024	0.004	2.79	0.008
Whanganui Stm at Lakeside Lake Taupo T8	10	0.017	0.017	0.003	0.034	0.004	0.70	0.016
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.021	0.019	0.015	0.033	0.005	1.44	0.018

IQR = Inter quartile range - = five-year record not available

Absorbance (440nm) (/cm)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.004	0.004	0.001	0.006	0.002	-0.61	0.003
Kauaeranga River at Smiths Cableway/Recorder	10	0.003	0.004	0.001	0.005	0.003	-0.26	0.003
Ohinemuri River at Karangahake	10	0.003	0.003	0.001	0.005	0.001	-0.44	-
Ohinemuri River at Queens Head	10	0.003	0.003	0.001	0.005	0.003	0.04	0.003
Ohinemuri River at SH25 Br	10	0.003	0.003	0.001	0.004	0.001	-0.60	0.002
Tairua River at Morrisons Br Hikuai	10	0.003	0.003	0.001	0.006	0.002	-0.06	0.004
Tapu River at Tapu-Coroglen Rd	10	0.002	0.002	0.001	0.005	0.002	1.33	0.002
Waiau River at E309 Rd Ford	10	0.005	0.005	0.001	0.008	0.003	0.01	0.004
Waitekauri River at U/S Ohinemuri Conflu	10	0.003	0.003	0.001	0.004	0.003	-0.57	0.002
Waiwawa River at SH25 Coroglen	10	0.005	0.004	0.001	0.012	0.004	0.88	0.004
Wharekawa River at SH25	10	0.004	0.004	0.001	0.006	0.002	-0.44	0.004
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.010	0.005	0.004	0.027	0.014	1.13	0.005
Oraka Stm at Lake Rd	11	0.004	0.003	0.001	0.008	0.004	0.96	0.003
Piako River at Kiwitahi	10	0.009	0.008	0.004	0.017	0.008	0.74	0.008
Piako River at Paeroa-Tahuna Rd Br	10	0.013	0.011	0.009	0.018	0.007	0.66	0.014
Piakonui Stm at Piakonui Rd	10	0.008	0.008	0.005	0.014	0.003	1.19	0.006
Waihou River at Okauia	10	0.003	0.003	0.001	0.006	0.003	0.56	0.003
Waihou River at Te Aroha	10	0.004	0.003	0.001	0.007	0.003	0.41	0.003
Waihou River at Whites Rd	11	0.002	0.001	0.001	0.014	0.000	3.32	0.001
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.012	0.009	0.007	0.028	0.007	1.66	0.008
Waiomou Stm at Matamata-Tauranga Rd	10	0.005	0.004	0.003	0.007	0.003	0.37	0.004
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.012	0.010	0.006	0.029	0.009	1.53	0.012
Waitoa River at Landsdowne Rd Br	10	0.009	0.007	0.004	0.016	0.006	0.75	0.007
Waitoa River at Mellon Rd Recorder	10	0.009	0.010	0.007	0.011	0.002	-0.29	0.007
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	9	0.009	0.009	0.001	0.021	0.008	0.75	0.006
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.003	0.003	0.001	0.007	0.002	0.91	0.003
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.012	0.012	0.007	0.019	0.005	0.44	0.009
Kirikiriroa Stm at Tauhara Dr	11	0.010	0.011	0.008	0.012	0.003	-0.72	0.008
Komakorau Stm at Henry Rd	11	0.017	0.018	0.011	0.023	0.006	-0.28	0.019
Little Waipa Stm at Arapuni - Putaruru Rd	10	0.004	0.003	0.001	0.014	0.005	1.71	0.002
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	10	0.041	0.027	0.017	0.097	0.046	1.06	0.040
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	0.006	0.006	0.004	0.009	0.003	0.15	0.006
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	0.011	0.010	0.006	0.018	0.004	0.86	0.009
Mangaonua Stm at Hoeka Rd	10	0.010	0.010	0.006	0.014	0.003	0.33	0.007
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.006	0.007	0.004	0.008	0.002	-0.33	0.006
Mangatangi River at SH2 Maramarua	9	0.009	0.008	0.005	0.022	0.005	1.86	0.008
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.007	0.004	0.004	0.019	0.007	1.62	0.004
Mangawara Stm at Rutherford Rd Br	11	0.019	0.018	0.013	0.026	0.011	0.23	0.023
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	0.023	0.020	0.012	0.046	0.010	1.37	0.019
Matahuru Stm at Waiterimu Road Below Confluence	11	0.016	0.014	0.010	0.025	0.010	0.33	0.014
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	0.012	0.012	0.008	0.017	0.004	0.21	-
Ohaeroa Stm at SH22 Br	9	0.010	0.007	0.005	0.023	0.007	1.61	0.005
Opuatia Stm at Ponganui Rd	9	0.009	0.006	0.005	0.015	0.008	0.71	0.005
Pokaiwhenua Stm at Puketurua	11	0.005	0.004	0.002	0.012	0.004	1.23	0.004
Waahi Stm at Te Ohaki Rd	11	0.010	0.008	0.006	0.017	0.004	1.25	-
Waerenga Stm at Taniwha Rd	9	0.010	0.008	0.005	0.018	0.009	0.79	0.006
Waitawhiriwhiri Stm at Edgecumbe Street	11	0.020	0.018	0.012	0.040	0.006	1.85	0.019
Whakapipi Stm at SH22 Br	9	0.009	0.007	0.006	0.017	0.004	1.66	0.006
Whakauru Stm at U/S SH1 Br	11	0.008	0.007	0.004	0.021	0.006	1.76	0.006
Whangamarino River at Island Block Rd	9	0.025	0.021	0.011	0.049	0.025	0.61	0.024
Whangamarino River at Jefferies Rd Br	9	0.011	0.010	0.007	0.019	0.004	1.68	0.008
Whangape Stm at Rangiriri-Glen Murray Rd	9	0.014	0.014	0.009	0.021	0.005	0.70	0.012

IQR = Inter quartile range      - = five-year record not available



Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	0.007	0.007	0.004	0.012	0.005	0.21	-
Kaniwhaniwha Stm at Wright Rd	11	0.006	0.006	0.002	0.012	0.003	0.53	0.005
Mangaohoi Stm at South Branch Maru Rd	11	0.001	0.001	0.001	0.003	0.001	1.80	0.001
Mangaokewa Stm at Lawrence Street Br	10	0.009	0.009	0.006	0.014	0.005	0.61	0.007
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	0.015	0.012	0.010	0.025	0.008	1.08	0.015
Mangapu River at Otorohanga	11	0.007	0.006	0.004	0.011	0.003	0.69	0.006
Mangarama at Gadsby Rd	10	0.009	0.009	0.003	0.016	0.007	0.25	-
Mangarapa Stm at Otorohanga Rd	11	0.007	0.005	0.004	0.015	0.004	1.55	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.004	0.004	0.002	0.005	0.002	-0.74	0.004
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.004	0.003	0.001	0.011	0.004	1.44	0.001
Moakurua Stm at Warratah Farm Bridge	11	0.005	0.004	0.001	0.014	0.004	1.93	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.026	0.026	0.010	0.051	0.024	0.55	0.028
Puniu River at Bartons Corner Rd Br	11	0.006	0.005	0.003	0.009	0.001	0.47	0.005
Puniu River at Wharepapa Rd Bridge	11	0.004	0.005	0.001	0.007	0.001	-0.76	-
Waipa River at Mangaokewa Rd	10	0.014	0.012	0.008	0.028	0.005	1.77	0.010
Waipa River at Ngaruawahia Br	11	0.008	0.008	0.005	0.012	0.003	0.56	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.007	0.006	0.004	0.010	0.004	0.31	0.006
Waipa River at SH3 Otorohanga	11	0.007	0.006	0.004	0.016	0.004	1.84	0.005
Waitomo Stm at SH31 Otorohanga	11	0.006	0.006	0.004	0.012	0.004	1.08	0.004
Waitomo Stm at Tumutumu Rd	11	0.005	0.003	0.001	0.015	0.005	1.77	0.003
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	0.007	0.006	0.003	0.020	0.005	1.79	0.005
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.009	0.006	0.004	0.025	0.004	2.35	0.006
Mangakara Stm (Reporoa) at SH5	11	0.006	0.004	0.004	0.012	0.003	1.66	0.004
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.002	0.002	0.001	0.003	0.002	-0.21	0.003
Otamakokore Stm at Hossack Rd	11	0.013	0.008	0.005	0.029	0.014	1.17	0.008
Pueto Stm at Broadlands Rd Br	11	0.002	0.001	0.001	0.005	0.002	1.65	0.001
Tahunaatara Stm at Ohakuri Rd	11	0.010	0.007	0.004	0.022	0.010	1.15	0.007
Torepatutahi Stm at Vaile Rd Br	11	0.002	0.002	0.001	0.005	0.002	0.63	0.003
Waiotapu Stm at Campbell Rd Br	11	0.001	0.001	0.001	0.003	0.000	3.32	0.001
Waiotapu Stm at Homestead Rd Br	11	0.005	0.005	0.003	0.009	0.002	1.49	0.004
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	0.005	0.003	0.001	0.014	0.006	1.29	0.003
Whirinaki Stm at Corbett Rd	11	0.003	0.001	0.001	0.019	0.000	2.67	0.001
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.004	0.003	0.001	0.010	0.003	1.43	0.001
Awakino River at SH3 Awakau Rd Junction	10	0.005	0.004	0.002	0.014	0.004	1.78	0.003
Manganui River at Off Manganui Rd	10	0.003	0.003	0.001	0.008	0.003	1.41	0.001
Mangaotaki River at SH3 Br	10	0.005	0.004	0.003	0.012	0.002	2.41	0.003
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.006	0.004	0.003	0.013	0.005	1.20	0.004
Mokau River at Awakau Rd	10	0.010	0.009	0.006	0.020	0.004	1.52	0.007
Mokau River at Mangaokewa Rd (Off SH30)	10	0.012	0.011	0.008	0.022	0.004	1.45	0.009
Mokau River at Totoro Rd Recorder	10	0.007	0.007	0.004	0.011	0.005	0.25	0.006
Mokauiti Stm at Three Way Point - Aria	10	0.013	0.013	0.007	0.022	0.007	0.45	0.010
Ohautira Stm at Waingaro Te Uku Rd	11	0.007	0.005	0.003	0.014	0.006	1.06	0.005
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.007	0.005	0.003	0.019	0.008	1.35	0.004
Tawarau River at Off Speedies Rd	11	0.005	0.004	0.002	0.013	0.004	1.81	0.003
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.009	0.008	0.004	0.016	0.004	0.67	0.007
Waitetuna River at Te Uku-Waingaro Rd	11	0.007	0.006	0.004	0.013	0.004	0.95	0.006
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.003	0.003	0.002	0.005	0.001	1.51	0.003
Kuratau River at SH41 Moerangi	11	0.004	0.004	0.003	0.006	0.001	1.08	0.004
Kuratau River at Te Rae Street T10	11	0.004	0.004	0.001	0.007	0.002	0.21	0.004
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.010	0.007	0.005	0.033	0.005	2.79	0.007
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.001	0.001	0.001	0.004	0.000	2.13	0.001
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.001	0.001	0.001	0.001	0.000	0.00	0.001
Tokaanu Stm at Off SH41 Turangi	11	0.001	0.001	0.001	0.002	0.000	3.32	0.001
Waihaha River at SH32	11	0.002	0.002	0.001	0.004	0.001	1.08	0.002
Waitahanui River at Blake Rd	11	0.001	0.001	0.001	0.003	0.000	3.32	0.001
Whangamata Stm (Kinloch) at Whangamata Rd	11	0.001	0.001	0.001	0.005	0.000	3.00	0.001
Whanganui Stm at Lakeside Lake Taupo T8	10	0.004	0.004	0.001	0.008	0.001	1.47	0.004
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.004	0.004	0.003	0.007	0.002	1.16	0.004

IQR = Inter quartile range - = five-year record not available

Black Disk (m)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	3.9	4.0	2.1	5.6	1.2	-0.17	3.3
Kauaeranga River at Smiths Cableway/Recorder	10	4.8	5.1	1.6	7.1	1.6	-0.61	4.4
Ohinemuri River at Karangahake	10	3.6	3.3	1.9	6.8	1.0	1.62	-
Ohinemuri River at Queens Head	10	4.7	4.6	3.0	6.0	1.0	-0.52	3.8
Ohinemuri River at SH25 Br	10	4.0	4.3	1.9	5.2	1.0	-1.17	3.7
Tairua River at Morrisons Br Hikuai	-	-	-	-	-	-	-	-
Tapu River at Tapu-Coroglen Rd	10	5.5	5.9	1.8	8.0	3.5	-0.68	4.5
Waiau River at E309 Rd Ford	10	2.4	2.7	0.6	3.6	1.2	-1.07	2.7
Waitekauri River at U/S Ohinemuri Conflu	10	3.7	3.8	1.7	5.4	1.3	-0.42	3.9
Waiwawa River at SH25 Coroglen	10	3.3	3.4	1.0	5.0	1.1	-0.91	3.1
Wharekawa River at SH25	9	3.8	3.6	1.6	5.4	1.6	-0.39	2.9
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.8	0.8	0.3	1.4	0.8	-0.10	0.9
Oraka Stm at Lake Rd	11	0.9	1.0	0.2	1.7	0.8	-0.17	0.9
Piako River at Kiwitahi	10	3.1	2.8	1.3	5.7	1.8	0.53	1.7
Piako River at Paeroa-Tahuna Rd Br	10	1.1	1.0	0.3	2.0	0.7	0.28	0.9
Piakonui Stm at Piakonui Rd	10	1.6	1.7	0.9	2.1	0.4	-0.81	1.3
Waihou River at Okauia	10	1.4	1.5	0.4	2.1	0.8	-0.42	1.1
Waihou River at Te Aroha	10	1.5	1.5	0.4	2.6	1.0	0.00	0.9
Waihou River at Whites Rd	11	4.7	5.2	0.0	5.7	1.0	-2.73	5.0
Waiohotu Stm at Waiohotu Rd (Off SH5)	-	-	-	-	-	-	-	-
Waiomou Stm at Matamata-Tauranga Rd	10	1.4	1.3	0.8	2.2	0.5	0.59	1.2
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	1.8	1.6	0.7	2.9	1.6	0.14	1.1
Waitoa River at Landsdowne Rd Br	10	3.1	3.1	0.5	7.0	1.1	0.94	1.4
Waitoa River at Mellon Rd Recorder	10	1.6	1.7	0.6	2.1	0.5	-1.42	0.8
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	9	0.7	0.4	0.2	2.5	0.5	2.50	0.4
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	2.0	1.7	1.4	3.6	0.9	1.38	1.2
Karapiro Stm at Hickey Rd Bridge - Cambridge	9	1.0	1.0	0.6	1.7	0.5	0.82	0.9
Kirikirihoa Stm at Tauhara Dr	11	0.5	0.6	0.3	0.8	0.3	0.18	0.4
Komakorau Stm at Henry Rd	11	0.2	0.2	0.1	0.5	0.1	1.59	0.1
Little Waipa Stm at Arapuni - Putaruru Rd	10	1.6	1.7	0.1	3.1	1.0	-0.08	1.8
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	0.5	0.5	0.3	0.7	0.2	-0.25	0.5
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	0.8	0.9	0.1	1.1	0.4	-1.40	0.8
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	0.9	0.9	0.7	1.2	0.2	0.67	0.8
Mangaonua Stm at Hoeka Rd	10	1.1	1.1	0.5	1.6	0.3	-0.78	0.8
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	1.4	1.4	0.8	2.1	0.7	0.11	1.2
Mangatangi River at SH2 Maramarua	9	0.7	0.8	0.3	1.3	0.4	0.26	0.4
Mangatawhiri River at Lyons Rd At Buckingham Br	9	2.0	2.5	0.4	3.3	2.5	-0.32	1.7
Mangawara Stm at Rutherford Rd Br	11	0.3	0.3	0.2	0.5	0.1	1.09	0.2
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	0.2	0.2	0.1	0.3	0.1	0.57	0.2
Matahuru Stm at Waiterimu Road Below Confluence	-	-	-	-	-	-	-	-
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	0.1	0.1	0.0	0.2	0.1	-0.37	-
Ohaeroa Stm at SH22 Br	8	0.7	0.7	0.2	1.2	0.8	0.01	0.8
Opuatia Stm at Ponganui Rd	8	0.5	0.5	0.2	1.2	0.6	0.88	0.5
Pokaiwhenua Stm at Puketurua	11	0.8	1.0	0.1	1.3	0.8	-0.84	1.1
Waahi Stm at Te Ohaki Rd	10	0.2	0.2	0.1	0.5	0.2	0.80	-
Waerenga Stm at Taniwha Rd	9	1.0	0.8	0.1	3.0	1.2	1.26	0.7
Waitawhiriwhiri Stm at Edgecumbe Street	11	0.4	0.4	0.2	0.5	0.2	-0.10	0.3
Whakapipi Stm at SH22 Br	9	2.2	1.9	0.2	6.0	2.7	1.03	1.9
Whakauru Stm at U/S SH1 Br	11	0.4	0.5	0.1	0.7	0.2	-0.75	0.5
Whangamarino River at Island Block Rd	9	0.2	0.2	0.1	0.3	0.1	0.18	0.2
Whangamarino River at Jefferies Rd Br	9	0.5	0.3	0.2	0.9	0.5	0.61	0.3
Whangape Stm at Rangiriri-Glen Murray Rd	9	0.2	0.2	0.1	0.3	0.2	-0.16	0.1

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

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	1.0	0.9	0.4	1.8	0.3	0.84	-
Kaniwhaniwha Stm at Wright Rd	8	1.0	1.0	0.5	1.8	0.4	0.90	0.8
Mangaohoi Stm at South Branch Maru Rd	11	1.4	1.4	1.0	1.9	0.5	0.17	1.5
Mangaokewa Stm at Lawrence Street Br	10	1.0	0.9	0.4	1.8	1.0	0.55	0.8
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	1.1	0.8	0.5	2.1	0.9	0.80	0.6
Mangapu River at Otorohanga	11	0.8	0.5	0.3	1.4	0.9	0.25	0.6
Mangarama at Gadsby Rd	-	-	-	-	-	-	-	-
Mangarapa Stm at Otorohanga Rd	11	1.3	0.9	0.2	3.6	1.5	1.15	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	2.0	1.7	1.0	2.8	1.0	0.02	1.5
Mangauika Stm at Te Awamutu Borough W/S Intake	11	3.6	3.4	1.5	5.1	2.3	-0.25	4.3
Moakurua Stm at Warratah Farm Bridge	11	0.8	0.8	0.1	1.9	0.5	0.87	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.5	0.4	0.3	0.9	0.3	1.03	0.5
Puniu River at Bartons Corner Rd Br	11	1.4	1.2	0.7	3.1	0.8	1.45	0.9
Puniu River at Wharepapa Rd Bridge	11	1.5	1.3	0.9	2.5	0.5	1.01	-
Waipa River at Mangaokewa Rd	9	1.9	2.1	0.4	3.3	0.4	-0.55	1.9
Waipa River at Ngaruawahia Br	11	0.7	0.7	0.2	1.0	0.3	-0.94	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.8	0.8	0.3	1.7	0.6	0.65	0.7
Waipa River at SH3 Otorohanga	11	1.2	1.3	0.1	2.2	1.0	-0.31	1.3
Waitomo Stm at SH31 Otorohanga	11	0.7	0.4	0.1	1.6	0.7	0.67	0.5
Waitomo Stm at Tumutumu Rd	11	1.0	1.0	0.1	2.3	1.1	0.56	1.0
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	0.9	1.1	0.1	1.6	0.8	-0.44	1.2
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.9	1.0	0.0	1.2	0.3	-1.96	1.0
Mangakara Stm (Reporoa) at SH5	11	0.6	0.6	0.2	1.0	0.4	-0.43	0.7
Mangakino Stm (Whakamaru) at Sandel Rd	11	2.0	1.9	1.2	2.9	0.8	0.38	1.8
Otamakokore Stm at Hossack Rd	11	1.2	1.3	0.5	1.9	0.7	-0.26	1.2
Pueto Stm at Broadlands Rd Br	11	2.1	2.0	0.8	2.9	1.3	-0.34	1.6
Tahunaatara Stm at Ohakuri Rd	11	1.1	1.2	0.1	2.0	0.9	-0.29	1.2
Torepatutahi Stm at Vaile Rd Br	-	-	-	-	-	-	-	-
Waiotapu Stm at Campbell Rd Br	11	1.3	1.4	0.1	2.2	0.8	-0.39	1.1
Waiotapu Stm at Homestead Rd Br	-	-	-	-	-	-	-	-
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	1.0	1.1	0.1	2.0	1.0	0.03	1.2
Whirinaki Stm at Corbett Rd	-	-	-	-	-	-	-	-
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	1.7	1.6	0.2	4.3	1.6	0.93	2.1
Awakino River at SH3 Awakau Rd Junction	10	1.2	0.9	0.1	3.3	2.0	0.81	1.4
Manganui River at Off Manganui Rd	10	1.1	1.0	0.2	3.1	1.2	0.93	1.2
Mangaotaki River at SH3 Br	10	0.9	0.9	0.2	2.1	0.9	0.67	1.0
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.9	0.7	0.3	1.9	0.7	0.81	1.0
Mokau River at Awakau Rd	10	0.6	0.7	0.2	1.2	0.6	0.08	0.5
Mokau River at Mangaokewa Rd (Off SH30)	9	1.4	1.1	0.6	2.2	1.0	0.35	1.1
Mokau River at Totoro Rd Recorder	9	1.3	1.1	0.2	2.7	2.0	0.44	1.1
Mokauiti Stm at Three Way Point - Aria	10	0.9	0.7	0.3	2.1	0.9	1.11	0.6
Ohautira Stm at Waingaro Te Uku Rd	11	1.1	0.9	0.3	1.7	0.9	0.11	1.0
Oparau River at Langdon Rd (Off Okupata Rd)	11	1.1	0.9	0.3	2.1	1.1	0.22	1.5
Tawarau River at Off Speedies Rd	11	0.9	0.7	0.3	1.8	0.7	0.68	1.2
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	1.0	0.9	0.2	1.7	0.7	0.23	0.9
Waitetuna River at Te Uku-Waingaro Rd	11	1.0	0.9	0.4	1.9	0.8	0.57	0.8
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	2.9	3.1	1.0	4.6	2.6	-0.17	2.4
Kuratau River at SH41 Moerangi	11	3.4	3.8	1.7	4.9	2.1	-0.22	2.8
Kuratau River at Te Rae Street T10	-	-	-	-	-	-	-	-
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	1.7	1.2	0.9	3.9	0.9	1.59	1.2
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	3.6	4.2	0.4	4.9	2.5	-1.03	3.2
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	-	-	-	-	-	-	-	-
Tokaanu Stm at Off SH41 Turangi	-	-	-	-	-	-	-	-
Waihaha River at SH32	11	3.9	4.6	1.5	5.3	2.0	-0.60	3.3
Waitahanui River at Blake Rd	11	3.6	3.8	1.1	4.9	1.9	-0.71	3.0
Whangamata Stm (Kinloch) at Whangamata Rd	-	-	-	-	-	-	-	-
Whanganui Stm at Lakeside Lake Taupo T8	-	-	-	-	-	-	-	-
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	-	-	-	-	-	-	-	-

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

Conductivity at 25 DegC (mS/m)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	8.5	8.6	7.7	9.5	1.1	0.17	8.3
Kauaeranga River at Smiths Cableway/Recorder	10	7.5	7.4	6.2	8.8	1.1	-0.04	7.5
Ohinemuri River at Karangahake	10	24.9	23.5	12.5	40.5	22.4	0.20	-
Ohinemuri River at Queens Head	10	48.2	47.4	17.5	89.0	41.9	0.20	25.0
Ohinemuri River at SH25 Br	10	7.9	8.0	7.4	8.4	0.5	-0.34	7.6
Tairua River at Morrisons Br Hikuai	10	6.0	6.1	5.7	6.4	0.5	-0.10	5.9
Tapu River at Tapu-Coroglen Rd	10	10.7	10.8	9.0	11.7	1.3	-0.76	10.2
Waiau River at E309 Rd Ford	10	10.0	10.1	9.4	10.5	0.8	-0.27	9.7
Waitekauri River at U/S Ohinemuri Conflu	10	12.6	11.2	9.4	17.5	5.1	0.65	11.0
Waiwawa River at SH25 Coroglen	10	6.7	6.8	5.2	7.5	0.7	-1.41	6.6
Wharekawa River at SH25	10	7.6	7.7	6.9	8.2	0.5	-0.33	7.2
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	11.6	12.2	9.4	12.9	2.0	-0.62	11.9
Oraka Stm at Lake Rd	11	17.6	18.7	10.5	21.5	6.5	-0.95	13.7
Piako River at Kiwitahi	10	16.1	15.8	13.8	18.9	1.7	0.43	15.0
Piako River at Paeroa-Tahuna Rd Br	10	23.9	24.5	21.3	25.8	3.3	-0.51	23.0
Piakonui Stm at Piakonui Rd	10	8.5	8.7	6.3	10.7	2.7	-0.04	7.3
Waihou River at Okauia	10	10.1	10.1	9.5	10.8	0.9	0.17	10.7
Waihou River at Te Aroha	10	10.8	10.7	9.6	12.3	1.0	0.71	11.4
Waihou River at Whites Rd	11	8.3	8.4	6.9	8.6	0.1	-3.14	8.5
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	5.3	5.4	4.0	5.9	0.7	-1.46	5.4
Waiomou Stm at Matamata-Tauranga Rd	10	6.8	6.7	6.3	7.8	0.6	1.20	6.9
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	19.7	19.7	14.9	24.0	5.7	-0.15	17.5
Waitoa River at Landsdowne Rd Br	10	17.7	17.6	13.5	21.3	3.2	-0.35	16.6
Waitoa River at Mellon Rd Recorder	10	37.1	35.4	24.6	50.6	15.1	0.04	30.0
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	9	28.6	26.2	21.0	41.3	6.9	1.17	26.2
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	89.2	78.5	54.0	141.8	31.3	0.94	72.4
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	14.1	14.3	11.2	16.3	2.4	-0.41	13.6
Kirikiri Stm at Tauhara Dr	11	18.7	19.6	13.5	22.0	5.5	-0.75	19.9
Komakorau Stm at Henry Rd	11	29.0	27.1	23.0	41.3	8.1	1.24	25.7
Little Waipa Stm at Arapuni - Putaruru Rd	10	10.6	10.7	10.0	11.1	0.3	-0.15	10.9
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	10	20.8	19.2	17.9	28.3	2.0	1.61	19.1
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	12.6	13.5	3.9	15.3	1.7	-2.58	13.7
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	27.3	27.3	24.3	29.3	2.0	-0.69	27.1
Mangaonua Stm at Hoeka Rd	10	20.6	20.9	17.5	22.5	0.8	-1.17	20.6
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	10.9	11.2	8.9	12.4	2.3	-0.33	9.9
Mangatangi River at SH2 Maramarua	9	12.8	12.5	11.4	14.8	1.9	0.73	13.1
Mangatawhiri River at Lyons Rd At Buckingham Br	9	11.9	12.5	7.8	13.6	1.3	-2.02	12.2
Mangawara Stm at Rutherford Rd Br	11	24.8	22.4	19.6	37.6	3.0	1.74	22.4
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	22.1	21.0	20.4	27.6	0.8	1.95	21.6
Matahuru Stm at Waiterimu Road Below Confluence	11	15.0	13.9	12.9	20.3	2.8	1.30	13.8
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	19.3	20.0	15.7	21.4	3.2	-0.71	-
Ohaeroa Stm at SH22 Br	9	17.5	15.3	14.6	21.5	5.5	0.33	16.7
Opuatia Stm at Ponganui Rd	9	19.1	20.0	14.0	21.0	2.1	-1.93	18.2
Pokaiwhenua Stm at Puketurua	11	11.6	11.5	10.1	12.7	0.7	-0.68	11.6
Waahi Stm at Te Ohaki Rd	11	47.2	51.8	31.9	59.3	16.9	-0.41	-
Waerenga Stm at Taniwha Rd	9	12.5	12.5	10.4	14.4	1.3	-0.31	12.0
Waitawhiriwhiri Stm at Edgecumbe Street	11	20.2	20.7	16.4	21.7	2.3	-1.36	20.0
Whakapipi Stm at SH22 Br	9	19.5	18.4	17.0	23.1	4.3	0.44	19.9
Whakauru Stm at U/S SH1 Br	11	8.5	8.7	6.4	9.1	0.2	-2.73	8.4
Whangamarino River at Island Block Rd	9	18.8	18.4	16.8	21.7	2.4	0.45	16.6
Whangamarino River at Jefferies Rd Br	9	16.4	16.0	15.1	18.6	1.5	0.94	15.6
Whangape Stm at Rangiriri-Glen Murray Rd	9	23.4	24.0	14.6	31.5	7.1	-0.29	21.6

IQR = Inter quartile range      - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	13.4	12.2	11.2	18.9	2.1	1.57	-
Kaniwhaniwha Stm at Wright Rd	11	10.6	10.4	9.4	12.4	1.5	0.53	10.3
Mangaohoi Stm at South Branch Maru Rd	11	8.2	8.6	7.0	9.5	1.7	-0.03	7.9
Mangaokewa Stm at Lawrence Street Br	10	17.7	16.7	12.2	24.8	5.8	0.50	15.5
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	20.7	19.8	16.4	27.3	3.7	0.75	18.2
Mangapu River at Otorohanga	11	20.4	20.4	16.4	24.5	5.4	0.19	19.5
Mangarama at Gadsby Rd	10	24.8	24.8	22.1	27.7	3.1	0.10	-
Mangarapa Stm at Otorohanga Rd	11	18.2	18.2	15.7	21.8	3.9	0.46	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	7.1	7.1	6.4	7.7	0.6	-0.02	7.0
Mangauika Stm at Te Awamutu Borough W/S Intake	11	6.7	6.8	4.6	8.6	0.8	-0.23	6.6
Moakurua Stm at Warratah Farm Bridge	11	11.7	11.6	10.7	13.3	1.5	0.76	-
Ohote Stm at Whatawhata/Horotiu Rd	11	21.1	19.5	18.5	25.8	3.9	0.69	18.3
Puniu River at Bartons Corner Rd Br	11	8.6	8.5	8.1	9.1	0.4	-0.02	8.6
Puniu River at Wharepapa Rd Bridge	11	6.6	6.7	5.7	7.3	1.0	-0.10	-
Waipa River at Mangaokewa Rd	10	5.3	5.2	4.4	6.7	0.8	1.08	5.1
Waipa River at Ngaruawahia Br	11	13.1	13.0	10.6	14.5	1.3	-0.96	-
Waipa River at Pukehoua Bridge on Baffin Road	11	12.4	12.8	10.8	13.8	1.5	-0.25	12.1
Waipa River at SH3 Otorohanga	11	8.6	8.5	7.6	9.8	0.6	0.61	8.4
Waitomo Stm at SH31 Otorohanga	11	19.1	18.5	16.5	23.2	3.3	0.82	19.6
Waitomo Stm at Tumutumu Rd	11	18.3	18.7	12.9	21.9	2.8	-0.80	19.1
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	14.4	14.4	11.7	16.4	0.5	-1.00	14.4
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	9.2	9.3	7.9	9.5	0.3	-2.46	9.2
Mangakara Stm (Reporoa) at SH5	11	10.1	10.1	9.1	10.8	1.1	-0.43	10.3
Mangakino Stm (Whakamaru) at Sandel Rd	11	7.2	7.4	6.3	7.7	0.9	-0.79	6.9
Otamakokore Stm at Hossack Rd	11	39.6	41.0	30.8	45.9	8.7	-0.80	37.0
Pueto Stm at Broadlands Rd Br	11	11.9	11.9	11.3	12.3	0.3	-1.26	11.9
Tahunaaatara Stm at Ohakuri Rd	11	8.0	8.0	7.5	8.2	0.2	-1.31	8.1
Torepatutahi Stm at Vaile Rd Br	11	9.9	9.8	9.4	10.6	0.7	0.49	10.5
Waiotapu Stm at Campbell Rd Br	11	73.5	76.2	57.2	81.7	10.6	-1.23	66.2
Waiotapu Stm at Homestead Rd Br	11	49.2	48.7	40.2	56.7	9.2	-0.23	44.3
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	42.5	43.2	30.8	50.2	7.7	-0.76	43.2
Whirinaki Stm at Corbett Rd	11	7.1	7.0	6.7	8.2	0.3	2.64	7.1
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	6.8	6.8	5.5	7.8	0.7	-0.46	7.1
Awakino River at SH3 Awakau Rd Junction	10	13.9	12.7	10.5	20.0	3.5	1.17	13.7
Manganui River at Off Manganui Rd	10	10.9	10.6	9.2	13.4	2.2	0.68	11.0
Mangaotaki River at SH3 Br	10	13.8	14.0	11.9	14.9	1.4	-0.78	14.0
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	13.4	13.3	11.1	15.5	1.8	-0.22	13.9
Mokau River at Awakau Rd	10	13.9	12.9	11.0	19.4	4.8	0.83	13.9
Mokau River at Mangaokewa Rd (Off SH30)	10	7.1	7.1	6.2	8.0	0.7	-0.04	6.9
Mokau River at Totoro Rd Recorder	10	12.8	12.7	11.0	14.8	1.5	0.18	12.4
Mokauti Stm at Three Way Point - Aria	10	12.4	12.3	10.1	14.6	3.0	0.03	11.4
Ohautira Stm at Waingaro Te Uku Rd	11	14.3	14.6	13.2	15.5	1.4	-0.10	14.3
Oparau River at Langdon Rd (Off Okupata Rd)	11	8.5	8.3	6.5	11.1	1.2	0.82	8.6
Tawarau River at Off Speedies Rd	11	12.8	12.8	10.2	14.8	1.9	-0.56	13.0
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	15.9	15.6	13.9	18.3	2.5	0.44	15.4
Waitetuna River at Te Uku-Waingaro Rd	11	11.2	10.9	10.0	12.5	1.8	0.24	10.6
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	5.9	5.8	4.0	7.3	2.1	-0.23	6.1
Kuratau River at SH41 Moerangi	11	4.2	4.2	3.4	5.1	1.2	0.05	4.2
Kuratau River at Te Rae Street T10	11	7.6	6.9	5.4	11.9	2.8	1.22	6.8
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	12.7	12.7	12.3	13.1	0.3	0.36	12.6
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	4.5	4.4	2.7	6.5	1.9	0.13	4.7
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	12.5	11.9	9.7	15.9	3.1	0.51	12.0
Tokaanu Stm at Off SH41 Turangi	11	10.1	10.1	9.7	10.6	0.4	0.47	10.2
Waihaha River at SH32	11	4.8	4.9	3.7	5.6	1.2	-0.53	4.6
Waitahanui River at Blake Rd	11	7.5	7.7	6.5	8.0	0.5	-1.43	7.6
Whangamata Stm (Kinloch) at Whangamata Rd	11	8.9	8.9	8.6	9.2	0.2	-0.36	9.0
Whanganui Stm at Lakeside Lake Taupo T8	10	5.8	6.1	4.4	7.4	2.1	-0.12	5.7
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	7.8	8.0	6.7	8.7	1.1	-0.50	7.7

IQR = Inter quartile range      - = five-year record not available

Dissolved Oxygen (% sat.)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	90	91	82	95	9	-0.30	94
Kauaeranga River at Smiths Cableway/Recorder	10	97	97	93	99	2	-1.01	98
Ohinemuri River at Karangahake	10	106	107	100	114	8	0.23	-
Ohinemuri River at Queens Head	10	101	103	83	111	10	-1.02	103
Ohinemuri River at SH25 Br	10	109	108	100	124	5	0.91	109
Tairua River at Morrisons Br Hikuai	10	96	96	90	104	4	0.23	97
Tapu River at Tapu-Coroglen Rd	10	100	99	97	102	3	0.14	100
Waiau River at E309 Rd Ford	10	101	100	94	104	5	-0.38	101
Waitekauri River at U/S Ohinemuri Conflu	10	103	103	98	109	3	0.44	103
Waiwawa River at SH25 Coroglen	10	101	101	94	105	5	-0.75	100
Wharekawa River at SH25	10	95	95	90	102	6	0.29	97
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	98	96	95	102	4	0.59	98
Oraka Stm at Lake Rd	11	92	92	90	98	2	1.93	92
Piako River at Kiwitahi	10	64	62	25	99	38	-0.11	85
Piako River at Paeroa-Tahuna Rd Br	10	83	84	75	96	9	0.45	84
Piakonui Stm at Piakonui Rd	10	98	98	96	100	2	0.05	99
Waihou River at Okauia	10	94	95	92	96	2	-0.26	94
Waihou River at Te Aroha	10	88	89	86	91	2	0.14	89
Waihou River at Whites Rd	11	96	96	92	104	4	0.85	97
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	94	93	87	103	3	0.94	93
Waiomou Stm at Matamata-Tauranga Rd	10	97	97	94	100	2	0.23	96
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	87	88	71	96	11	-1.07	93
Waitoa River at Landsdowne Rd Br	10	92	88	81	113	14	1.17	89
Waitoa River at Mellon Rd Recorder	10	72	74	62	80	10	-0.51	76
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	79	88	43	94	20	-1.37	85
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	81	83	57	92	10	-1.62	86
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	87	88	79	97	9	0.08	90
Kirikiri Stm at Tauhara Dr	11	71	70	64	83	8	0.82	73
Komakorau Stm at Henry Rd	11	63	60	54	74	12	0.52	63
Little Waipa Stm at Arapuni - Putaruru Rd	10	87	86	72	102	5	0.28	95
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	86	86	81	94	5	0.67	88
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	99	99	94	104	5	-0.15	99
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	79	79	73	85	6	0.29	79
Mangaonua Stm at Hoeka Rd	10	76	76	68	87	12	0.53	81
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	99	99	96	101	3	-0.43	99
Mangatangi River at SH2 Maramarua	9	86	87	77	96	5	-0.06	87
Mangatawhiri River at Lyons Rd At Buckingham Br	9	106	107	94	119	13	-0.04	109
Mangawara Stm at Rutherford Rd Br	11	68	66	58	75	8	-0.07	72
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	86	85	83	92	2	1.60	86
Matahuru Stm at Waiterimu Road Below Confluence	11	83	83	79	86	2	-0.12	84
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	8	77	80	45	103	22	-0.60	-
Ohaeroa Stm at SH22 Br	9	88	88	81	95	8	0.15	94
Opuatia Stm at Ponganui Rd	9	91	93	85	96	6	-0.58	95
Pokaiwhenua Stm at Puketurua	11	92	91	87	101	7	0.75	96
Waahi Stm at Te Ohaki Rd	11	82	89	52	95	15	-1.43	-
Waerenga Stm at Taniwha Rd	9	91	89	88	97	6	0.51	97
Waitawhiriwhiri Stm at Edgecumbe Street	11	78	77	71	87	10	0.43	81
Whakapipi Stm at SH22 Br	9	81	86	56	96	17	-1.03	93
Whakauru Stm at U/S SH1 Br	11	95	95	90	100	3	-0.02	96
Whangamarino River at Island Block Rd	9	77	70	25	136	41	0.20	61
Whangamarino River at Jefferies Rd Br	9	71	70	60	81	7	-0.24	77
Whangape Stm at Rangiriri-Glen Murray Rd	9	74	83	39	100	30	-0.78	86

IQR = Inter quartile range      - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	86	87	77	96	11	-0.42	-
Kaniwhaniwha Stm at Wright Rd	11	95	93	86	106	6	0.62	91
Mangaohoi Stm at South Branch Maru Rd	11	99	99	98	103	2	1.46	99
Mangaokewa Stm at Lawrence Street Br	10	92	92	85	99	5	-0.11	94
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	106	99	90	152	22	1.60	96
Mangapu River at Otorohanga	11	89	90	82	94	6	-0.51	91
Mangarama at Gadsby Rd	10	104	101	75	147	41	0.41	-
Mangarapa Stm at Otorohanga Rd	11	83	82	67	95	15	-0.44	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	97	97	92	105	3	1.22	96
Mangauika Stm at Te Awamutu Borough W/S Intake	11	99	99	98	101	1	0.92	99
Moakurua Stm at Warratah Farm Bridge	11	95	95	91	99	2	-0.17	-
Ohote Stm at Whatawhata/Horotiu Rd	11	45	44	21	76	33	0.34	50
Puniu River at Bartons Corner Rd Br	11	96	95	92	103	5	0.91	93
Puniu River at Wharepapa Rd Bridge	11	108	110	101	113	11	-0.49	-
Waipa River at Mangaokewa Rd	10	101	100	99	105	1	1.76	100
Waipa River at Ngaruawahia Br	11	85	85	75	91	7	-0.73	-
Waipa River at Pukehoua Bridge on Baffin Road	11	90	90	85	93	4	-0.35	91
Waipa River at SH3 Otorohanga	11	101	101	85	113	9	-0.56	100
Waitomo Stm at SH31 Otorohanga	11	96	94	84	114	13	0.81	95
Waitomo Stm at Tumutumu Rd	11	99	98	97	102	3	0.82	99
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	86	86	82	89	2	-0.68	87
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	92	94	82	97	3	-2.09	94
Mangakara Stm (Reporoa) at SH5	11	93	93	90	97	2	0.79	92
Mangakino Stm (Whakamaru) at Sandel Rd	11	102	102	100	103	1	-1.08	102
Otamakokore Stm at Hossack Rd	11	92	91	79	111	11	0.89	92
Pueto Stm at Broadlands Rd Br	11	94	93	90	98	3	0.40	93
Tahunaatara Stm at Ohakuri Rd	11	100	102	93	105	6	-0.60	101
Torepatutahi Stm at Vaile Rd Br	11	92	91	74	113	8	0.47	93
Waiotapu Stm at Campbell Rd Br	11	86	87	84	89	3	-0.20	88
Waiotapu Stm at Homestead Rd Br	11	84	83	75	95	9	0.28	85
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	98	98	94	102	2	-0.09	98
Whirinaki Stm at Corbett Rd	11	96	97	90	104	2	0.74	98
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	101	100	98	107	3	1.45	101
Awakino River at SH3 Awakau Rd Junction	10	100	99	96	111	8	1.27	101
Manganui River at Off Manganui Rd	10	98	98	95	106	3	1.51	98
Mangaotaki River at SH3 Br	10	100	100	96	104	2	0.27	101
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	102	102	99	107	5	0.63	102
Mokau River at Awakau Rd	10	93	94	87	100	7	0.07	94
Mokau River at Mangaokewa Rd (Off SH30)	10	98	97	97	102	1	2.59	98
Mokau River at Totoro Rd Recorder	10	101	101	98	105	2	0.25	102
Mokauiti Stm at Three Way Point - Aria	10	89	89	78	100	11	0.08	92
Ohautira Stm at Waingaro Te Uku Rd	11	97	97	93	102	6	0.16	96
Oparau River at Langdon Rd (Off Okupata Rd)	11	101	100	98	107	3	1.40	102
Tawarau River at Off Speedies Rd	11	103	103	100	105	3	0.05	103
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	99	96	86	117	10	0.73	95
Waitetuna River at Te Uku-Waingaro Rd	11	98	99	96	100	2	-0.61	98
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	98	98	94	102	2	0.13	99
Kuratau River at SH41 Moerangi	11	93	93	88	96	5	-0.32	94
Kuratau River at Te Rae Street T10	11	97	100	73	104	5	-2.55	99
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	86	86	80	91	4	-0.43	87
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	96	96	90	102	4	-0.11	98
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	97	97	88	108	8	-0.04	99
Tokaanu Stm at Off SH41 Turangi	11	79	80	77	81	3	-0.24	81
Waihaha River at SH32	11	101	100	97	108	7	0.59	101
Waitahanui River at Blake Rd	11	97	98	94	100	2	0.29	98
Whangamata Stm (Kinloch) at Whangamata Rd	11	93	94	90	97	4	-0.11	94
Whanganui Stm at Lakeside Lake Taupo T8	10	98	99	89	101	5	-1.41	100
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	95	95	91	98	5	-0.48	95

IQR = Inter quartile range - = five-year record not available

Dissolved Oxygen (g/m <sup>3</sup> )								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	9.0	8.5	7.3	11.4	1.5	0.81	9.8
Kauaeranga River at Smiths Cableway/Recorder	10	9.6	9.4	8.2	11.7	1.5	0.80	10.2
Ohinemuri River at Karangahake	10	10.2	9.9	9.1	11.7	0.9	0.63	-
Ohinemuri River at Queens Head	10	9.7	9.9	7.0	11.4	1.2	-0.81	10.3
Ohinemuri River at SH25 Br	10	10.4	10.2	9.1	11.5	1.3	0.10	10.6
Tairua River at Morrisons Br Hikuai	10	9.3	9.2	7.9	11.1	1.6	0.35	9.8
Tapu River at Tapu-Coroglen Rd	10	10.0	9.8	8.7	12.3	1.2	1.05	10.4
Waiau River at E309 Rd Ford	10	10.1	10.1	8.6	12.2	1.2	0.71	10.4
Waitekauri River at U/S Ohinemuri Conflu	10	10.0	9.8	8.8	11.8	0.8	0.84	10.2
Waiwawa River at SH25 Coroglen	10	9.9	9.8	8.3	11.9	1.2	0.51	10.2
Wharekawa River at SH25	10	9.3	9.3	8.0	10.8	1.4	0.29	9.8
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	9.5	9.3	8.9	10.4	0.8	0.59	9.8
Oraka Stm at Lake Rd	11	9.1	9.0	8.3	9.9	0.7	0.06	9.5
Piako River at Kiwitahi	10	6.4	6.3	2.3	9.9	5.0	0.00	9.0
Piako River at Paeroa-Tahuna Rd Br	10	8.4	7.9	6.8	10.7	2.4	0.59	8.4
Piakonui Stm at Piakonui Rd	10	10.1	9.9	9.1	11.8	1.1	0.91	10.3
Waihou River at Okauia	10	9.6	9.5	9.0	10.7	1.2	0.71	9.7
Waihou River at Te Aroha	10	8.9	8.6	8.0	9.9	1.6	0.55	9.1
Waihou River at Whites Rd	11	10.0	10.0	9.3	10.8	0.5	0.19	10.2
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	9.7	9.6	9.1	10.8	1.0	0.67	9.9
Waiomou Stm at Matamata-Tauranga Rd	10	10.0	9.7	9.1	11.5	1.3	0.85	9.8
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	8.5	8.5	6.3	10.1	0.9	-0.46	9.0
Waitoa River at Landsdowne Rd Br	10	9.2	9.5	7.5	10.1	1.9	-0.76	9.4
Waitoa River at Mellon Rd Recorder	10	7.2	6.9	5.5	9.3	2.3	0.44	7.6
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	9	7.4	7.6	3.8	9.6	1.8	-1.14	8.4
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	8.0	8.2	5.4	10.3	2.1	0.02	8.3
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	8.7	8.3	7.4	11.3	1.9	0.87	9.1
Kirikiri Stm at Tauhara Dr	11	7.1	6.8	5.9	9.0	1.3	0.92	7.3
Komakorau Stm at Henry Rd	11	6.2	5.6	5.1	8.5	1.9	0.97	6.2
Little Waipa Stm at Arapuni - Putaruru Rd	10	8.8	9.0	7.2	10.2	0.7	-0.58	9.9
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	8.6	8.2	7.4	10.2	1.2	0.74	8.8
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	9.7	9.5	9.1	10.6	1.0	0.67	10.0
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	8.0	7.9	7.0	9.4	1.0	0.53	8.0
Mangaonua Stm at Hoeka Rd	10	7.7	7.5	6.3	10.0	1.4	0.81	8.3
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	9.9	9.4	9.1	11.4	1.4	0.83	10.0
Mangatangi River at SH2 Maramarua	9	8.2	8.1	6.7	10.1	1.6	0.38	8.6
Mangatawhiri River at Lyons Rd At Buckingham Br	9	10.2	10.3	8.2	12.5	1.5	0.25	10.4
Mangawara Stm at Rutherford Rd Br	11	6.7	6.3	5.2	8.7	1.9	0.60	7.2
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	8.7	8.3	7.8	10.5	0.9	1.21	8.8
Matahuru Stm at Waiterimu Road Below Confluence	11	8.2	7.9	7.3	9.9	1.2	1.08	8.3
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	8	7.6	7.7	3.9	10.5	3.2	-0.35	-
Ohaeroa Stm at SH22 Br	9	8.7	8.4	7.6	10.3	1.5	0.49	9.5
Opuatia Stm at Ponganui Rd	9	9.0	9.0	7.7	10.4	1.7	0.08	9.6
Pokaiwhenua Stm at Puketurua	11	9.3	9.5	8.2	10.0	1.1	-0.66	9.9
Waahi Stm at Te Ohaki Rd	11	7.9	8.3	4.5	10.1	2.9	-0.70	-
Waerenga Stm at Taniwha Rd	9	9.1	8.6	7.9	10.5	1.5	0.40	9.8
Waitawhiriwhiri Stm at Edgecumbe Street	11	7.6	7.4	6.6	9.2	1.4	0.72	7.8
Whakapipi Stm at SH22 Br	9	8.0	8.2	5.3	10.2	1.8	-0.52	9.2
Whakauru Stm at U/S SH1 Br	11	9.6	9.4	9.0	10.4	0.9	0.54	9.9
Whangamarino River at Island Block Rd	9	7.1	6.9	2.6	11.3	4.0	-0.32	5.9
Whangamarino River at Jefferies Rd Br	9	7.1	6.7	5.3	8.9	1.5	0.14	7.6
Whangape Stm at Rangiriri-Glen Murray Rd	9	7.2	8.0	3.4	10.7	4.4	-0.36	8.4

IQR = Inter quartile range      - = five-year record not available



Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	8.7	8.7	7.2	10.6	2.0	0.24	-
Kaniwhaniwha Stm at Wright Rd	11	9.4	9.2	8.5	10.5	1.4	0.33	9.3
Mangaohoi Stm at South Branch Maru Rd	11	9.8	9.9	8.9	11.0	1.0	0.25	10.0
Mangaokewa Stm at Lawrence Street Br	10	9.4	9.4	8.6	10.4	1.1	0.11	9.9
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	10.1	9.9	8.7	12.5	2.1	0.52	9.6
Mangapu River at Otorohanga	11	8.8	8.8	7.6	9.8	1.0	-0.23	9.1
Mangarama at Gadsby Rd	10	10.2	10.4	7.7	13.9	2.8	0.41	-
Mangarapa Stm at Otorohanga Rd	11	8.2	8.0	6.2	9.8	1.3	-0.36	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	9.8	10.1	8.1	11.3	2.2	-0.17	9.8
Mangauika Stm at Te Awamutu Borough W/S Intake	11	10.3	10.3	9.8	11.0	0.5	0.59	10.4
Moakurua Stm at Warratah Farm Bridge	11	9.7	9.9	8.7	10.7	1.0	0.02	-
Ohote Stm at Whatawhata/Horotiu Rd	11	4.5	4.4	2.0	8.3	3.6	0.55	4.8
Puniu River at Bartons Corner Rd Br	11	9.6	9.3	8.3	11.4	1.9	0.49	9.4
Puniu River at Wharepapa Rd Bridge	11	10.7	10.5	9.4	12.1	1.2	0.45	-
Waipa River at Mangaokewa Rd	10	10.0	9.9	9.2	10.9	0.8	0.27	10.0
Waipa River at Ngaruawahia Br	11	8.4	8.1	7.0	10.4	2.1	0.64	-
Waipa River at Pukehoua Bridge on Baffin Road	11	8.9	9.0	7.8	9.9	1.1	-0.11	9.2
Waipa River at SH3 Otorohanga	11	9.9	10.2	7.9	10.9	0.9	-1.62	10.1
Waitomo Stm at SH31 Otorohanga	11	9.6	9.7	8.1	10.8	0.8	-0.63	9.7
Waitomo Stm at Tumutumu Rd	11	10.1	10.2	9.4	10.5	0.7	-0.69	10.2
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	8.3	8.1	7.8	8.8	0.5	0.45	8.3
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	9.3	9.3	8.2	10.0	0.5	-1.00	9.5
Mangakara Stm (Reporoa) at SH5	11	9.2	9.1	8.7	10.0	0.9	0.39	9.3
Mangakino Stm (Whakamaru) at Sandel Rd	11	10.6	10.8	9.5	11.8	0.8	0.19	10.8
Otamakokore Stm at Hossack Rd	11	7.8	7.5	7.1	9.3	0.7	1.25	8.2
Pueto Stm at Broadlands Rd Br	11	9.3	9.2	8.9	9.8	0.6	0.55	9.4
Tahunaatara Stm at Ohakuri Rd	11	9.9	9.9	8.7	11.1	0.7	-0.03	10.2
Torepatutahi Stm at Vaile Rd Br	11	8.9	9.1	6.8	10.6	1.7	-0.44	9.5
Waiotapu Stm at Campbell Rd Br	11	6.5	6.4	6.1	6.9	0.5	0.39	6.7
Waiotapu Stm at Homestead Rd Br	11	7.5	7.5	7.0	8.2	0.6	0.44	7.9
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	8.2	8.2	7.8	8.7	0.6	-0.17	8.4
Whirinaki Stm at Corbett Rd	11	9.8	9.8	8.8	10.4	0.7	-0.91	10.2
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	10.4	10.4	9.8	11.3	0.3	0.80	10.5
Awakino River at SH3 Awakau Rd Junction	10	10.1	10.2	9.1	11.0	0.9	-0.20	10.4
Manganui River at Off Manganui Rd	10	10.1	10.0	9.1	11.2	0.3	0.57	10.2
Mangaotaki River at SH3 Br	10	10.2	10.3	9.6	11.0	0.8	-0.03	10.5
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	10.5	10.6	9.7	11.1	0.8	-0.45	10.6
Mokau River at Awakau Rd	10	9.2	9.3	8.1	10.5	1.7	0.00	9.7
Mokau River at Mangaokewa Rd (Off SH30)	10	10.0	9.9	9.0	10.8	0.6	-0.25	10.2
Mokau River at Totoro Rd Recorder	10	10.1	10.2	9.3	10.9	1.0	0.00	10.5
Mokauiti Stm at Three Way Point - Aria	10	8.7	9.0	7.5	9.9	1.4	-0.38	9.2
Ohautira Stm at Waingaro Te Uku Rd	11	9.9	9.5	8.9	11.1	1.3	0.55	10.0
Oparau River at Langdon Rd (Off Okupata Rd)	11	10.3	10.2	9.5	11.5	1.0	0.70	10.5
Tawarau River at Off Speedies Rd	11	10.5	10.6	9.8	11.1	0.8	-0.20	10.7
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	9.7	9.8	7.8	11.1	1.6	-0.44	9.9
Waitetuna River at Te Uku-Waingaro Rd	11	9.8	9.6	8.9	11.2	1.3	0.57	10.1
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	10.2	10.5	9.2	11.4	1.3	-0.02	10.5
Kuratau River at SH41 Moerangi	11	9.6	9.8	8.5	10.8	1.3	-0.25	9.9
Kuratau River at Te Rae Street T10	11	9.7	9.9	7.1	11.0	1.9	-0.85	9.9
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	9.1	9.0	8.1	10.0	1.0	0.07	9.2
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	10.2	10.3	8.8	11.6	1.8	-0.07	10.4
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	9.7	9.7	8.2	10.8	1.1	-0.44	10.2
Tokaanu Stm at Off SH41 Turangi	11	8.1	8.2	7.5	8.6	0.8	-0.39	8.4
Waihaha River at SH32	11	10.3	10.3	9.4	11.4	1.1	0.09	10.6
Waitahanui River at Blake Rd	11	10.3	10.4	9.6	10.9	0.7	-0.31	10.4
Whangamata Stm (Kinloch) at Whangamata Rd	11	9.9	9.9	9.1	10.7	1.1	0.07	10.1
Whanganui Stm at Lakeside Lake Taupo T8	10	10.2	10.4	8.3	11.9	1.8	-0.18	10.5
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	10.0	10.0	8.7	11.4	1.6	0.30	10.1

IQR = Inter quartile range      - = five-year record not available

Dissolved Reactive Phosphorus (g/m <sup>3</sup> )								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.002	0.002	0.002	0.005	0.000	3.16	0.002
Kauaeranga River at Smiths Cableway/Recorder	10	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Ohinemuri River at Karangahake	10	0.002	0.002	0.002	0.006	0.000	3.16	-
Ohinemuri River at Queens Head	10	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Ohinemuri River at SH25 Br	10	0.003	0.002	0.002	0.008	0.002	1.94	0.004
Tairua River at Morrisons Br Hikuai	10	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Tapu River at Tapu-Coroglen Rd	10	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Waiau River at E309 Rd Ford	10	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Waitekauri River at U/S Ohinemuri Conflu	10	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Waiwawa River at SH25 Coroglen	10	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Wharekawa River at SH25	10	0.002	0.002	0.002	0.005	0.000	3.16	0.002
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.033	0.034	0.024	0.038	0.004	-1.21	0.033
Oraka Stm at Lake Rd	11	0.277	0.130	0.063	0.860	0.313	1.44	0.120
Piako River at Kiwitahi	10	0.035	0.028	0.021	0.067	0.022	1.25	0.028
Piako River at Paeroa-Tahuna Rd Br	10	0.209	0.205	0.043	0.410	0.149	0.32	0.126
Piakonui Stm at Piakonui Rd	10	0.011	0.012	0.005	0.015	0.005	-0.71	0.010
Waihou River at Okauia	10	0.076	0.071	0.048	0.119	0.019	1.07	0.063
Waihou River at Te Aroha	10	0.068	0.061	0.048	0.098	0.026	0.59	0.059
Waihou River at Whites Rd	11	0.076	0.068	0.061	0.174	0.007	3.25	0.069
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.011	0.012	0.008	0.015	0.004	0.08	0.011
Waiomou Stm at Matamata-Tauranga Rd	10	0.017	0.016	0.012	0.023	0.006	0.33	0.016
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.023	0.018	0.007	0.050	0.021	1.04	0.016
Waitoa River at Landsdowne Rd Br	10	0.018	0.018	0.002	0.035	0.013	0.36	0.018
Waitoa River at Mellon Rd Recorder	10	0.048	0.046	0.031	0.076	0.029	0.63	0.046
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otua Rd Br opp Moseley Rd	9	0.014	0.002	0.002	0.106	0.002	2.97	0.002
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.052	0.053	0.024	0.074	0.016	-0.21	0.041
Kirikiroa Stm at Tauhara Dr	11	0.012	0.013	0.008	0.017	0.003	0.13	0.009
Komakorau Stm at Henry Rd	11	0.006	0.005	0.002	0.010	0.004	0.23	0.007
Little Waipa Stm at Arapuni - Putaruru Rd	10	0.062	0.052	0.033	0.159	0.024	2.57	0.048
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	0.262	0.124	0.075	1.100	0.248	2.49	0.181
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	0.180	0.166	0.091	0.260	0.070	0.26	0.163
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	0.069	0.067	0.057	0.101	0.016	1.43	0.061
Mangaonua Stm at Hoeka Rd	10	0.011	0.012	0.002	0.021	0.005	-0.09	0.009
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.014	0.014	0.008	0.018	0.007	-0.43	0.012
Mangatangi River at SH2 Maramarua	9	0.015	0.011	0.007	0.045	0.009	2.24	0.016
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.009	0.009	0.006	0.012	0.003	0.20	0.009
Mangawara Stm at Rutherford Rd Br	11	0.030	0.022	0.015	0.054	0.020	0.72	0.040
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	0.048	0.031	0.016	0.134	0.037	1.59	0.036
Matahuru Stm at Waiterimu Road Below Confluence	11	0.022	0.021	0.014	0.037	0.008	1.14	0.020
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	0.002	0.002	0.002	0.002	0.000	0.00	-
Ohaeroa Stm at SH22 Br	9	0.008	0.008	0.005	0.012	0.003	0.62	0.007
Opuatia Stm at Ponganui Rd	9	0.006	0.007	0.002	0.011	0.007	0.02	0.005
Pokaiwhenua Stm at Puketurua	11	0.084	0.077	0.061	0.119	0.018	0.92	0.078
Waahi Stm at Te Ohaki Rd	11	0.002	0.002	0.002	0.002	0.000	0.00	-
Waerenga Stm at Taniwha Rd	9	0.024	0.022	0.008	0.037	0.012	-0.22	0.018
Waitawhiriwhiri Stm at Edgecumbe Street	11	0.023	0.019	0.011	0.057	0.009	2.03	0.018
Whakapipi Stm at SH22 Br	9	0.023	0.023	0.002	0.050	0.018	0.56	0.022
Whakauru Stm at U/S SH1 Br	11	0.082	0.033	0.016	0.510	0.032	3.18	0.030
Whangamarino River at Island Block Rd	9	0.004	0.002	0.002	0.008	0.005	0.83	0.005
Whangamarino River at Jefferies Rd Br	9	0.029	0.026	0.017	0.060	0.007	2.19	0.023
Whangape Stm at Rangiriri-Glen Murray Rd	9	0.004	0.002	0.002	0.022	0.000	3.00	0.002

IQR = Inter quartile range      - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	0.005	0.005	0.002	0.007	0.005	-0.22	-
Kaniwhaniwha Stm at Wright Rd	11	0.006	0.006	0.002	0.018	0.003	2.03	0.006
Mangaohoi Stm at South Branch Maru Rd	11	0.041	0.038	0.022	0.062	0.021	0.38	0.033
Mangaokewa Stm at Lawrence Street Br	10	0.015	0.014	0.008	0.025	0.008	0.73	0.012
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	0.097	0.076	0.037	0.210	0.069	1.17	0.076
Mangapu River at Otorohanga	11	0.018	0.015	0.012	0.033	0.009	1.43	0.014
Mangarama at Gadsby Rd	10	0.012	0.011	0.007	0.019	0.004	0.77	-
Mangarapa Stm at Otorohanga Rd	11	0.011	0.011	0.008	0.025	0.002	2.90	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.006	0.006	0.002	0.011	0.004	0.14	0.008
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.006	0.006	0.002	0.009	0.003	-0.33	0.005
Moakurua Stm at Warratah Farm Bridge	11	0.008	0.009	0.002	0.013	0.003	-0.57	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.013	0.011	0.002	0.027	0.013	0.57	0.015
Puniu River at Bartons Corner Rd Br	11	0.018	0.017	0.010	0.028	0.006	0.37	0.019
Puniu River at Wharepapa Rd Bridge	11	0.026	0.025	0.015	0.040	0.013	0.55	-
Waipa River at Mangaokewa Rd	10	0.003	0.002	0.002	0.009	0.002	1.71	0.004
Waipa River at Ngaruawahia Br	11	0.016	0.015	0.008	0.023	0.007	0.10	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.012	0.012	0.002	0.017	0.005	-1.32	0.012
Waipa River at SH3 Otorohanga	11	0.007	0.008	0.002	0.016	0.006	0.76	0.007
Waitomo Stm at SH31 Otorohanga	11	0.007	0.007	0.002	0.013	0.003	0.00	0.006
Waitomo Stm at Tumutumu Rd	11	0.008	0.008	0.007	0.011	0.003	0.48	0.008
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	0.054	0.044	0.038	0.140	0.013	2.90	0.041
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.048	0.031	0.024	0.220	0.005	3.29	0.028
Mangakara Stm (Reporoa) at SH5	11	0.049	0.044	0.037	0.091	0.005	2.41	0.042
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.042	0.044	0.032	0.053	0.013	-0.11	0.037
Otamakokore Stm at Hossack Rd	11	0.138	0.133	0.128	0.152	0.016	0.34	0.136
Pueto Stm at Broadlands Rd Br	11	0.061	0.064	0.051	0.067	0.006	-1.26	0.061
Tahunaatara Stm at Ohakuri Rd	11	0.040	0.035	0.024	0.064	0.021	0.97	0.032
Torepatutahi Stm at Vaile Rd Br	11	0.076	0.077	0.067	0.087	0.010	0.24	0.073
Waiotapu Stm at Campbell Rd Br	11	0.004	0.002	0.002	0.011	0.002	1.98	0.002
Waiotapu Stm at Homestead Rd Br	11	0.031	0.034	0.005	0.045	0.008	-1.39	0.030
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	0.078	0.075	0.065	0.125	0.012	2.54	0.072
Whirinaki Stm at Corbett Rd	11	0.072	0.055	0.047	0.230	0.005	3.20	0.055
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.011	0.011	0.008	0.013	0.002	-0.73	0.011
Awakino River at SH3 Awakau Rd Junction	10	0.007	0.008	0.002	0.011	0.004	-0.68	0.008
Manganui River at Off Manganui Rd	10	0.010	0.011	0.005	0.014	0.006	-0.29	0.011
Mangaotaki River at SH3 Br	10	0.012	0.010	0.005	0.024	0.006	1.18	0.010
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.012	0.011	0.011	0.015	0.003	0.94	0.012
Mokau River at Awakau Rd	10	0.007	0.007	0.002	0.010	0.004	-0.56	0.006
Mokau River at Mangaokewa Rd (Off SH30)	10	0.015	0.014	0.010	0.029	0.003	1.94	0.013
Mokau River at Totoro Rd Recorder	10	0.010	0.010	0.002	0.018	0.005	0.28	0.009
Mokauiti Stm at Three Way Point - Aria	10	0.010	0.009	0.002	0.017	0.004	0.06	0.007
Ohautira Stm at Waingaro Te Uku Rd	11	0.022	0.023	0.015	0.029	0.006	-0.39	0.019
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.007	0.006	0.004	0.011	0.003	0.89	0.005
Tawarau River at Off Speedies Rd	11	0.013	0.012	0.010	0.018	0.002	1.17	0.013
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.012	0.012	0.007	0.018	0.005	0.16	0.009
Waitetuna River at Te Uku-Waingaro Rd	11	0.015	0.013	0.010	0.042	0.004	2.96	0.011
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.023	0.021	0.016	0.030	0.006	0.48	0.023
Kuratau River at SH41 Moerangi	11	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Kuratau River at Te Rae Street T10	11	0.006	0.002	0.002	0.022	0.005	1.94	0.004
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.112	0.109	0.107	0.133	0.006	2.17	0.112
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.010	0.010	0.007	0.016	0.004	0.80	0.012
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.002	0.002	0.002	0.005	0.000	3.32	0.002
Tokaanu Stm at Off SH41 Turangi	11	0.069	0.069	0.050	0.077	0.006	-1.87	0.072
Waihaha River at SH32	11	0.016	0.017	0.006	0.023	0.009	-0.53	0.016
Waitahanui River at Blake Rd	11	0.038	0.038	0.033	0.042	0.002	-0.31	0.039
Whangamata Stm (Kinloch) at Whangamata Rd	11	0.065	0.066	0.058	0.071	0.005	-0.65	0.064
Whanganui Stm at Lakeside Lake Taupo T8	10	0.008	0.007	0.002	0.013	0.006	0.21	0.008
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.017	0.017	0.013	0.022	0.004	0.30	0.017

IQR = Inter quartile range - = five-year record not available

Total Phosphorus (g/m <sup>3</sup> )								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.008	0.008	0.002	0.014	0.005	-0.17	0.008
Kauaeranga River at Smiths Cableway/Recorder	10	0.004	0.002	0.002	0.009	0.003	1.70	0.002
Ohinemuri River at Karangahake	10	0.007	0.006	0.004	0.012	0.003	0.65	-
Ohinemuri River at Queens Head	10	0.010	0.010	0.002	0.016	0.007	-0.23	0.010
Ohinemuri River at SH25 Br	10	0.010	0.010	0.007	0.016	0.003	1.31	0.011
Tairua River at Morrisons Br Hikuai	10	0.005	0.006	0.002	0.007	0.004	-0.45	0.004
Tapu River at Tapu-Coroglen Rd	10	0.005	0.005	0.002	0.009	0.004	0.23	0.005
Waiau River at E309 Rd Ford	10	0.008	0.007	0.002	0.018	0.009	0.68	0.007
Waitekauri River at U/S Ohinemuri Conflu	10	0.007	0.007	0.002	0.014	0.004	0.94	0.007
Waiwawa River at SH25 Coroglen	10	0.004	0.002	0.002	0.009	0.002	1.62	0.004
Wharekawa River at SH25	10	0.006	0.007	0.002	0.009	0.003	-0.73	0.006
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.059	0.052	0.047	0.096	0.014	1.81	0.049
Oraka Stm at Lake Rd	11	0.350	0.210	0.096	0.940	0.335	1.40	0.174
Piako River at Kiwitahi	10	0.062	0.051	0.032	0.103	0.044	0.74	0.061
Piako River at Paeroa-Tahuna Rd Br	10	0.278	0.270	0.089	0.540	0.147	0.75	0.240
Piakonui Stm at Piakonui Rd	10	0.023	0.023	0.014	0.033	0.009	0.19	0.022
Waihou River at Okauia	10	0.100	0.097	0.072	0.143	0.027	0.95	0.094
Waihou River at Te Aroha	10	0.095	0.097	0.076	0.118	0.012	0.11	0.096
Waihou River at Whites Rd	11	0.279	0.076	0.072	2.300	0.004	3.32	0.076
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.040	0.031	0.023	0.133	0.012	3.13	0.029
Waiomou Stm at Matamata-Tauranga Rd	10	0.034	0.034	0.022	0.044	0.010	-0.31	0.034
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.046	0.037	0.019	0.116	0.025	1.96	0.049
Waitoa River at Landsdowne Rd Br	10	0.042	0.033	0.014	0.104	0.032	1.27	0.048
Waitoa River at Mellon Rd Recorder	10	0.089	0.087	0.061	0.122	0.043	0.07	0.118
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	9	0.073	0.046	0.026	0.280	0.041	2.63	0.042
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.010	0.009	0.002	0.020	0.004	0.84	0.010
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.105	0.112	0.058	0.134	0.041	-0.63	0.094
Kirikiroa Stm at Tauhara Dr	11	0.070	0.066	0.035	0.097	0.026	-0.15	0.067
Komakorau Stm at Henry Rd	11	0.123	0.092	0.050	0.490	0.037	3.13	0.101
Little Waipa Stm at Arapuni - Putaruru Rd	10	0.115	0.063	0.046	0.450	0.049	2.69	0.066
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	0.439	0.300	0.166	1.430	0.317	2.16	0.420
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	0.297	0.240	0.195	0.810	0.085	2.99	0.225
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	0.149	0.141	0.117	0.200	0.039	0.98	0.134
Mangaonua Stm at Hoeka Rd	10	0.051	0.048	0.025	0.091	0.026	0.90	0.063
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.028	0.029	0.018	0.038	0.008	0.08	0.029
Mangatangi River at SH2 Maramarua	9	0.053	0.039	0.029	0.129	0.025	2.02	0.072
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.028	0.024	0.018	0.050	0.011	1.42	0.023
Mangawara Stm at Rutherford Rd Br	11	0.145	0.128	0.119	0.200	0.043	1.14	0.200
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	0.184	0.160	0.131	0.360	0.065	2.20	0.165
Matahuru Stm at Waiterimu Road Below Confluence	11	0.074	0.069	0.054	0.103	0.026	0.89	0.093
Northern Outlet Canal (a.k.a.Pungarehu Canal) D/S of Ctrl Gates*	9	0.217	0.220	0.173	0.260	0.037	-0.23	-
Ohaeroa Stm at SH22 Br	9	0.050	0.029	0.020	0.144	0.050	1.67	0.028
Opuatia Stm at Ponganui Rd	9	0.042	0.024	0.012	0.089	0.054	0.80	0.024
Pokaiwhenua Stm at Puketurua	11	0.217	0.119	0.090	0.960	0.096	2.88	0.104
Waahi Stm at Te Ohaki Rd*	11	0.074	0.056	0.034	0.170	0.053	1.41	-
Waerenga Stm at Taniwha Rd	9	0.086	0.051	0.030	0.250	0.080	1.70	0.046
Waitawhiriwhiri Stm at Edgecumbe Street	11	0.075	0.072	0.050	0.114	0.022	0.72	0.083
Whakapipi Stm at SH22 Br	9	0.065	0.047	0.026	0.167	0.046	1.57	0.052
Whakauru Stm at U/S SH1 Br	11	0.267	0.078	0.046	1.670	0.078	2.83	0.072
Whangamarino River at Island Block Rd	9	0.147	0.126	0.072	0.290	0.083	1.22	0.134
Whangamarino River at Jefferies Rd Br	9	0.090	0.082	0.044	0.170	0.055	0.86	0.099
Whangape Stm at Rangiriri-Glen Murray Rd	9	0.132	0.107	0.064	0.250	0.102	0.77	0.123

IQR = Inter quartile range

- = five-year record not available

\* = new TP method used (see appendix II)

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge*	11	0.023	0.026	0.013	0.033	0.014	-0.26	-
Kaniwhaniwha Stm at Wright Rd	11	0.030	0.026	0.015	0.051	0.019	0.64	0.028
Mangaohoi Stm at South Branch Maru Rd	11	0.054	0.055	0.032	0.072	0.024	-0.27	0.049
Mangaokewa Stm at Lawrence Street Br	10	0.046	0.047	0.025	0.073	0.017	0.23	0.040
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	0.164	0.154	0.091	0.280	0.081	0.62	0.197
Mangapu River at Otorohanga	11	0.060	0.047	0.032	0.164	0.040	2.25	0.052
Mangarama at Gadsby Rd*	10	0.043	0.042	0.022	0.076	0.035	0.37	-
Mangarapa Stm at Otorohanga Rd*	11	0.050	0.033	0.020	0.175	0.031	2.55	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.017	0.018	0.011	0.024	0.007	0.02	0.021
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.010	0.011	0.004	0.013	0.002	-1.43	0.009
Moakurua Stm at Warratah Farm Bridge*	11	0.046	0.027	0.014	0.230	0.023	3.12	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.085	0.090	0.031	0.122	0.043	-0.61	0.096
Puniu River at Bartons Corner Rd Br	11	0.044	0.043	0.028	0.066	0.020	0.34	0.051
Puniu River at Wharepapa Rd Bridge*	11	0.045	0.045	0.030	0.061	0.015	-0.07	-
Waipa River at Mangaokewa Rd	10	0.022	0.018	0.012	0.053	0.005	2.11	0.017
Waipa River at Ngaruawahia Br	11	0.052	0.041	0.035	0.122	0.020	2.52	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.051	0.043	0.029	0.099	0.025	1.35	0.043
Waipa River at SH3 Otorohanga	11	0.049	0.023	0.016	0.280	0.017	3.24	0.024
Waitomo Stm at SH31 Otorohanga	11	0.044	0.033	0.018	0.122	0.033	1.92	0.031
Waitomo Stm at Tumutumu Rd	11	0.032	0.023	0.013	0.116	0.015	2.94	0.020
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	0.123	0.071	0.055	0.490	0.055	2.88	0.068
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.088	0.052	0.043	0.400	0.016	3.20	0.051
Mangakara Stm (Reporoa) at SH5	11	0.111	0.070	0.061	0.490	0.025	3.26	0.068
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.053	0.056	0.038	0.064	0.013	-0.61	0.052
Otamakokore Stm at Hossack Rd	11	0.171	0.168	0.146	0.210	0.037	0.54	0.156
Pueto Stm at Broadlands Rd Br	11	0.082	0.080	0.069	0.109	0.012	1.30	0.080
Tahunaatara Stm at Ohakuri Rd	11	0.137	0.054	0.045	0.740	0.061	2.97	0.052
Torepatutahi Stm at Vaile Rd Br	11	0.095	0.094	0.084	0.107	0.010	0.00	0.094
Waiotapu Stm at Campbell Rd Br	11	0.085	0.051	0.029	0.360	0.049	2.95	0.068
Waiotapu Stm at Homestead Rd Br	11	0.135	0.096	0.067	0.420	0.074	2.38	0.111
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	0.169	0.101	0.078	0.640	0.108	2.60	0.090
Whirinaki Stm at Corbett Rd	11	0.136	0.064	0.057	0.790	0.036	3.28	0.062
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.025	0.019	0.011	0.066	0.014	1.83	0.018
Awakino River at SH3 Awakau Rd Junction	10	0.039	0.025	0.011	0.105	0.042	1.25	0.017
Manganui River at Off Manganui Rd	10	0.040	0.026	0.012	0.110	0.043	1.23	0.023
Mangaotaki River at SH3 Br	10	0.041	0.028	0.016	0.118	0.035	1.88	0.023
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.032	0.026	0.018	0.063	0.015	1.46	0.024
Mokau River at Awakau Rd	10	0.042	0.031	0.017	0.077	0.049	0.49	0.029
Mokau River at Mangaokewa Rd (Off SH30)	10	0.041	0.039	0.028	0.083	0.014	2.27	0.032
Mokau River at Totoro Rd Recorder	10	0.035	0.029	0.015	0.079	0.028	1.28	0.029
Mokaiti Stm at Three Way Point - Aria	10	0.043	0.045	0.025	0.083	0.021	1.32	0.043
Ohautira Stm at Waingaro Te Uku Rd	11	0.042	0.039	0.026	0.066	0.014	0.99	0.035
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.030	0.020	0.010	0.099	0.020	2.18	0.015
Tawarau River at Off Speedies Rd	11	0.031	0.025	0.017	0.066	0.012	1.56	0.023
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.038	0.035	0.026	0.081	0.010	2.64	0.033
Waitetuna River at Te Uku-Waingaro Rd	11	0.039	0.032	0.025	0.103	0.011	2.65	0.032
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.034	0.033	0.027	0.042	0.009	0.24	0.032
Kuratau River at SH41 Moerangi	11	0.007	0.006	0.002	0.011	0.005	0.00	0.005
Kuratau River at Te Rae Street T10	11	0.016	0.015	0.011	0.032	0.007	1.92	0.013
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.141	0.137	0.131	0.168	0.009	2.14	0.140
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.016	0.018	0.011	0.020	0.004	-0.72	0.017
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.012	0.012	0.008	0.016	0.005	-0.07	0.012
Tokaanu Stm at Off SH41 Turangi	11	0.155	0.079	0.075	0.910	0.008	3.32	0.078
Waihaha River at SH32	11	0.024	0.025	0.016	0.032	0.010	-0.29	0.022
Waitahanui River at Blake Rd	11	0.044	0.043	0.040	0.047	0.004	0.01	0.046
Whangamata Stm (Kinloch) at Whangamata Rd	11	0.077	0.077	0.064	0.085	0.008	-0.51	0.075
Whanganui Stm at Lakeside Lake Taupo T8	10	0.016	0.016	0.009	0.022	0.008	-0.11	0.016
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.035	0.033	0.027	0.042	0.009	0.00	0.033

IQR = Inter quartile range - = five-year record not available

\* = new TP method used (see appendix II)

Ammoniacal Nitrogen (g/m <sup>3</sup> )								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Kauaeranga River at Smiths Cableway/Recorder	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Ohinemuri River at Karangahake	10	0.012	0.005	0.005	0.078	0.000	3.16	-
Ohinemuri River at Queens Head	10	0.135	0.119	0.005	0.400	0.173	1.09	0.079
Ohinemuri River at SH25 Br	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Tairua River at Morrisons Br Hikuai	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Tapu River at Tapu-Coroglen Rd	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waiau River at E309 Rd Ford	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waitekauri River at U/S Ohinemuri Conflu	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waiwawa River at SH25 Coroglen	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Wharekawa River at SH25	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.008	0.005	0.005	0.015	0.007	1.08	0.005
Oraka Stm at Lake Rd	11	0.063	0.033	0.011	0.179	0.112	0.90	0.033
Piako River at Kiwitahi	10	0.009	0.005	0.005	0.021	0.008	1.36	0.012
Piako River at Paeroa-Tahuna Rd Br	10	0.019	0.008	0.005	0.070	0.020	1.81	0.044
Piakonui Stm at Piakonui Rd	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waihou River at Okauia	10	0.013	0.008	0.005	0.049	0.007	2.56	0.012
Waihou River at Te Aroha	10	0.016	0.015	0.005	0.030	0.020	0.18	0.024
Waihou River at Whites Rd	11	0.027	0.005	0.005	0.250	0.000	3.32	0.005
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waiomou Stm at Matamata-Tauranga Rd	10	0.008	0.005	0.005	0.017	0.008	1.17	0.005
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.019	0.005	0.005	0.098	0.011	2.72	0.013
Waitoa River at Landsdowne Rd Br	10	0.011	0.011	0.005	0.025	0.007	1.21	0.012
Waitoa River at Mellon Rd Recorder	10	0.020	0.005	0.005	0.067	0.027	1.41	0.062
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	9	0.069	0.025	0.005	0.270	0.098	1.74	0.047
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.049	0.053	0.005	0.087	0.040	-0.22	0.042
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.018	0.012	0.005	0.072	0.015	2.43	0.020
Kirikiri Stm at Tauhara Dr	11	0.196	0.192	0.109	0.360	0.120	0.94	0.205
Komakorau Stm at Henry Rd	11	0.418	0.320	0.086	0.990	0.654	0.65	0.685
Little Waipa Stm at Arapuni - Putaruru Rd	10	0.037	0.013	0.005	0.220	0.033	2.90	0.010
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	10	0.181	0.119	0.048	0.420	0.195	0.89	0.220
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	0.121	0.045	0.005	0.520	0.195	1.82	0.154
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	0.027	0.024	0.012	0.051	0.018	0.91	0.024
Mangaonua Stm at Hoeka Rd	10	0.050	0.050	0.005	0.095	0.020	-0.06	0.078
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Mangatangi River at SH2 Maramarua	9	0.013	0.005	0.005	0.041	0.014	1.85	0.022
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Mangawara Stm at Rutherford Rd Br	11	0.279	0.187	0.118	0.710	0.175	1.55	0.365
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	0.097	0.077	0.044	0.270	0.044	2.01	0.105
Matahuru Stm at Waiterimu Road Below Confluence	11	0.040	0.027	0.016	0.123	0.027	1.82	0.048
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	0.011	0.005	0.005	0.049	0.003	2.74	-
Ohaeroa Stm at SH22 Br	9	0.016	0.005	0.005	0.043	0.023	1.07	0.012
Opuatia Stm at Ponganui Rd	9	0.012	0.005	0.005	0.026	0.015	0.55	0.012
Pokaiwhenua Stm at Puketurua	11	0.030	0.005	0.005	0.158	0.042	2.32	0.008
Waahi Stm at Te Ohaki Rd	11	0.011	0.005	0.005	0.046	0.007	2.87	-
Waerenga Stm at Taniwha Rd	9	0.020	0.014	0.005	0.038	0.025	0.39	0.014
Waitawhiriwhiri Stm at Edgecumbe Street	11	0.694	0.590	0.420	1.960	0.160	3.02	0.580
Whakapipi Stm at SH22 Br	9	0.017	0.015	0.005	0.043	0.022	0.87	0.013
Whakauru Stm at U/S SH1 Br	11	0.070	0.017	0.005	0.610	0.018	3.28	0.013
Whangamarino River at Island Block Rd	9	0.288	0.134	0.011	0.840	0.474	1.09	0.143
Whangamarino River at Jefferies Rd Br	9	0.028	0.015	0.005	0.129	0.024	2.67	0.039
Whangape Stm at Rangiriri-Glen Murray Rd	9	0.066	0.005	0.005	0.440	0.041	2.81	0.005

IQR = Inter quartile range      - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	0.006	0.005	0.005	0.015	0.000	2.23	-
Kaniwhaniwha Stm at Wright Rd	11	0.011	0.005	0.005	0.023	0.010	0.82	0.018
Mangaohoi Stm at South Branch Maru Rd	11	0.007	0.005	0.005	0.017	0.004	1.64	0.005
Mangaokewa Stm at Lawrence Street Br	10	0.013	0.014	0.005	0.023	0.006	-0.15	0.015
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	0.033	0.012	0.005	0.129	0.044	1.60	0.056
Mangapu River at Otorohanga	11	0.031	0.015	0.005	0.152	0.010	2.81	0.022
Mangarama at Gadsby Rd	10	0.015	0.008	0.005	0.041	0.014	1.19	-
Mangarapa Stm at Otorohanga Rd	11	0.033	0.027	0.005	0.176	0.026	2.93	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.006	0.005	0.005	0.011	0.000	1.97	0.005
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.006	0.005	0.005	0.020	0.000	3.32	0.005
Moakurua Stm at Warratah Farm Bridge	11	0.012	0.005	0.005	0.028	0.017	0.79	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.065	0.048	0.005	0.230	0.053	2.16	0.073
Puniu River at Bartons Corner Rd Br	11	0.013	0.012	0.005	0.028	0.015	0.47	0.021
Puniu River at Wharepapa Rd Bridge	11	0.008	0.005	0.005	0.021	0.004	1.72	-
Waipa River at Mangaokewa Rd	10	0.007	0.005	0.005	0.022	0.000	2.61	0.005
Waipa River at Ngaruawahia Br	11	0.022	0.018	0.005	0.043	0.016	0.38	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.018	0.014	0.005	0.059	0.012	2.17	0.020
Waipa River at SH3 Otorohanga	11	0.017	0.012	0.005	0.063	0.016	2.14	0.013
Waitomo Stm at SH31 Otorohanga	11	0.020	0.005	0.005	0.062	0.023	1.36	0.015
Waitomo Stm at Tumutumu Rd	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	0.022	0.022	0.005	0.048	0.034	0.51	0.014
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.027	0.005	0.005	0.194	0.016	3.20	0.005
Mangakara Stm (Reporoa) at SH5	11	0.021	0.018	0.013	0.056	0.006	2.74	0.020
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Otamakokore Stm at Hossack Rd	11	0.011	0.005	0.005	0.059	0.000	3.13	0.005
Pueto Stm at Broadlands Rd Br	11	0.008	0.005	0.005	0.023	0.005	2.30	0.005
Tahunaatara Stm at Ohakuri Rd	11	0.026	0.012	0.005	0.084	0.045	1.25	0.005
Torepatutahi Stm at Vaile Rd Br	11	0.010	0.005	0.005	0.019	0.012	0.57	0.005
Waiotapu Stm at Campbell Rd Br	11	0.920	0.930	0.770	1.020	0.090	-0.86	0.860
Waiotapu Stm at Homestead Rd Br	11	0.260	0.240	0.057	0.570	0.331	0.54	0.285
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	0.008	0.005	0.005	0.033	0.000	3.08	0.005
Whirinaki Stm at Corbett Rd	11	0.033	0.005	0.005	0.300	0.000	3.31	0.005
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Awakino River at SH3 Awakau Rd Junction	10	0.007	0.005	0.005	0.014	0.000	1.80	0.005
Manganui River at Off Manganui Rd	10	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Mangaotaki River at SH3 Br	10	0.008	0.005	0.005	0.014	0.006	0.76	0.005
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.006	0.005	0.005	0.014	0.000	3.32	0.005
Mokau River at Awakau Rd	10	0.018	0.019	0.005	0.034	0.014	0.18	0.015
Mokau River at Mangaokewa Rd (Off SH30)	10	0.006	0.005	0.005	0.010	0.000	3.16	0.005
Mokau River at Totoro Rd Recorder	10	0.012	0.014	0.005	0.020	0.011	-0.28	0.010
Mokauiti Stm at Three Way Point - Aria	10	0.019	0.012	0.005	0.048	0.027	0.69	0.015
Ohautira Stm at Waingaro Te Uku Rd	11	0.006	0.005	0.005	0.013	0.000	3.32	0.005
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.006	0.005	0.005	0.015	0.000	2.42	0.005
Tawarau River at Off Speedies Rd	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.010	0.005	0.005	0.058	0.000	3.32	0.005
Waitetuna River at Te Uku-Waingaro Rd	11	0.008	0.005	0.005	0.015	0.005	1.11	0.005
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Kuratau River at SH41 Moerangi	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Kuratau River at Te Rae Street T10	11	0.007	0.005	0.005	0.015	0.000	1.99	0.005
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.006	0.005	0.005	0.019	0.000	3.32	0.005
Tokaanu Stm at Off SH41 Turangi	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waihaha River at SH32	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waitahanui River at Blake Rd	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Whangamata Stm (Kinloch) at Whangamata Rd	11	0.006	0.005	0.005	0.012	0.000	1.92	0.005
Whanganui Stm at Lakeside Lake Taupo T8	10	0.007	0.005	0.005	0.018	0.000	2.36	0.005
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.005	0.005	0.005	0.005	0.000	0.00	0.005

IQR = Inter quartile range - = five-year record not available

Nitrate/Nitrite Nitrogen (g/m <sup>3</sup> )								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.05	0.00	0.00	0.32	0.04	2.85	0.03
Kauaeranga River at Smiths Cableway/Recorder	10	0.01	0.00	0.00	0.03	0.00	1.96	0.01
Ohinemuri River at Karangahake	10	0.40	0.38	0.06	0.77	0.29	0.27	-
Ohinemuri River at Queens Head	10	1.04	1.16	0.19	1.61	0.52	-1.00	1.03
Ohinemuri River at SH25 Br	10	0.32	0.24	0.07	0.69	0.40	0.60	0.48
Tairua River at Morrisons Br Hikuai	10	0.02	0.00	0.00	0.08	0.03	1.84	0.02
Tapu River at Tapu-Coroglen Rd	10	0.01	0.00	0.00	0.04	0.00	2.98	0.00
Waiau River at E309 Rd Ford	10	0.02	0.01	0.00	0.14	0.01	3.03	0.02
Waitekauri River at U/S Ohinemuri Conflu	10	0.07	0.03	0.00	0.24	0.12	1.06	0.11
Waiwawa River at SH25 Coroglen	10	0.01	0.00	0.00	0.03	0.01	2.15	0.01
Wharekawa River at SH25	10	0.05	0.01	0.00	0.28	0.06	2.57	0.04
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.28	0.27	0.11	0.48	0.18	0.36	0.31
Oraka Stm at Lake Rd	11	2.23	2.10	1.89	3.30	0.18	2.04	2.20
Piako River at Kiwitahi	10	0.83	0.13	0.01	2.90	1.99	1.12	0.61
Piako River at Paeroa-Tahuna Rd Br	10	1.01	0.74	0.01	2.80	1.12	1.16	1.39
Piakonui Stm at Piakonui Rd	10	0.21	0.15	0.12	0.40	0.17	1.05	0.25
Waihou River at Okauia	10	1.08	1.03	0.87	1.32	0.29	0.50	1.21
Waihou River at Te Aroha	10	1.00	0.96	0.83	1.23	0.20	0.81	1.18
Waihou River at Whites Rd	11	0.82	0.84	0.66	0.87	0.05	-2.55	0.86
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.12	0.12	0.11	0.15	0.03	0.36	0.16
Waiomou Stm at Matamata-Tauranga Rd	10	0.43	0.38	0.26	0.88	0.21	1.64	0.49
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.17	0.02	0.01	0.54	0.28	0.96	0.18
Waitoa River at Landsdowne Rd Br	10	1.11	1.05	0.59	2.20	0.43	1.22	1.45
Waitoa River at Mellon Rd Recorder	10	1.30	1.18	0.36	2.90	0.75	0.95	1.97
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	0.76	0.66	0.00	2.20	1.25	0.76	1.35
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.55	0.53	0.06	0.92	0.30	-0.38	0.43
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.57	0.26	0.12	1.57	0.93	1.14	0.65
Kirikiri Stm at Tauhara Dr	11	0.57	0.40	0.26	1.31	0.52	1.01	0.67
Komakorau Stm at Henry Rd	11	1.94	1.25	0.92	5.20	0.76	1.78	1.39
Little Waipa Stm at Arapuni - Putaruru Rd	10	1.78	1.78	1.54	2.00	0.25	-0.05	2.00
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	1.02	0.75	0.67	2.60	0.30	2.16	0.83
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	2.44	2.30	0.65	3.80	0.38	-0.39	2.45
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	1.81	1.82	1.27	2.40	0.36	0.10	2.20
Mangaonua Stm at Hoeka Rd	10	1.24	1.13	0.98	1.96	0.29	1.61	1.34
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.40	0.30	0.15	0.95	0.28	1.31	0.47
Mangatangi River at SH2 Maramarua	9	0.17	0.03	0.01	0.70	0.28	1.69	0.22
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.08	0.00	0.00	0.32	0.14	1.44	0.02
Mangawara Stm at Rutherford Rd Br	11	1.03	0.81	0.29	3.00	0.43	1.70	0.89
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	1.46	1.10	1.04	3.50	0.25	2.32	1.90
Matahuru Stm at Waiterimu Road Below Confluence	11	0.59	0.33	0.05	1.59	1.05	0.84	0.74
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	0.05	0.00	0.00	0.25	0.04	1.95	-
Ohaeroa Stm at SH22 Br	9	1.35	1.32	1.07	1.81	0.28	0.87	1.67
Opuatia Stm at Ponganui Rd	9	0.73	0.67	0.38	1.16	0.28	0.46	0.83
Pokaiwhenua Stm at Puketurua	11	2.00	1.95	1.75	2.40	0.24	0.89	2.10
Waahi Stm at Te Ohaki Rd	11	0.13	0.00	0.00	0.63	0.18	1.67	-
Waerenga Stm at Taniwha Rd	9	0.55	0.64	0.13	1.05	0.60	0.09	0.78
Waitawhiriwhiri Stm at Edgecumbe Street	11	0.89	0.94	0.68	1.18	0.19	0.30	0.84
Whakapipi Stm at SH22 Br	9	2.30	1.79	1.28	4.00	1.42	0.70	3.80
Whakauru Stm at U/S SH1 Br	11	1.37	1.40	0.67	1.60	0.19	-2.14	1.25
Whangamarino River at Island Block Rd	9	0.21	0.14	0.03	0.58	0.23	1.34	0.14
Whangamarino River at Jefferies Rd Br	9	0.52	0.21	0.02	1.74	0.91	1.10	0.63
Whangape Stm at Rangiriri-Glen Murray Rd	9	0.16	0.01	0.00	0.95	0.18	2.45	0.01

IQR = Inter quartile range - = five-year record not available



Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	0.42	0.42	0.10	0.78	0.32	0.20	-
Kaniwhaniwha Stm at Wright Rd	11	0.25	0.18	0.00	0.86	0.31	1.41	0.29
Mangaohoi Stm at South Branch Maru Rd	11	0.17	0.16	0.05	0.27	0.09	-0.07	0.20
Mangaokewa Stm at Lawrence Street Br	10	0.56	0.52	0.26	1.11	0.40	0.85	0.63
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	1.29	1.04	0.47	2.70	1.30	0.74	1.33
Mangapu River at Otorohanga	11	0.90	0.92	0.36	1.65	0.83	0.38	0.83
Mangarama at Gadsby Rd	10	1.21	0.87	0.50	2.80	0.42	1.57	-
Mangarapa Stm at Otorohanga Rd	11	0.94	1.07	0.29	2.00	0.73	0.55	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.29	0.16	0.09	0.65	0.34	0.74	0.33
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.02	0.02	0.01	0.05	0.02	0.84	0.05
Moakurua Stm at Warratah Farm Bridge	11	0.39	0.38	0.16	0.78	0.29	0.63	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.41	0.27	0.00	1.38	0.50	1.42	0.47
Puniu River at Bartons Corner Rd Br	11	0.61	0.44	0.30	1.12	0.59	0.79	0.67
Puniu River at Wharepapa Rd Bridge	11	0.52	0.46	0.39	0.76	0.25	0.80	-
Waipa River at Mangaokewa Rd	10	0.27	0.21	0.11	0.58	0.19	1.39	0.33
Waipa River at Ngaruawahia Br	11	0.58	0.46	0.15	1.38	0.37	1.24	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.60	0.61	0.19	1.38	0.53	0.91	0.61
Waipa River at SH3 Otorohanga	11	0.44	0.50	0.05	1.04	0.51	0.33	0.44
Waitomo Stm at SH31 Otorohanga	11	0.58	0.57	0.30	0.93	0.43	0.44	0.56
Waitomo Stm at Tumutumu Rd	11	0.56	0.55	0.41	0.75	0.11	0.51	0.61
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	2.86	3.00	1.98	3.30	0.35	-1.35	3.10
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.57	0.56	0.39	0.80	0.26	0.34	0.64
Mangakara Stm (Reporoa) at SH5	11	1.43	1.44	1.30	1.61	0.09	0.63	1.62
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.79	0.78	0.69	0.99	0.09	1.38	0.77
Otamakokore Stm at Hossack Rd	11	0.82	0.77	0.63	1.33	0.29	1.35	0.92
Pueto Stm at Broadlands Rd Br	11	0.65	0.64	0.61	0.70	0.04	0.25	0.65
Tahunaatara Stm at Ohakuri Rd	11	0.71	0.70	0.50	1.15	0.28	1.06	0.72
Torepatutahi Stm at Vaile Rd Br	11	0.59	0.58	0.52	0.72	0.09	0.64	0.64
Waiotapu Stm at Campbell Rd Br	11	1.03	1.05	0.77	1.19	0.23	-0.58	1.01
Waiotapu Stm at Homestead Rd Br	11	1.45	1.44	1.19	2.00	0.13	2.07	1.48
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	1.44	1.40	1.35	1.61	0.14	0.86	1.46
Whirinaki Stm at Corbett Rd	11	0.84	0.83	0.78	0.99	0.04	2.11	0.84
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.07	0.07	0.02	0.13	0.09	0.14	0.08
Awakino River at SH3 Awakau Rd Junction	10	0.20	0.20	0.04	0.39	0.17	0.10	0.20
Manganui River at Off Manganui Rd	10	0.10	0.09	0.00	0.25	0.16	0.32	0.11
Mangaotaki River at SH3 Br	10	0.60	0.61	0.34	0.92	0.30	0.20	0.68
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.25	0.26	0.15	0.39	0.11	0.34	0.27
Mokau River at Awakau Rd	10	0.34	0.29	0.13	0.99	0.24	2.17	0.42
Mokau River at Mangaokewa Rd (Off SH30)	10	0.36	0.29	0.23	0.73	0.14	1.65	0.42
Mokau River at Totoro Rd Recorder	10	0.50	0.46	0.18	1.12	0.31	1.14	0.58
Mokauiti Stm at Three Way Point - Aria	10	0.36	0.29	0.03	0.84	0.43	0.52	0.28
Ohautira Stm at Waingaro Te Uku Rd	11	0.28	0.21	0.00	0.55	0.38	0.18	0.27
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.14	0.14	0.01	0.41	0.24	0.68	0.11
Tawarau River at Off Speedies Rd	11	0.29	0.29	0.19	0.43	0.12	0.14	0.31
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.39	0.25	0.00	1.08	0.59	0.65	0.46
Waitetuna River at Te Uku-Waingaro Rd	11	0.34	0.30	0.06	0.75	0.42	0.35	0.35
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.06	0.07	0.02	0.10	0.05	-0.22	0.10
Kuratau River at SH41 Moerangi	11	0.08	0.08	0.07	0.12	0.01	1.66	0.16
Kuratau River at Te Rae Street T10	11	0.62	0.60	0.31	1.12	0.27	0.82	0.63
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.76	0.78	0.68	0.83	0.10	-0.35	0.74
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.04	0.05	0.01	0.06	0.02	-0.67	0.05
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.00	0.01	0.00	0.01	0.01	0.26	0.00
Tokaanu Stm at Off SH41 Turangi	11	0.40	0.39	0.35	0.43	0.04	-0.19	0.45
Waihaha River at SH32	11	0.07	0.07	0.05	0.12	0.02	1.24	0.08
Waitahanui River at Blake Rd	11	0.41	0.41	0.37	0.44	0.02	-0.27	0.41
Whangamata Stm (Kinloch) at Whangamata Rd	11	1.21	1.24	1.12	1.29	0.10	-0.61	1.43
Whanganui Stm at Lakeside Lake Taupo T8	10	0.29	0.29	0.24	0.31	0.05	-0.46	0.33
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.65	0.63	0.43	0.88	0.31	0.17	0.69

IQR = Inter quartile range - = five-year record not available

Total Kjeldahl Nitrogen (g/m <sup>3</sup> )								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.07	0.07	0.03	0.09	0.03	-0.79	0.09
Kauaeranga River at Smiths Cableway/Recorder	10	0.04	0.03	0.03	0.07	0.05	0.69	0.07
Ohinemuri River at Karangahake	10	0.19	0.16	0.09	0.53	0.05	2.84	-
Ohinemuri River at Queens Head	10	0.31	0.31	0.11	0.59	0.22	0.50	0.30
Ohinemuri River at SH25 Br	10	0.10	0.11	0.03	0.16	0.03	-0.63	0.13
Tairua River at Morrisons Br Hikuai	10	0.06	0.07	0.03	0.11	0.05	0.02	0.07
Tapu River at Tapu-Coroglen Rd	10	0.04	0.03	0.03	0.08	0.03	1.54	0.06
Waiau River at E309 Rd Ford	10	0.07	0.08	0.03	0.11	0.07	-0.38	0.08
Waitekauri River at U/S Ohinemuri Conflu	10	0.09	0.09	0.06	0.14	0.03	1.25	0.09
Waiwawa River at SH25 Coroglen	10	0.09	0.09	0.03	0.14	0.05	-0.45	0.09
Wharekawa River at SH25	10	0.07	0.08	0.03	0.13	0.03	-0.06	0.08
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.16	0.12	0.07	0.37	0.15	1.30	0.12
Oraka Stm at Lake Rd	11	0.40	0.33	0.14	1.07	0.28	1.51	0.34
Piako River at Kiwitahi	10	0.32	0.28	0.13	0.63	0.13	1.23	0.35
Piako River at Paeroa-Tahuna Rd Br	10	0.53	0.46	0.39	1.07	0.14	2.39	0.60
Piakonui Stm at Piakonui Rd	10	0.18	0.16	0.10	0.36	0.05	1.62	0.17
Waihou River at Okauia	10	0.15	0.13	0.08	0.38	0.03	2.49	0.18
Waihou River at Te Aroha	10	0.18	0.17	0.08	0.28	0.08	0.30	0.23
Waihou River at Whites Rd	11	0.74	0.03	0.03	7.70	0.00	3.31	0.03
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.23	0.12	0.08	1.13	0.07	3.05	0.16
Waiomou Stm at Matamata-Tauranga Rd	10	0.15	0.15	0.07	0.22	0.04	-0.24	0.17
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.30	0.24	0.19	0.71	0.07	2.56	0.28
Waitoa River at Landsdowne Rd Br	10	0.38	0.31	0.22	0.78	0.07	1.58	0.37
Waitoa River at Mellon Rd Recorder	10	0.38	0.34	0.30	0.63	0.06	2.10	0.50
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	9	0.55	0.43	0.31	1.30	0.22	2.38	0.56
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.23	0.21	0.17	0.35	0.06	1.58	0.25
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.36	0.35	0.17	0.70	0.11	1.59	0.36
Kirikiriroa Stm at Tauhara Dr	11	0.47	0.44	0.26	0.63	0.18	-0.25	0.57
Komakorau Stm at Henry Rd	11	1.34	0.97	0.72	2.60	1.11	0.86	1.78
Little Waipa Stm at Arapuni - Putaruru Rd	10	0.36	0.14	0.07	1.79	0.15	2.55	0.19
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	0.98	0.63	0.34	2.60	0.78	1.42	1.20
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	0.75	0.42	0.24	3.60	0.45	2.96	0.59
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	0.42	0.39	0.33	0.60	0.06	1.51	0.44
Mangaonua Stm at Hoeka Rd	10	0.33	0.29	0.23	0.54	0.10	1.40	0.43
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.17	0.17	0.12	0.22	0.05	0.05	0.20
Mangatangi River at SH2 Maramarua	9	0.27	0.19	0.15	0.50	0.21	0.85	0.35
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.13	0.10	0.06	0.27	0.08	1.29	0.12
Mangawara Stm at Rutherford Rd Br	11	0.91	0.69	0.37	1.87	0.51	1.29	1.18
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	0.72	0.58	0.41	1.93	0.39	2.53	0.72
Matahuru Stm at Waiterimu Road Below Confluence	11	0.44	0.31	0.25	0.82	0.36	1.01	0.58
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	5.33	5.20	4.00	6.90	1.65	0.34	-
Ohaeroa Stm at SH22 Br	9	0.35	0.29	0.19	0.74	0.16	1.70	0.27
Opuatia Stm at Ponganui Rd	9	0.33	0.28	0.20	0.68	0.20	1.66	0.27
Pokaiwhenua Stm at Puketurua	11	0.64	0.21	0.16	3.80	0.28	2.96	0.24
Waahi Stm at Te Ohaki Rd	11	1.00	0.80	0.54	2.40	0.51	2.06	-
Waerenga Stm at Taniwha Rd	9	0.35	0.26	0.20	0.68	0.28	1.11	0.28
Waitawhiriwhiri Stm at Edgecumbe Street	11	1.15	1.10	0.74	2.40	0.27	2.49	1.15
Whakapipi Stm at SH22 Br	9	0.40	0.35	0.29	0.66	0.21	1.09	0.34
Whakauru Stm at U/S SH1 Br	11	0.95	0.33	0.21	5.70	0.10	2.80	0.33
Whangamarino River at Island Block Rd	9	2.21	1.94	0.59	3.70	1.74	0.08	1.87
Whangamarino River at Jefferies Rd Br	9	0.46	0.36	0.22	0.83	0.42	0.78	0.48
Whangape Stm at Rangiriri-Glen Murray Rd	9	2.84	1.65	0.48	8.10	3.79	1.23	1.72

IQR = Inter quartile range - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	0.19	0.19	0.10	0.28	0.14	0.14	-
Kaniwhaniwha Stm at Wright Rd	11	0.18	0.15	0.07	0.45	0.07	2.17	0.20
Mangaohoi Stm at South Branch Maru Rd	11	0.13	0.10	0.07	0.36	0.04	2.41	0.12
Mangaokewa Stm at Lawrence Street Br	10	0.29	0.27	0.19	0.38	0.08	0.00	0.25
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	0.50	0.40	0.33	0.97	0.28	1.34	0.65
Mangapu River at Otorohanga	11	0.43	0.28	0.20	1.56	0.20	2.82	0.30
Mangarama at Gadsby Rd	10	0.40	0.33	0.17	0.81	0.29	1.09	-
Mangarapa Stm at Otorohanga Rd	11	0.37	0.35	0.19	1.01	0.17	2.33	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.12	0.12	0.06	0.16	0.06	-0.52	0.16
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.05	0.03	0.03	0.16	0.03	1.80	0.05
Moakurua Stm at Warratah Farm Bridge	11	0.28	0.15	0.10	1.16	0.18	2.78	-
Ohote Stm at Whatawhata/Horotiu Rd	11	0.72	0.62	0.47	1.13	0.43	0.76	0.76
Puniu River at Bartons Corner Rd Br	11	0.22	0.23	0.11	0.44	0.09	1.29	0.27
Puniu River at Wharepapa Rd Bridge	11	0.16	0.16	0.10	0.22	0.07	-0.23	-
Waipa River at Mangaokewa Rd	10	0.23	0.19	0.15	0.43	0.12	1.38	0.18
Waipa River at Ngaruawahia Br	11	0.27	0.25	0.12	0.54	0.16	1.00	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.28	0.25	0.19	0.54	0.07	2.27	0.26
Waipa River at SH3 Otorohanga	11	0.31	0.17	0.14	1.42	0.11	3.11	0.21
Waitomo Stm at SH31 Otorohanga	11	0.25	0.21	0.12	0.57	0.14	1.46	0.23
Waitomo Stm at Tumutumu Rd	11	0.17	0.12	0.07	0.63	0.08	2.81	0.13
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	0.50	0.28	0.13	1.85	0.39	2.23	0.31
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.63	0.15	0.12	5.10	0.13	3.29	0.21
Mangakara Stm (Reporoa) at SH5	11	0.35	0.23	0.12	1.32	0.18	2.86	0.28
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.08	0.07	0.03	0.13	0.04	0.03	0.12
Otamakokore Stm at Hossack Rd	11	0.29	0.18	0.12	0.70	0.33	1.22	0.24
Pueto Stm at Broadlands Rd Br	11	0.07	0.06	0.03	0.13	0.04	0.66	0.09
Tahunaatara Stm at Ohakuri Rd	11	0.55	0.18	0.08	3.40	0.35	2.91	0.21
Torepatutahi Stm at Vaile Rd Br	11	0.11	0.09	0.06	0.20	0.03	1.64	0.13
Waiotapu Stm at Campbell Rd Br	11	1.09	1.09	0.82	1.72	0.19	2.09	0.99
Waiotapu Stm at Homestead Rd Br	11	0.62	0.33	0.20	1.83	0.55	1.67	0.61
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	0.48	0.13	0.09	2.70	0.51	2.62	0.16
Whirinaki Stm at Corbett Rd	11	0.25	0.06	0.03	2.10	0.08	3.26	0.07
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.10	0.08	0.03	0.23	0.06	1.08	0.07
Awakino River at SH3 Awakau Rd Junction	10	0.23	0.17	0.09	0.66	0.18	1.76	0.12
Manganui River at Off Manganui Rd	10	0.16	0.09	0.03	0.34	0.21	0.63	0.11
Mangaotaki River at SH3 Br	10	0.24	0.17	0.14	0.64	0.12	2.26	0.18
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.16	0.14	0.06	0.35	0.14	0.91	0.15
Mokau River at Awakau Rd	10	0.26	0.21	0.16	0.47	0.20	1.09	0.24
Mokau River at Mangaokewa Rd (Off SH30)	10	0.24	0.21	0.12	0.54	0.11	1.82	0.23
Mokau River at Totoro Rd Recorder	10	0.28	0.25	0.18	0.51	0.12	1.35	0.23
Mokauiti Stm at Three Way Point - Aria	10	0.35	0.33	0.30	0.50	0.07	1.85	0.34
Ohautira Stm at Waingaro Te Uku Rd	11	0.14	0.11	0.06	0.31	0.08	1.42	0.13
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.21	0.13	0.07	0.74	0.18	2.35	0.12
Tawarau River at Off Speedies Rd	11	0.15	0.12	0.07	0.31	0.11	1.15	0.13
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.25	0.20	0.16	0.59	0.10	2.50	0.25
Waitetuna River at Te Uku-Waingaro Rd	11	0.17	0.13	0.09	0.44	0.07	2.07	0.17
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.07	0.07	0.03	0.13	0.03	0.36	0.08
Kuratau River at SH41 Moerangi	11	0.06	0.06	0.03	0.14	0.05	1.34	0.08
Kuratau River at Te Rae Street T10	11	0.11	0.10	0.07	0.15	0.04	0.14	0.13
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.15	0.14	0.03	0.27	0.09	0.09	0.21
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.05	0.03	0.03	0.17	0.02	2.43	0.05
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.08	0.08	0.03	0.13	0.04	0.02	0.10
Tokaanu Stm at Off SH41 Turangi	11	0.33	0.03	0.03	3.30	0.00	3.31	0.03
Waihaha River at SH32	11	0.05	0.05	0.03	0.09	0.05	0.25	0.08
Waitahanui River at Blake Rd	11	0.04	0.03	0.03	0.12	0.02	2.25	0.05
Whangamata Stm (Kinloch) at Whangamata Rd	11	0.08	0.06	0.03	0.23	0.09	1.11	0.15
Whanganui Stm at Lakeside Lake Taupo T8	10	0.10	0.10	0.06	0.17	0.03	1.28	0.10
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.17	0.13	0.09	0.30	0.11	0.85	0.17

IQR = Inter quartile range - = five-year record not available

Total Nitrogen (g/m <sup>3</sup> )								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	0.11	0.08	0.03	0.41	0.03	2.75	0.13
Kauaeranga River at Smiths Cableway/Recorder	10	0.05	0.04	0.03	0.10	0.05	1.02	0.08
Ohinemuri River at Karangahake	10	0.59	0.57	0.34	0.95	0.24	0.56	-
Ohinemuri River at Queens Head	10	1.35	1.51	0.36	1.97	0.68	-0.96	1.37
Ohinemuri River at SH25 Br	10	0.42	0.33	0.23	0.75	0.41	0.59	0.64
Tairua River at Morrisons Br Hikuai	10	0.08	0.07	0.03	0.19	0.04	1.38	0.10
Tapu River at Tapu-Coroglen Rd	10	0.04	0.03	0.03	0.10	0.02	1.57	0.06
Waiau River at E309 Rd Ford	10	0.09	0.08	0.03	0.23	0.06	1.77	0.11
Waitekauri River at U/S Ohinemuri Conflu	10	0.16	0.14	0.07	0.33	0.09	1.22	0.21
Waiwawa River at SH25 Coroglen	10	0.09	0.10	0.03	0.14	0.03	-0.68	0.10
Wharekawa River at SH25	10	0.12	0.09	0.06	0.41	0.02	3.02	0.12
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	0.44	0.35	0.21	0.82	0.34	0.80	0.47
Oraka Stm at Lake Rd	11	2.63	2.44	2.11	4.15	0.59	2.09	2.55
Piako River at Kiwitahi	10	1.14	0.42	0.14	3.53	2.12	1.15	0.96
Piako River at Paeroa-Tahuna Rd Br	10	1.54	1.13	0.46	3.87	1.24	1.32	2.14
Piakonui Stm at Piakonui Rd	10	0.38	0.34	0.26	0.75	0.15	1.60	0.41
Waihou River at Okauia	10	1.23	1.16	0.96	1.70	0.32	1.12	1.39
Waihou River at Te Aroha	10	1.17	1.14	1.05	1.46	0.12	1.46	1.37
Waihou River at Whites Rd	11	1.56	0.88	0.84	8.36	0.05	3.31	0.90
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	0.36	0.24	0.21	1.24	0.09	3.00	0.34
Waiomou Stm at Matamata-Tauranga Rd	10	0.58	0.53	0.40	1.10	0.25	1.78	0.67
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	0.46	0.27	0.20	0.95	0.52	0.80	0.46
Waitoa River at Landsdowne Rd Br	10	1.50	1.31	0.92	2.98	0.80	1.45	1.83
Waitoa River at Mellon Rd Recorder	10	1.68	1.51	0.70	3.53	0.81	1.20	2.67
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	1.31	1.07	0.40	2.59	1.54	0.51	2.02
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.78	0.78	0.25	1.14	0.27	-0.74	0.69
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	0.93	0.61	0.44	2.20	0.90	1.30	0.99
Kirikiri Stm at Tauhara Dr	11	1.04	0.82	0.52	1.90	0.66	0.67	1.29
Komakorau Stm at Henry Rd	11	3.28	2.01	1.68	7.50	1.57	1.56	3.12
Little Waipa Stm at Arapuni - Putaruru Rd	10	2.14	2.06	1.75	3.33	0.37	1.83	2.15
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	2.00	1.36	1.03	5.20	0.88	1.82	1.99
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	3.19	2.92	2.54	4.26	1.27	0.73	3.13
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	2.22	2.24	1.66	2.84	0.25	-0.06	2.70
Mangaonua Stm at Hoeka Rd	10	1.57	1.48	1.26	2.50	0.23	2.10	1.79
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	0.58	0.46	0.35	1.16	0.34	1.37	0.72
Mangatangi River at SH2 Maramarua	9	0.44	0.22	0.16	1.20	0.41	1.42	0.61
Mangatawhiri River at Lyons Rd At Buckingham Br	9	0.21	0.10	0.09	0.59	0.18	1.57	0.16
Mangawara Stm at Rutherford Rd Br	11	1.94	1.56	0.85	4.82	0.95	1.63	2.10
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	2.18	1.66	1.51	5.43	0.31	2.52	2.89
Matahuru Stm at Waiterimu Road Below Confluence	11	1.03	0.61	0.32	2.33	1.24	0.85	1.45
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	5.38	5.20	4.00	6.90	1.59	0.27	-
Ohaeroa Stm at SH22 Br	9	1.70	1.67	1.41	2.00	0.25	0.34	2.02
Opuatia Stm at Ponganui Rd	9	1.06	1.00	0.61	1.59	0.40	0.69	1.10
Pokaiwhenua Stm at Puketurua	11	2.64	2.27	2.02	5.61	0.50	2.71	2.39
Waahi Stm at Te Ohaki Rd	11	1.13	1.05	0.54	2.40	0.58	1.59	-
Waerenga Stm at Taniwha Rd	9	0.90	0.91	0.33	1.73	0.74	0.38	1.09
Waitawhiriwhiri Stm at Edgecumbe Street	11	2.05	2.02	1.42	3.34	0.36	1.60	2.02
Whakapipi Stm at SH22 Br	9	2.71	2.24	1.58	4.30	1.57	0.45	4.26
Whakauru Stm at U/S SH1 Br	11	2.32	1.75	1.52	6.37	0.33	2.59	1.60
Whangamarino River at Island Block Rd	9	2.42	2.51	0.68	4.08	1.82	0.07	2.02
Whangamarino River at Jefferies Rd Br	9	0.97	0.43	0.30	2.46	1.17	0.91	1.25
Whangape Stm at Rangiriri-Glen Murray Rd	9	3.00	1.65	0.88	8.10	3.29	1.33	1.74

IQR = Inter quartile range - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	0.61	0.56	0.37	0.92	0.30	0.47	-
Kaniwhaniwha Stm at Wright Rd	11	0.43	0.32	0.16	1.04	0.28	1.38	0.52
Mangaohoi Stm at South Branch Maru Rd	11	0.30	0.27	0.15	0.59	0.11	1.25	0.33
Mangaokewa Stm at Lawrence Street Br	10	0.85	0.87	0.53	1.46	0.43	0.90	0.90
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	1.80	1.37	0.82	3.67	1.53	0.86	2.14
Mangapu River at Otorohanga	11	1.33	1.21	0.56	2.94	1.16	1.08	1.22
Mangarama at Gadsby Rd	10	1.61	1.16	0.82	3.61	0.74	1.56	-
Mangarapa Stm at Otorohanga Rd	11	1.31	1.46	0.51	2.35	1.13	0.07	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	0.41	0.28	0.17	0.80	0.30	0.77	0.50
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.07	0.05	0.04	0.17	0.06	1.39	0.13
Moakurua Stm at Warratah Farm Bridge	11	0.67	0.59	0.28	1.54	0.24	1.82	-
Ohote Stm at Whatawhata/Horotiu Rd	11	1.13	0.88	0.52	2.11	0.93	0.58	1.41
Puniu River at Bartons Corner Rd Br	11	0.84	0.72	0.47	1.37	0.57	0.60	0.96
Puniu River at Wharepapa Rd Bridge	11	0.69	0.63	0.56	0.90	0.21	0.71	-
Waipa River at Mangaokewa Rd	10	0.50	0.49	0.33	0.85	0.16	1.40	0.54
Waipa River at Ngaruawahia Br	11	0.85	0.70	0.40	1.79	0.61	1.18	-
Waipa River at Pukehoua Bridge on Baffin Road	11	0.88	0.89	0.44	1.72	0.54	0.94	0.91
Waipa River at SH3 Otorohanga	11	0.75	0.72	0.20	1.98	0.77	1.18	0.70
Waitomo Stm at SH31 Otorohanga	11	0.83	0.80	0.46	1.42	0.60	0.69	0.81
Waitomo Stm at Tumutumu Rd	11	0.73	0.68	0.60	1.09	0.08	1.94	0.74
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	3.36	3.33	3.06	3.83	0.27	0.76	3.47
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	1.20	0.71	0.51	5.90	0.34	3.22	0.85
Mangakara Stm (Reporoa) at SH5	11	1.78	1.67	1.50	2.68	0.17	2.72	1.91
Mangakino Stm (Whakamaru) at Sandel Rd	11	0.87	0.85	0.72	1.12	0.09	1.22	0.89
Otamakokore Stm at Hossack Rd	11	1.11	0.95	0.76	1.88	0.59	1.09	1.22
Pueto Stm at Broadlands Rd Br	11	0.72	0.73	0.67	0.74	0.02	-1.64	0.74
Tahunaatara Stm at Ohakuri Rd	11	1.26	0.83	0.63	4.24	0.86	2.49	0.95
Torepatutahi Stm at Vaile Rd Br	11	0.70	0.71	0.58	0.83	0.10	0.31	0.77
Waiotapu Stm at Campbell Rd Br	11	2.12	2.11	1.92	2.49	0.28	0.85	2.01
Waiotapu Stm at Homestead Rd Br	11	2.07	1.79	1.53	3.15	0.62	1.31	2.04
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	1.92	1.59	1.45	4.15	0.55	2.46	1.64
Whirinaki Stm at Corbett Rd	11	1.09	0.86	0.84	2.98	0.15	3.21	0.90
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	0.17	0.15	0.05	0.33	0.13	0.56	0.14
Awakino River at SH3 Awakau Rd Junction	10	0.43	0.38	0.15	0.95	0.37	0.83	0.31
Manganui River at Off Manganui Rd	10	0.26	0.24	0.03	0.50	0.40	0.16	0.23
Mangaotaki River at SH3 Br	10	0.83	0.88	0.48	1.25	0.37	0.09	0.91
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.41	0.41	0.31	0.55	0.17	0.21	0.42
Mokau River at Awakau Rd	10	0.60	0.51	0.34	1.37	0.26	1.94	0.64
Mokau River at Mangaokewa Rd (Off SH30)	10	0.60	0.55	0.35	1.05	0.35	1.02	0.70
Mokau River at Totoro Rd Recorder	10	0.78	0.82	0.40	1.49	0.39	0.86	0.87
Mokauiti Stm at Three Way Point - Aria	10	0.71	0.72	0.33	1.21	0.44	0.36	0.58
Ohautira Stm at Waingaro Te Uku Rd	11	0.42	0.46	0.16	0.83	0.39	0.43	0.39
Oparau River at Langdon Rd (Off Okupata Rd)	11	0.35	0.29	0.12	0.75	0.25	0.85	0.23
Tawarau River at Off Speedies Rd	11	0.44	0.44	0.35	0.54	0.12	0.10	0.44
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	0.64	0.55	0.20	1.67	0.49	1.49	0.64
Waitetuna River at Te Uku-Waingaro Rd	11	0.52	0.42	0.19	1.19	0.49	0.98	0.53
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	0.13	0.12	0.07	0.22	0.07	0.79	0.18
Kuratau River at SH41 Moerangi	11	0.14	0.14	0.09	0.21	0.07	0.35	0.26
Kuratau River at Te Rae Street T10	11	0.73	0.67	0.44	1.22	0.28	0.88	0.79
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	0.92	0.93	0.76	1.09	0.13	0.00	0.95
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	0.09	0.07	0.03	0.23	0.05	2.03	0.11
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	0.08	0.08	0.03	0.14	0.04	-0.01	0.10
Tokaanu Stm at Off SH41 Turangi	11	0.72	0.45	0.41	3.65	0.05	3.31	0.49
Waihaha River at SH32	11	0.13	0.12	0.07	0.20	0.06	0.61	0.18
Waitahanui River at Blake Rd	11	0.45	0.44	0.43	0.49	0.04	0.54	0.46
Whangamata Stm (Kinloch) at Whangamata Rd	11	1.30	1.29	1.15	1.49	0.13	0.30	1.63
Whanganui Stm at Lakeside Lake Taupo T8	10	0.39	0.39	0.30	0.48	0.06	0.24	0.46
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	0.82	0.73	0.61	1.15	0.35	0.60	0.86

IQR = Inter quartile range      - = five-year record not available

Turbidity (NTU)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	1.0	0.8	0.6	2.2	0.3	1.89	1.4
Kauaeranga River at Smiths Cableway/Recorder	10	0.9	0.6	0.4	3.4	0.3	2.95	0.8
Ohinemuri River at Karangahake	10	0.8	0.8	0.5	1.4	0.2	2.04	-
Ohinemuri River at Queens Head	10	0.7	0.8	0.4	1.2	0.3	0.31	1.1
Ohinemuri River at SH25 Br	10	0.7	0.6	0.5	1.1	0.1	1.44	1.0
Tairua River at Morrisons Br Hikuai	10	0.7	0.6	0.5	1.5	0.2	2.50	0.8
Tapu River at Tapu-Coroglen Rd	10	0.7	0.4	0.3	2.9	0.3	2.89	0.8
Waiau River at E309 Rd Ford	10	2.7	1.5	1.1	10.3	0.5	2.19	2.0
Waitekauri River at U/S Ohinemuri Conflu	10	0.8	0.6	0.4	1.7	0.5	1.37	0.7
Waiwawa River at SH25 Coroglen	10	1.4	1.0	0.8	4.8	0.2	3.07	1.3
Wharekawa River at SH25	10	0.9	0.8	0.6	2.1	0.4	2.41	1.4
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	11.3	4.1	0.1	33.0	18.3	1.02	6.8
Oraka Stm at Lake Rd	11	11.0	4.5	2.1	46.0	11.7	1.99	5.1
Piako River at Kiwitahi	10	2.0	1.3	0.3	5.3	1.9	1.04	3.1
Piako River at Paeroa-Tahuna Rd Br	10	6.6	4.6	1.7	27.0	3.6	2.87	8.2
Piakonui Stm at Piakonui Rd	10	3.3	3.0	2.0	7.0	1.6	1.97	3.8
Waihou River at Okauia	10	3.7	2.9	1.1	9.3	2.4	1.55	3.6
Waihou River at Te Aroha	10	3.9	2.8	1.2	8.8	4.3	1.01	5.6
Waihou River at Whites Rd	11	34.6	0.3	0.1	370.0	0.2	3.31	0.6
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	7.4	3.9	1.6	41.0	4.1	3.14	4.5
Waiomou Stm at Matamata-Tauranga Rd	10	3.3	3.3	2.1	5.3	1.7	0.64	4.0
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	4.0	1.9	1.1	12.1	5.8	1.35	5.6
Waitoa River at Landsdowne Rd Br	10	3.0	1.3	0.6	14.4	1.3	2.41	4.9
Waitoa River at Mellon Rd Recorder	10	4.8	4.4	2.5	9.5	1.6	1.93	10.0
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	12.2	11.3	2.3	30.0	10.0	1.06	13.1
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	2.3	2.3	1.2	4.1	1.1	0.67	4.4
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	6.9	6.4	3.4	11.1	3.5	0.41	7.2
Kirikiriroa Stm at Tauhara Dr	11	22.3	21.0	9.0	36.0	14.2	0.21	24.0
Komakorau Stm at Henry Rd	11	74.1	68.0	15.6	137.0	71.3	0.34	77.5
Little Waipa Stm at Arapuni - Putaruru Rd	10	7.9	1.1	0.5	53.0	2.9	2.75	1.8
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	22.1	21.4	9.7	33.0	10.7	-0.01	19.9
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	20.8	5.0	2.2	157.0	2.3	3.14	5.0
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	9.5	9.8	4.9	12.9	4.1	-0.46	9.3
Mangaonua Stm at Hoeka Rd	10	8.1	6.6	5.0	15.4	4.2	1.31	13.6
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	3.1	2.7	2.2	5.9	0.6	2.10	4.1
Mangatangi River at SH2 Maramarua	9	11.2	7.7	3.7	28.0	10.7	1.38	15.4
Mangatawhiri River at Lyons Rd At Buckingham Br	9	5.8	1.9	0.9	20.0	7.5	1.50	2.9
Mangawara Stm at Rutherford Rd Br	11	36.5	40.0	13.5	53.0	15.0	-0.92	45.0
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	52.9	51.5	31.0	77.0	16.0	-0.05	47.0
Matahuru Stm at Waiterimu Road Below Confluence	11	21.1	19.9	8.1	39.0	11.6	0.68	31.0
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	87.7	89.0	55.0	121.0	32.8	0.12	-
Ohaeroa Stm at SH22 Br	9	18.4	7.2	4.1	66.0	21.0	1.86	7.4
Opuatia Stm at Ponganui Rd	9	22.5	11.6	3.6	67.0	35.7	1.18	12.2
Pokaiwhenua Stm at Puketurua	11	22.6	2.7	1.3	174.0	8.0	3.05	2.8
Waahi Stm at Te Ohaki Rd	11	61.7	44.0	16.3	168.0	57.5	1.40	-
Waerenga Stm at Taniwha Rd	9	30.2	6.6	1.6	97.0	58.7	1.18	8.2
Waitawhiriwhiri Stm at Edgecumbe Street	11	30.6	22.0	14.1	52.0	23.5	0.43	32.5
Whakapipi Stm at SH22 Br	9	9.1	3.2	0.6	34.0	10.5	1.70	3.2
Whakauru Stm at U/S SH1 Br	11	66.6	11.0	5.9	540.0	5.2	3.16	9.2
Whangamarino River at Island Block Rd	9	40.8	35.0	19.1	96.0	25.5	1.79	39.0
Whangamarino River at Jefferies Rd Br	9	21.5	23.0	5.4	47.0	22.6	0.42	29.0
Whangape Stm at Rangiriri-Glen Murray Rd	9	72.2	57.0	23.0	149.0	94.3	0.64	58.0

IQR = Inter quartile range - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	7.9	7.1	3.6	15.4	5.6	0.67	-
Kaniwhaniwha Stm at Wright Rd	11	5.3	4.8	2.2	10.1	3.5	0.82	7.4
Mangaohoi Stm at South Branch Maru Rd	11	2.1	2.5	0.4	3.1	1.3	-0.97	1.6
Mangaokewa Stm at Lawrence Street Br	10	6.3	6.5	2.0	12.0	6.7	0.26	6.0
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	8.2	8.3	2.2	14.1	5.1	-0.01	13.2
Mangapu River at Otorohanga	11	12.7	8.0	2.2	45.0	12.8	1.81	13.3
Mangarama at Gadsby Rd	10	12.4	9.6	2.1	29.0	17.8	0.49	-
Mangarapa Stm at Otorohanga Rd	11	13.5	8.8	1.5	57.0	18.1	2.10	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	2.0	2.1	0.9	3.3	1.2	0.04	2.6
Mangauika Stm at Te Awamutu Borough W/S Intake	11	0.8	0.6	0.2	1.9	1.2	0.98	1.0
Moakurua Stm at Warratah Farm Bridge	11	15.1	6.5	2.1	97.0	5.9	3.14	-
Ohote Stm at Whatawhata/Horotiu Rd	11	24.0	21.0	5.5	46.0	29.3	0.22	14.9
Puniu River at Bartons Corner Rd Br	11	4.6	4.3	0.9	8.8	5.1	0.30	7.0
Puniu River at Wharepapa Rd Bridge	11	3.0	3.0	1.2	4.9	1.1	0.40	-
Waipa River at Mangaokewa Rd	10	3.2	1.6	1.1	14.9	0.9	2.81	2.2
Waipa River at Ngaruawahia Br	11	10.8	7.1	3.7	46.0	4.1	3.10	-
Waipa River at Pukehoua Bridge on Baffin Road	11	11.8	9.2	4.1	30.0	11.3	1.22	10.7
Waipa River at SH3 Otorohanga	11	14.3	4.9	1.7	111.0	5.9	3.26	4.6
Waitomo Stm at SH31 Otorohanga	11	16.6	15.9	2.1	51.0	19.1	1.30	12.6
Waitomo Stm at Tumutumu Rd	11	12.2	5.4	2.3	67.0	6.5	3.09	6.1
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	9.1	3.2	2.0	46.0	6.7	2.67	3.3
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	52.8	4.3	2.7	530.0	2.9	3.31	5.9
Mangakara Stm (Reporoa) at SH5	11	10.3	5.8	2.6	48.0	4.4	2.95	5.8
Mangakino Stm (Whakamaru) at Sandel Rd	11	1.3	1.1	0.5	2.6	0.7	0.97	1.6
Otamakokore Stm at Hossack Rd	11	3.8	2.6	1.8	9.4	1.9	1.65	3.3
Pueto Stm at Broadlands Rd Br	11	2.4	2.1	1.0	6.7	0.4	2.75	2.5
Tahunaatara Stm at Ohakuri Rd	11	16.3	2.4	1.5	129.0	6.9	3.18	3.3
Torepatutahi Stm at Vaile Rd Br	11	1.4	1.1	0.7	2.5	0.6	1.03	1.2
Waiotapu Stm at Campbell Rd Br	11	10.8	4.8	3.2	60.0	5.9	3.13	7.6
Waiotapu Stm at Homestead Rd Br	11	14.1	7.4	4.3	45.0	14.5	1.66	12.9
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	35.7	2.7	1.5	330.0	14.8	3.28	3.2
Whirinaki Stm at Corbett Rd	11	6.1	0.6	0.2	61.0	0.8	3.31	0.5
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	5.7	1.4	0.6	30.0	4.1	2.49	1.3
Awakino River at SH3 Awakau Rd Junction	10	24.3	6.1	1.1	112.0	45.2	1.95	3.1
Manganui River at Off Manganui Rd	10	13.0	4.6	1.5	45.0	15.7	1.43	4.2
Mangaotaki River at SH3 Br	10	10.6	5.6	1.4	45.0	8.5	2.23	4.3
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	8.8	5.5	2.1	26.0	6.9	1.51	4.6
Mokau River at Awakau Rd	10	20.3	11.7	5.1	52.0	27.8	0.80	11.1
Mokau River at Mangaokewa Rd (Off SH30)	10	4.1	2.9	1.7	12.2	2.0	2.28	3.4
Mokau River at Totoro Rd Recorder	10	8.8	6.7	1.3	28.0	10.7	1.59	5.6
Mokauiti Stm at Three Way Point - Aria	10	11.7	10.3	2.6	31.0	11.1	1.14	9.4
Ohautira Stm at Waingaro Te Uku Rd	11	6.3	3.7	2.5	22.0	4.2	2.55	5.7
Oparau River at Langdon Rd (Off Okupata Rd)	11	9.8	3.6	1.6	46.0	9.4	2.33	3.3
Tawarau River at Off Speedies Rd	11	7.6	5.4	2.3	20.0	6.4	1.35	3.6
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	8.2	5.3	2.6	35.0	5.5	2.70	7.8
Waitetuna River at Te Uku-Waingaro Rd	11	7.2	4.8	2.9	23.0	5.7	2.20	7.5
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	1.3	1.1	0.7	2.7	0.4	1.69	1.2
Kuratau River at SH41 Moerangi	11	2.0	1.8	1.1	3.4	0.8	1.00	1.7
Kuratau River at Te Rae Street T10	11	1.2	1.0	0.6	3.5	0.4	2.82	1.3
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	3.0	3.1	2.0	5.1	1.0	1.09	3.3
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	1.7	0.7	0.3	8.5	0.8	2.42	0.8
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	1.4	1.0	0.6	4.1	1.1	1.95	1.2
Tokaanu Stm at Off SH41 Turangi	11	4.8	0.2	0.0	49.0	0.2	3.30	0.2
Waihaha River at SH32	11	0.9	0.5	0.3	2.6	0.6	1.65	0.6
Waitahanui River at Blake Rd	11	1.1	0.7	0.3	2.6	1.3	0.90	1.0
Whangamata Stm (Kinloch) at Whangamata Rd	11	1.6	0.6	0.4	4.5	2.6	1.04	1.7
Whanganui Stm at Lakeside Lake Taupo T8	10	2.0	1.6	1.1	5.0	1.2	2.07	1.8
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	4.7	4.0	2.0	10.1	2.4	1.27	3.8

IQR = Inter quartile range - = five-year record not available

Location	pH							17-21 median
	Count	Mean	Median	Min	Max	IQR	Skew	
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	7.1	7.1	6.6	7.3	0.4	-0.78	7.1
Kauaeranga River at Smiths Cableway/Recorder	10	7.0	7.1	6.4	7.3	0.4	-0.82	7.1
Ohinemuri River at Karangahake	10	7.3	7.5	6.6	7.9	0.8	-0.39	-
Ohinemuri River at Queens Head	10	7.1	7.1	6.5	7.5	0.4	-0.37	7.1
Ohinemuri River at SH25 Br	10	7.2	7.3	6.4	8.4	0.8	0.46	7.2
Tairua River at Morrisons Br Hikuai	10	6.8	6.9	6.4	7.2	0.6	-0.47	7.0
Tapu River at Tapu-Coroglen Rd	10	7.4	7.5	6.8	7.7	0.4	-0.92	7.5
Waiau River at E309 Rd Ford	10	7.2	7.4	6.7	7.6	0.6	-0.64	7.3
Waitekauri River at U/S Ohinemuri Conflu	10	7.1	7.2	6.5	7.5	0.7	-0.39	7.2
Waiwawa River at SH25 Coroglen	10	7.0	7.2	6.4	7.3	0.6	-0.65	7.1
Wharekawa River at SH25	10	7.0	7.1	6.3	7.4	0.6	-0.63	7.0
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	7.2	7.2	6.9	7.6	0.4	0.29	7.4
Oraka Stm at Lake Rd	11	7.3	7.3	7.0	7.6	0.3	-0.09	7.3
Piako River at Kiwitahi	10	7.0	7.0	6.6	7.3	0.4	-0.53	7.2
Piako River at Paeroa-Tahuna Rd Br	10	7.4	7.5	6.7	7.8	0.5	-1.01	7.3
Piakonui Stm at Piakonui Rd	10	7.1	7.2	6.3	7.4	0.6	-1.05	7.3
Waihou River at Okauia	10	7.3	7.4	6.7	7.5	0.1	-1.80	7.3
Waihou River at Te Aroha	10	7.3	7.3	6.8	7.6	0.2	-0.67	7.2
Waihou River at Whites Rd	11	6.9	6.9	6.6	7.1	0.2	-0.54	7.0
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	7.1	7.2	6.5	7.5	0.5	-0.44	7.2
Waiomou Stm at Matamata-Tauranga Rd	10	7.0	7.2	6.5	7.3	0.3	-1.10	7.2
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	7.2	7.1	6.8	7.4	0.5	-0.21	7.2
Waitoa River at Landsdowne Rd Br	10	7.0	7.1	6.5	7.4	0.3	-0.49	7.1
Waitoa River at Mellon Rd Recorder	10	7.5	7.6	6.7	7.8	0.4	-1.30	7.4
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	7.0	7.1	6.0	7.7	1.1	-0.63	7.2
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	7.9	8.0	7.7	8.2	0.2	-0.02	7.9
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	7.2	7.2	6.7	7.3	0.2	-1.87	7.2
Kirikirihoa Stm at Tauhara Dr	11	6.9	6.9	6.6	7.2	0.4	-0.10	7.0
Komakorau Stm at Henry Rd	11	6.6	6.7	5.9	7.1	0.3	-1.20	6.7
Little Waipa Stm at Arapuni - Putaruru Rd	10	6.9	6.9	6.6	7.2	0.2	0.20	7.0
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	10	7.0	7.2	5.7	7.4	0.4	-2.24	7.1
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	7.4	7.5	6.7	7.7	0.3	-1.45	7.5
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	7.4	7.4	7.2	7.6	0.1	-0.44	7.4
Mangaonua Stm at Hoeka Rd	10	7.0	7.0	6.6	7.2	0.1	-1.65	7.0
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	7.3	7.5	6.5	7.7	0.7	-1.04	7.4
Mangatangi River at SH2 Maramarua	9	7.1	7.1	6.8	7.5	0.3	0.61	7.2
Mangatawhiri River at Lyons Rd At Buckingham Br	9	7.2	7.4	6.9	7.5	0.5	-0.36	7.4
Mangawara Stm at Rutherford Rd Br	11	6.8	7.0	6.1	7.2	0.3	-1.47	6.8
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	7.0	7.2	6.2	7.3	0.2	-1.98	7.1
Matahuru Stm at Waiterimu Road Below Confluence	11	7.1	7.2	6.4	7.4	0.5	-1.10	7.1
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	7.4	7.4	7.2	7.6	0.2	-0.15	-
Ohaeroa Stm at SH22 Br	9	7.2	7.1	6.9	7.6	0.4	0.23	7.4
Opuatia Stm at Ponganui Rd	9	7.4	7.4	7.1	7.7	0.4	0.09	7.5
Pokaiwhenua Stm at Puketurua	11	7.1	7.1	6.8	7.2	0.2	-0.89	7.2
Waahi Stm at Te Ohaki Rd	11	7.9	7.9	7.3	8.4	0.5	-0.10	-
Waerenga Stm at Taniwha Rd	9	7.2	7.3	6.9	7.5	0.3	-0.27	7.4
Waitawhiriwhiri Stm at Edgecumbe Street	11	7.1	7.1	6.8	7.3	0.1	-0.67	7.1
Whakapipi Stm at SH22 Br	9	7.2	7.2	6.8	7.5	0.3	-0.61	7.4
Whakauru Stm at U/S SH1 Br	11	7.2	7.3	6.9	7.5	0.3	-0.56	7.4
Whangamarino River at Island Block Rd	9	7.1	7.2	6.6	7.6	0.6	-0.12	7.0
Whangamarino River at Jefferies Rd Br	9	7.1	7.2	6.7	7.4	0.4	-0.41	7.2
Whangape Stm at Rangiriri-Glen Murray Rd	9	7.4	7.4	7.0	7.9	0.6	0.22	7.5

IQR = Inter quartile range      - = five-year record not available



Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	7.0	7.0	6.6	7.3	0.2	-0.98	-
Kaniwhaniwha Stm at Wright Rd	11	7.1	7.1	6.7	7.5	0.3	-0.04	7.2
Mangaohoi Stm at South Branch Maru Rd	11	7.3	7.4	6.7	7.7	0.5	-0.72	7.4
Mangaokewa Stm at Lawrence Street Br	10	7.4	7.5	6.8	7.6	0.3	-1.45	7.4
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	7.5	7.5	6.6	8.7	0.9	0.46	7.4
Mangapu River at Otorohanga	11	7.5	7.5	7.1	7.8	0.5	0.02	7.6
Mangarama at Gadsby Rd	10	7.7	7.7	6.8	8.6	0.9	-0.13	-
Mangarapa Stm at Otorohanga Rd	11	7.4	7.2	7.0	7.8	0.5	0.26	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	7.0	7.2	6.4	7.4	0.4	-1.15	7.2
Mangauika Stm at Te Awamutu Borough W/S Intake	11	7.2	7.2	6.1	7.5	0.3	-2.39	7.4
Moakurua Stm at Warratah Farm Bridge	11	7.4	7.5	7.1	7.7	0.3	-0.26	-
Ohote Stm at Whatawhata/Horotiu Rd	11	6.7	6.7	6.0	7.2	0.4	-0.56	6.7
Puniu River at Bartons Corner Rd Br	11	7.1	7.1	6.6	7.4	0.4	-0.70	7.2
Puniu River at Wharepapa Rd Bridge	11	7.3	7.4	6.6	7.8	0.7	-0.59	-
Waipa River at Mangaokewa Rd	10	7.1	7.1	6.4	7.8	0.7	-0.11	7.3
Waipa River at Ngaruawahia Br	11	7.2	7.2	6.8	7.5	0.2	-0.64	-
Waipa River at Pukehoua Bridge on Baffin Road	11	7.3	7.4	6.7	7.5	0.4	-1.37	7.4
Waipa River at SH3 Otorohanga	11	7.1	7.2	6.7	7.5	0.6	-0.13	7.3
Waitomo Stm at SH31 Otorohanga	11	7.6	7.5	7.1	8.2	0.4	0.12	7.7
Waitomo Stm at Tumutumu Rd	11	7.8	7.7	7.5	8.0	0.3	-0.05	7.9
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	7.0	7.0	6.6	7.3	0.3	-0.35	7.1
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	7.2	7.2	6.8	7.4	0.3	-0.95	7.3
Mangakara Stm (Reporoa) at SH5	11	7.0	7.0	6.7	7.3	0.3	-0.21	7.1
Mangakino Stm (Whakamaru) at Sandel Rd	11	7.3	7.4	6.7	7.7	0.5	-0.83	7.4
Otamakokore Stm at Hossack Rd	11	7.9	7.9	7.3	8.3	0.4	-0.76	8.0
Pueto Stm at Broadlands Rd Br	11	7.3	7.3	7.0	7.5	0.3	-0.75	7.4
Tahunaatara Stm at Ohakuri Rd	11	7.4	7.4	6.7	7.6	0.3	-1.52	7.5
Torepatutahi Stm at Vaile Rd Br	11	7.2	7.2	6.9	7.4	0.2	-0.54	7.2
Waiotapu Stm at Campbell Rd Br	11	5.2	5.4	4.1	5.9	0.9	-0.85	5.7
Waiotapu Stm at Homestead Rd Br	11	6.8	6.9	6.3	7.1	0.3	-1.00	6.9
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	7.5	7.5	7.1	7.7	0.4	-0.82	7.7
Whirinaki Stm at Corbett Rd	11	7.1	7.1	6.7	7.3	0.2	-1.02	7.3
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	7.2	7.3	6.6	7.8	0.5	-0.57	7.4
Awakino River at SH3 Awakau Rd Junction	10	7.3	7.4	6.8	7.7	0.3	-0.85	7.5
Manganui River at Off Manganui Rd	10	7.2	7.2	6.7	7.5	0.3	-0.63	7.4
Mangaotaki River at SH3 Br	10	7.6	7.7	7.1	8.0	0.5	-0.74	7.8
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	7.7	7.7	7.5	8.1	0.4	0.18	7.8
Mokau River at Awakau Rd	10	7.3	7.4	6.8	7.7	0.5	-0.50	7.4
Mokau River at Mangaokewa Rd (Off SH30)	10	7.1	7.2	6.6	7.4	0.3	-0.91	7.3
Mokau River at Totoro Rd Recorder	10	7.5	7.6	6.9	7.8	0.3	-1.22	7.7
Mokauiti Stm at Three Way Point - Aria	10	7.1	7.1	6.6	7.4	0.3	-0.75	7.3
Ohautira Stm at Waingaro Te Uku Rd	11	7.3	7.3	6.8	7.7	0.4	-0.27	7.4
Oparau River at Langdon Rd (Off Okupata Rd)	11	7.2	7.2	6.3	7.7	0.5	-0.89	7.4
Tawarau River at Off Speedies Rd	11	7.7	7.7	7.1	8.0	0.4	-1.06	7.8
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	7.3	7.3	6.7	8.2	0.7	0.45	7.4
Waitetuna River at Te Uku-Waingaro Rd	11	7.2	7.1	6.5	7.6	0.5	-0.57	7.4
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	7.3	7.4	6.7	7.6	0.4	-1.10	7.5
Kuratau River at SH41 Moerangi	11	6.9	7.0	6.5	7.2	0.3	-0.43	7.1
Kuratau River at Te Rae Street T10	11	7.3	7.3	6.7	7.7	0.4	-0.76	7.4
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	7.4	7.4	7.0	7.6	0.2	-1.25	7.5
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	7.2	7.2	6.5	7.7	0.4	-0.55	7.3
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	7.4	7.4	6.9	7.7	0.4	-0.83	7.5
Tokaanu Stm at Off SH41 Turangi	11	7.2	7.2	6.8	7.7	0.3	0.51	7.2
Waihaha River at SH32	11	7.2	7.3	6.6	7.5	0.4	-0.84	7.2
Waitahanui River at Blake Rd	11	7.4	7.5	7.2	7.6	0.2	-0.20	7.5
Whangamata Stm (Kinloch) at Whangamata Rd	11	7.3	7.3	6.8	7.5	0.2	-1.57	7.4
Whanganui Stm at Lakeside Lake Taupo T8	10	7.4	7.5	6.6	7.7	0.6	-1.21	7.4
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	7.4	7.4	7.2	7.7	0.3	0.47	7.4

IQR = Inter quartile range - = five-year record not available

<i>Escherichia coli</i> (✓100ml)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	823	630	110	1700	1350	0.48	410
Kauaeranga River at Smiths Cableway/Recorder	10	218	160	36	800	130	2.39	115
Ohinemuri River at Karangahake	10	217	75	13	800	193	1.58	-
Ohinemuri River at Queens Head	10	103	100	37	180	117	0.07	100
Ohinemuri River at SH25 Br	10	340	185	42	1600	180	2.70	150
Tairua River at Morrisons Br Hikuai	10	213	155	18	900	110	2.69	110
Tapu River at Tapu-Coroglen Rd	10	432	140	19	2200	313	2.25	120
Waiau River at E309 Rd Ford	10	329	165	100	1700	80	3.08	160
Waitekauri River at U/S Ohinemuri Conflu	10	182	115	27	600	140	1.77	130
Waiwawa River at SH25 Coroglen	10	115	120	32	250	80	0.77	110
Wharekawa River at SH25	10	536	400	110	1200	520	0.69	320
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	298	90	22	1500	292	2.46	70
Oraka Stm at Lake Rd	11	3597	1200	370	26000	800	3.22	600
Piako River at Kiwitahi	10	582	350	190	1900	360	1.92	500
Piako River at Paeroa-Tahuna Rd Br	10	866	655	150	3400	100	2.74	900
Piakonui Stm at Piakonui Rd	10	118	130	19	220	150	-0.09	90
Waihou River at Okauia	10	442	305	160	1400	250	2.18	310
Waihou River at Te Aroha	10	793	355	150	3600	780	2.44	380
Waihou River at Whites Rd	11	12903	210	80	140000	233	3.32	115
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	271	160	9	900	336	1.28	49
Waiomou Stm at Matamata-Tauranga Rd	10	457	430	190	900	180	1.01	460
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	790	900	160	1700	1008	0.25	280
Waitoa River at Landsdowne Rd Br	10	1035	950	230	1800	1000	0.13	1100
Waitoa River at Mellon Rd Recorder	10	503	525	160	800	220	-0.23	700
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	2703	340	1	13100	2742	1.89	310
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	266	220	80	600	208	1.14	255
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	494	205	110	2700	210	3.06	380
Kirikiri Stm at Tauhara Dr	11	603	700	130	1400	670	0.48	700
Komakorau Stm at Henry Rd	11	2075	2000	230	5700	1825	1.30	1750
Little Waipa Stm at Arapuni - Putaruru Rd	10	6791	255	120	60000	570	3.12	270
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	2279	900	290	12800	500	2.68	1000
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	6081	900	390	29000	2425	1.91	750
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	1464	1000	500	3600	1150	1.30	950
Mangaonua Stm at Hoeka Rd	10	1175	1000	450	2300	700	0.84	1400
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	211	190	70	600	80	2.54	220
Mangatangi River at SH2 Maramarua	9	1338	1400	240	2700	1150	0.23	600
Mangatawhiri River at Lyons Rd At Buckingham Br	9	604	400	70	1400	870	0.70	300
Mangawara Stm at Rutherford Rd Br	11	2797	2500	270	7900	1150	1.68	2150
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	908	800	470	1500	790	0.33	1000
Matahuru Stm at Waiterimu Road Below Confluence	11	783	700	210	1500	475	0.47	800
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	57	60	6	110	85	0.01	-
Ohaeroa Stm at SH22 Br	9	2612	900	130	16000	1588	2.85	500
Opuatia Stm at Ponganui Rd	9	1150	240	60	3900	2003	1.32	320
Pokaiwhenua Stm at Puketurua	11	6644	800	240	39000	7800	2.43	470
Waahi Stm at Te Ohaki Rd	11	66	60	15	170	62	1.07	-
Waerenga Stm at Taniwha Rd	9	4387	700	260	19000	6760	1.73	1000
Waitawhiriwhiri Stm at Edgecumbe Street	11	1776	1600	240	3100	1700	-0.10	1800
Whakapipi Stm at SH22 Br	9	1372	400	32	6600	1445	2.13	490
Whakauru Stm at U/S SH1 Br	11	17755	1500	700	160000	1475	3.22	1200
Whangamarino River at Island Block Rd	9	291	70	24	1100	387	1.57	110
Whangamarino River at Jefferies Rd Br	9	4372	470	230	20000	4665	1.77	1100
Whangape Stm at Rangiriri-Glen Murray Rd	9	272	110	12	1500	220	2.76	80

IQR = Inter quartile range - = five-year record not available

Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	393	300	150	800	410	0.96	-
Kaniwhaniwha Stm at Wright Rd	11	544	240	130	3300	293	3.16	500
Mangaohoi Stm at South Branch Maru Rd	11	198	50	8	1500	102	3.17	55
Mangaokewa Stm at Lawrence Street Br	10	1195	1000	250	3500	900	2.06	600
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	675	600	200	1700	540	1.23	900
Mangapu River at Otorohanga	11	2375	1700	320	10000	2700	2.30	800
Mangarama at Gadsby Rd	10	714	450	190	1800	900	1.09	-
Mangarapa Stm at Otorohanga Rd	11	1146	800	200	4000	1073	1.75	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	185	170	30	300	155	-0.25	190
Mangauika Stm at Te Awamutu Borough W/S Intake	11	22	3	1	140	22	2.80	10
Moakurua Stm at Warratah Farm Bridge	11	2143	240	90	19000	785	3.28	-
Ohote Stm at Whatawhata/Horotiu Rd	11	830	800	90	2300	978	1.01	650
Puniu River at Bartons Corner Rd Br	11	188	140	60	400	200	0.68	295
Puniu River at Wharepapa Rd Bridge	11	235	210	100	480	170	0.92	-
Waipa River at Mangaokewa Rd	10	1316	180	70	10000	60	3.01	190
Waipa River at Ngaruawahia Br	11	648	190	60	5500	100	3.31	-
Waipa River at Pukehoua Bridge on Baffin Road	11	984	400	130	3800	1343	1.88	380
Waipa River at SH3 Otorohanga	11	3991	500	140	40000	393	3.31	330
Waitomo Stm at SH31 Otorohanga	11	2237	700	140	12000	2298	2.58	800
Waitomo Stm at Tumutumu Rd	11	1603	530	90	11000	815	3.14	270
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	3006	1200	270	17000	2600	2.86	445
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	20631	700	160	220000	770	3.32	380
Mangakara Stm (Reporoa) at SH5	11	3908	1600	310	29000	1450	3.27	490
Mangakino Stm (Whakamaru) at Sandel Rd	11	119	120	21	260	104	0.68	85
Otamakokore Stm at Hossack Rd	11	995	450	290	4200	550	2.54	420
Pueto Stm at Broadlands Rd Br	11	111	100	22	430	100	2.26	40
Tahunaatara Stm at Ohakuri Rd	11	4604	320	110	43000	1525	3.28	210
Torepatutahi Stm at Vaile Rd Br	11	466	310	60	1200	565	0.79	190
Waiotapu Stm at Campbell Rd Br	11	1013	10	1	11000	23	3.32	5
Waiotapu Stm at Homestead Rd Br	11	2122	350	90	20000	268	3.31	265
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	2516	240	110	16000	3090	2.52	150
Whirinaki Stm at Corbett Rd	11	11171	60	38	120000	525	3.32	51
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	454	120	69	1500	1020	1.14	110
Awakino River at SH3 Awakau Rd Junction	10	1070	245	36	5400	570	2.14	220
Manganui River at Off Manganui Rd	10	905	275	120	4100	600	1.99	260
Mangaotaki River at SH3 Br	10	924	360	180	3300	1180	1.68	360
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	1222	320	90	5000	715	1.82	220
Mokau River at Awakau Rd	10	567	255	100	2000	850	1.54	210
Mokau River at Mangaokewa Rd (Off SH30)	10	505	240	40	2500	450	2.71	220
Mokau River at Totoro Rd Recorder	10	608	330	100	2700	480	2.39	230
Mokauiti Stm at Three Way Point - Aria	10	635	300	160	2700	200	2.22	300
Ohautira Stm at Waingaro Te Uku Rd	11	675	700	130	1500	780	0.50	355
Oparau River at Langdon Rd (Off Okupata Rd)	11	788	260	50	3800	538	2.14	220
Tawarau River at Off Speedies Rd	11	1864	450	90	9000	728	1.94	230
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	423	310	110	2200	203	3.14	225
Waitetuna River at Te Uku-Waingaro Rd	11	646	330	110	3700	265	3.13	340
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	30	26	14	60	12	1.42	25
Kuratau River at SH41 Moerangi	11	51	48	9	120	72	0.66	19
Kuratau River at Te Rae Street T10	11	101	100	22	250	109	0.68	70
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	112	90	40	220	85	0.62	115
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	32	23	10	130	12	3.06	23
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	26	6	1	200	16	3.23	5
Tokaanu Stm at Off SH41 Turangi	11	26	15	8	130	12	3.13	14
Waihaha River at SH32	11	15	10	4	40	13	1.34	16
Waitahanui River at Blake Rd	11	36	27	20	90	12	1.81	25
Whangamata Stm (Kinloch) at Whangamata Rd	11	199	190	70	520	135	1.79	110
Whanganui Stm at Lakeside Lake Taupo T8	10	96	85	15	300	118	1.44	70
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	213	240	100	320	125	-0.32	160

IQR = Inter quartile range - = five-year record not available

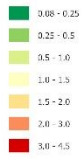
Water Temperature (°C)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	10	15.9	17.2	7.0	20.8	7.1	-0.95	13.7
Kauaeranga River at Smiths Cableway/Recorder	10	16.3	17.4	7.0	21.7	8.0	-0.87	14.3
Ohinemuri River at Karangahake	10	17.5	18.4	8.8	24.7	8.0	-0.42	-
Ohinemuri River at Queens Head	10	17.5	18.5	9.6	23.2	7.8	-0.58	16.4
Ohinemuri River at SH25 Br	10	17.3	18.1	9.3	22.7	6.3	-0.59	16.3
Tairua River at Morrisons Br Hikuai	10	17.2	18.4	9.0	22.4	7.3	-0.71	15.9
Tapu River at Tapu-Coroglen Rd	10	15.8	16.5	5.5	21.5	6.8	-1.04	14.2
Waiau River at E309 Rd Ford	10	15.5	16.5	6.9	20.2	5.7	-1.05	13.9
Waitekauri River at U/S Ohinemuri Conflu	10	16.9	17.8	8.2	23.8	7.2	-0.55	15.8
Waiwawa River at SH25 Coroglen	10	16.8	17.8	7.9	22.0	7.7	-0.79	15.1
Wharekawa River at SH25	10	17.0	18.1	8.8	22.8	6.3	-0.69	15.7
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	9	16.0	16.0	11.6	20.0	5.4	-0.03	14.3
Oraka Stm at Lake Rd	11	15.2	16.1	12.0	17.9	4.5	-0.38	14.5
Piako River at Kiwitahi	10	16.1	17.9	8.9	21.5	8.9	-0.46	15.2
Piako River at Paeroa-Tahuna Rd Br	10	15.7	17.5	8.7	21.0	8.6	-0.43	15.6
Piakonui Stm at Piakonui Rd	10	13.6	14.9	7.9	17.3	4.8	-0.73	13.5
Waihou River at Okauia	10	14.4	15.5	9.7	17.8	4.1	-0.57	14.0
Waihou River at Te Aroha	10	15.2	16.5	9.7	19.4	6.0	-0.47	15.0
Waihou River at Whites Rd	11	13.1	13.6	12.1	14.0	1.3	-0.49	13.1
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	12.1	12.7	9.0	15.0	4.8	-0.25	11.7
Waiomou Stm at Matamata-Tauranga Rd	10	14.3	15.5	8.2	18.8	5.2	-0.63	13.4
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	9	16.8	16.8	11.7	21.1	7.2	-0.20	16.1
Waitoa River at Landsdowne Rd Br	10	15.6	17.4	8.4	21.1	6.2	-0.58	15.7
Waitoa River at Mellon Rd Recorder	10	16.3	18.0	8.5	21.5	8.2	-0.53	16.2
<b>Tributaries to the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	9	17.7	17.8	12.5	22.4	6.7	-0.14	17.3
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	16.3	16.3	9.1	21.4	6.0	-0.45	15.7
Karapiro Stm at Hickey Rd Bridge - Cambridge	10	15.7	18.0	8.6	20.7	6.2	-0.66	14.6
Kirikiri Stm at Tauhara Dr	11	15.9	16.9	10.7	19.3	4.0	-0.71	15.6
Komakorau Stm at Henry Rd	11	16.2	16.7	9.7	21.3	6.3	-0.33	16.2
Little Waipa Stm at Arapuni - Putaruru Rd	10	14.1	14.5	11.8	16.0	3.2	-0.43	14.1
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	10	15.7	17.6	9.5	19.9	4.8	-0.78	15.7
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11	14.4	15.8	10.3	17.6	4.7	-0.55	13.9
Mangaone Stm (Waikato) at Annebrooke Rd Br	11	14.9	15.0	10.5	18.6	3.5	-0.21	14.4
Mangaonua Stm at Hoeka Rd	10	15.2	16.4	9.3	19.0	5.7	-0.66	14.7
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10	15.0	17.4	8.3	19.4	5.4	-0.72	14.6
Mangatangi River at SH2 Maramarua	9	17.4	18.0	12.5	22.0	7.2	-0.13	16.4
Mangatawhiri River at Lyons Rd At Buckingham Br	9	17.2	17.2	12.4	21.5	7.5	-0.07	16.3
Mangawara Stm at Rutherford Rd Br	11	16.4	16.5	9.0	22.2	6.0	-0.32	15.9
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10	15.1	16.5	9.3	19.8	3.9	-0.65	14.8
Matahuru Stm at Waiterimu Road Below Confluence	11	16.1	16.4	8.5	21.7	5.5	-0.58	15.8
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gates	9	17.5	17.5	11.4	22.8	7.8	-0.17	-
Ohaeroa Stm at SH22 Br	9	15.8	16.6	11.0	19.9	6.1	-0.24	14.6
Opuatia Stm at Ponganui Rd	9	16.2	16.7	11.1	20.6	6.0	-0.17	15.0
Pokaiwhenua Stm at Puketurua	11	14.2	15.5	11.3	16.7	3.9	-0.36	13.7
Waahi Stm at Te Ohaki Rd	11	18.1	18.0	9.3	25.0	7.5	-0.31	-
Waerenga Stm at Taniwha Rd	9	15.4	16.4	10.6	19.9	4.9	-0.25	14.3
Waitawhiriwhiri Stm at Edgecumbe Street	11	16.9	17.4	12.0	20.6	3.2	-0.35	16.8
Whakapipi Stm at SH22 Br	9	16.2	17.1	11.9	20.1	4.4	-0.28	15.8
Whakauru Stm at U/S SH1 Br	11	13.1	14.1	9.9	15.5	3.7	-0.73	12.8
Whangamarino River at Island Block Rd	9	18.5	17.7	12.5	24.9	9.4	-0.08	17.5
Whangamarino River at Jefferies Rd Br	9	15.8	16.5	11.1	19.9	5.9	-0.28	15.0
Whangape Stm at Rangiriri-Glen Murray Rd	9	17.5	17.8	11.8	22.2	8.0	-0.25	17.0

IQR = Inter quartile range      - = five-year record not available

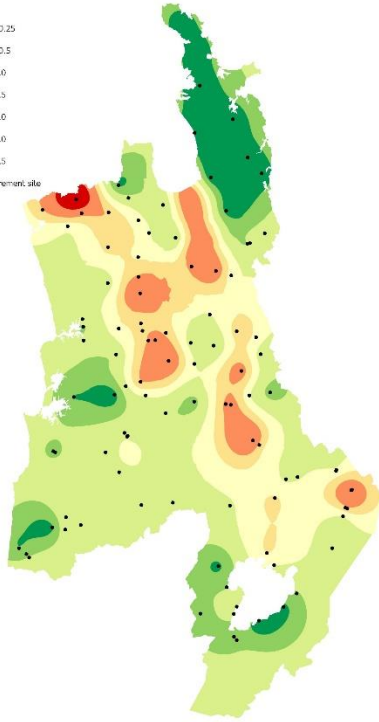
Location	Count	Mean	Median	Min	Max	IQR	Skew	17-21 median
<b>Waipa River and Tributaries</b>								
Firewood Creek at Waingaro Road Bridge	11	15.2	16.0	9.2	19.6	5.3	-0.45	-
Kaniwhaniwha Stm at Wright Rd	11	16.0	16.0	9.3	22.0	4.9	-0.17	15.2
Mangaohoi Stm at South Branch Maru Rd	11	14.6	14.6	10.0	18.9	5.2	-0.09	14.1
Mangaokewa Stm at Lawrence Street Br	10	13.8	13.8	11.9	18.1	2.3	1.14	13.1
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11	17.2	18.2	9.0	24.8	10.3	-0.05	18.0
Mangapu River at Otorohanga	11	16.0	15.6	11.6	19.4	5.7	-0.14	14.9
Mangarama at Gadsby Rd	10	15.4	15.2	11.6	19.2	3.6	0.08	-
Mangarapa Stm at Otorohanga Rd	11	15.8	15.6	10.9	19.4	5.0	-0.28	-
Mangatutu Stm (Waikeria) at Walker Rd Br	11	15.1	14.5	8.3	21.0	8.6	-0.05	14.4
Mangauika Stm at Te Awamutu Borough W/S Intake	11	12.4	12.2	9.3	14.9	1.9	-0.50	12.2
Moakurua Stm at Warratah Farm Bridge	11	14.5	14.2	10.0	17.8	4.8	-0.30	-
Ohote Stm at Whatawhata/Horotiu Rd	11	16.1	16.2	9.0	20.9	5.0	-0.60	16.1
Puniu River at Bartons Corner Rd Br	11	15.6	15.3	8.6	22.1	9.6	0.05	15.7
Puniu River at Wharepapa Rd Bridge	11	15.3	15.0	8.7	22.9	7.5	0.14	1
Waipa River at Mangaokewa Rd	10	13.3	13.5	10.5	17.2	3.5	0.46	12.8
Waipa River at Ngaruawahia Br	11	16.4	17.1	8.3	22.3	7.6	-0.46	-
Waipa River at Pukehoua Bridge on Baffin Road	11	15.8	15.4	10.9	20.0	6.3	-0.06	15.0
Waipa River at SH3 Otorohanga	11	16.1	16.5	10.5	20.8	5.9	-0.20	14.6
Waitomo Stm at SH31 Otorohanga	11	15.2	15.3	11.5	18.0	4.6	-0.23	15.0
Waitomo Stm at Tumutumu Rd	11	14.3	14.0	11.7	16.6	2.8	-0.01	14.0
<b>Tributaries to the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	11	15.3	16.6	12.5	17.5	4.1	-0.37	15.4
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	13.7	14.5	11.1	15.6	3.0	-0.48	13.4
Mangakara Stm (Reporoa) at SH5	11	13.8	15.0	10.5	16.2	4.3	-0.39	13.3
Mangakino Stm (Whakamaru) at Sandel Rd	11	12.4	12.4	7.9	17.2	4.9	0.09	12.2
Otamakokore Stm at Hossack Rd	11	21.0	22.7	16.8	24.4	5.4	-0.42	19.9
Pueto Stm at Broadlands Rd Br	11	14.0	14.4	11.7	15.9	2.7	-0.41	14.0
Tahunaatara Stm at Ohakuri Rd	11	14.5	15.9	10.4	17.9	5.5	-0.57	13.4
Torepatutahi Stm at Vaile Rd Br	11	15.2	15.5	11.7	18.9	4.4	-0.20	14.6
Waiotapu Stm at Campbell Rd Br	11	28.2	29.5	24.1	32.0	5.1	-0.29	27.6
Waiotapu Stm at Homestead Rd Br	11	19.1	20.7	15.0	22.8	4.7	-0.31	17.6
Waipapa Stm (Mokai) at Tirohanga Rd Br	11	22.4	23.3	18.9	24.7	3.8	-0.64	21.8
Whirinaki Stm at Corbett Rd	11	12.7	12.8	10.9	14.6	2.4	-0.15	12.6
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	13.3	13.4	11.6	15.7	1.6	0.57	12.8
Awakino River at SH3 Awakau Rd Junction	10	15.0	15.5	11.8	18.1	4.7	-0.12	14.2
Manganui River at Off Manganui Rd	10	14.3	14.8	11.9	17.6	2.7	0.23	13.5
Mangaotaki River at SH3 Br	10	14.0	14.3	11.9	17.4	2.7	0.46	13.4
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	14.3	14.3	10.7	17.5	3.2	-0.19	14.0
Mokau River at Awakau Rd	10	15.5	15.9	11.6	19.9	5.2	0.02	14.6
Mokau River at Mangaokewa Rd (Off SH30)	10	13.0	12.9	10.8	17.3	3.0	0.94	12.6
Mokau River at Totoro Rd Recorder	10	15.2	15.6	11.8	18.8	4.6	-0.02	14.5
Mokauiti Stm at Three Way Point - Aria	10	15.2	15.5	11.7	18.8	5.2	0.01	14.4
Ohautira Stm at Waingaro Te Uku Rd	11	14.8	15.3	7.8	19.9	5.1	-0.49	14.2
Oparau River at Langdon Rd (Off Okupata Rd)	11	14.5	14.5	10.4	18.0	3.2	-0.34	14.1
Tawarau River at Off Speedies Rd	11	14.3	14.4	10.5	17.4	3.1	-0.26	13.7
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11	16.7	16.3	8.0	23.2	6.2	-0.45	16.0
Waitetuna River at Te Uku-Waingaro Rd	11	15.6	16.0	8.5	20.9	4.8	-0.45	15.0
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	11	12.1	12.8	7.8	16.2	5.5	-0.13	11.4
Kuratau River at SH41 Moerangi	11	10.5	10.8	7.3	14.1	4.5	0.06	9.9
Kuratau River at Te Rae Street T10	11	14.0	13.8	8.4	21.0	7.1	0.42	12.8
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	11	11.5	11.5	8.9	13.6	2.9	-0.17	11.3
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11	11.6	12.3	6.8	16.2	6.0	-0.13	10.9
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	13.7	13.5	8.2	19.3	7.6	-0.02	12.7
Tokaanu Stm at Off SH41 Turangi	11	12.6	12.4	11.1	15.2	2.0	0.79	12.1
Waihaha River at SH32	11	12.4	12.9	8.0	17.1	5.3	-0.06	11.6
Waitahanui River at Blake Rd	11	11.1	11.1	8.9	12.5	2.2	-0.41	11.0
Whangamata Stm (Kinloch) at Whangamata Rd	11	11.0	10.8	8.9	13.0	3.0	-0.08	10.6
Whanganui Stm at Lakeside Lake Taupo T8	10	12.3	12.2	7.0	17.3	6.0	-0.04	11.3
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	11.9	13.2	7.5	16.1	4.9	-0.34	11.4

IQR = Inter quartile range - = five-year record not available

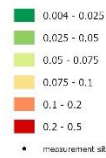
Total Nitrogen (g/m3)



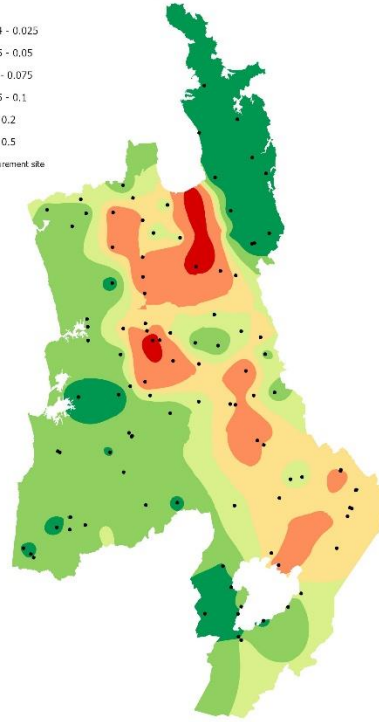
• measurement site



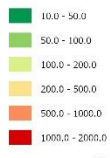
Total Phosphorous (g/m3)



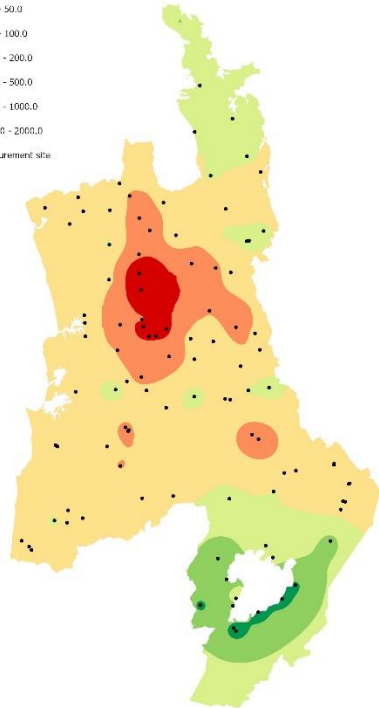
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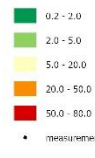
Ecoli (n/100ml)



• measurement site



Turbidity (NTU)



• measurement site

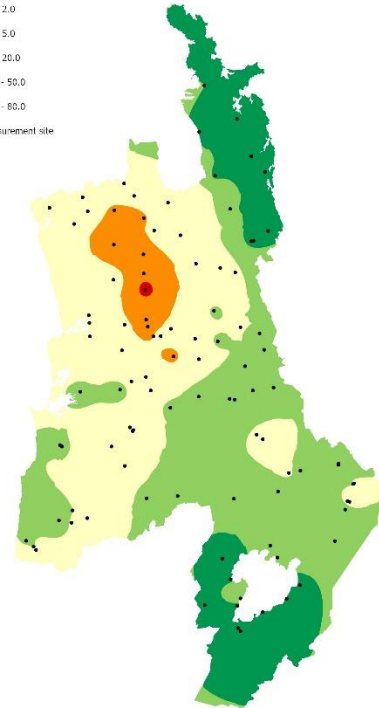


Figure 2: Spatial contour plots of four water quality parameters (based on 5 year median values, 2017-2021); Total Nitrogen, Total Phosphorous, *Escherichia coli*, Turbidity

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

**Table 4: Number of samples (2021) complying with the "satisfactory" and "excellent" water quality guidelines and standards**

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



Waipa River and Tributaries																				
Firewood Creek at Waingaro Road Bridge	8 <sup>1</sup>	11 <sup>1</sup>	3 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	2 <sup>1</sup>	8 <sup>1</sup>	N <sup>1</sup>	3 <sup>1</sup>	8 <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>1</sup>	N <sup>1</sup>	
Kaniwhaniwha Stm at Wright Rd	11 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	1 <sup>4</sup>	9 <sup>1</sup>	N <sup>1</sup>	9 <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>4</sup>	N <sup>1</sup>	
Mangaohoi Stm at South Branch Maru Rd	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	3 <sup>1</sup>	10 <sup>1</sup>	4 <sup>1</sup>	10 <sup>1</sup>	Y <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	4 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Mangaokewa Stm at Lawrence Street Br	10 <sup>2</sup>	10 <sup>2</sup>	4 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	3 <sup>2</sup>	0 <sup>2</sup>	3 <sup>2</sup>	1 <sup>2</sup>	N <sup>2</sup>	7 <sup>2</sup>	9 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	5 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>	
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	11 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	11 <sup>1</sup>	4 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	3 <sup>1</sup>	5 <sup>1</sup>	N <sup>1</sup>	10 <sup>1</sup>	7 <sup>1</sup>	0 <sup>1</sup>	10 <sup>1</sup>	1 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Mangapu River at Otorohanga	11 <sup>1</sup>	11 <sup>1</sup>	4 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	4 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	3 <sup>1</sup>	N <sup>1</sup>	4 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	10 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Mangarama at Gadsby Rd	7 <sup>2</sup>	10 <sup>2</sup>	3 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	5 <sup>2</sup>	0 <sup>2</sup>	-	6 <sup>2</sup>	N <sup>2</sup>	7 <sup>2</sup>	4 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	2 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	-	N <sup>2</sup>	
Mangarapa Stm at Otorohanga Rd	8 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	6 <sup>1</sup>	0 <sup>1</sup>	3 <sup>1</sup>	5 <sup>1</sup>	N <sup>2</sup>	3 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	10 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Mangatutu Stm (Waikeria) at Walker Rd Br	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	8 <sup>1</sup>	11 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Mangauika Stm at Te Awamutu Borough W/S Intake	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	3 <sup>1</sup>	8 <sup>1</sup>	4 <sup>1</sup>	Y <sup>1</sup>	
Moakururua Stm at Warratah Farm Bridge	11 <sup>1</sup>	11 <sup>1</sup>	3 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	7 <sup>1</sup>	2 <sup>1</sup>	2 <sup>1</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>	3 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Ohote Stm at Whatawhata/Horotiu Rd	0 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	4 <sup>1</sup>	N <sup>1</sup>	0 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	9 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Puniu River at Bartons Corner Rd Br	11 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	4 <sup>1</sup>	2 <sup>1</sup>	3 <sup>1</sup>	11 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	3 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Puniu River at Wharepapa Rd Bridge	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	3 <sup>1</sup>	0 <sup>1</sup>	4 <sup>1</sup>	11 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	8 <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>1</sup>	N <sup>1</sup>	
Waipa River at Mangaokewa Rd	10 <sup>2</sup>	9 <sup>2</sup>	9 <sup>2</sup>	10 <sup>2</sup>	10 <sup>2</sup>	9 <sup>2</sup>	5 <sup>2</sup>	7 <sup>2</sup>	8 <sup>2</sup>	N <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	7 <sup>2</sup>	10 <sup>2</sup>	4 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>3</sup>	N <sup>2</sup>	
Waipa River at Ngaruawahia Br	9 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	4 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	10 <sup>1</sup>	N <sup>1</sup>	1 <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>1</sup>	N <sup>1</sup>	
Waipa River at Pukehoua Bridge on Baffin Road	11 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	4 <sup>1</sup>	2 <sup>1</sup>	1 <sup>1</sup>	6 <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>1</sup>	N <sup>1</sup>	
Waipa River at SH3 Otorohanga	11 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	9 <sup>1</sup>	4 <sup>1</sup>	4 <sup>1</sup>	7 <sup>1</sup>	N <sup>1</sup>	10 <sup>1</sup>	7 <sup>1</sup>	3 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Waitomo Stm at SH31 Otorohanga	11 <sup>1</sup>	11 <sup>1</sup>	3 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	7 <sup>1</sup>	1 <sup>1</sup>	0 <sup>1</sup>	4 <sup>1</sup>	N <sup>1</sup>	8 <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>1</sup>	N <sup>1</sup>	
Waitomo Stm at Tumutumu Rd	11 <sup>1</sup>	11 <sup>1</sup>	4 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	2 <sup>1</sup>	6 <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>	0 <sup>1</sup>	N <sup>1</sup>	
Tributaries to the Lower Waikato																				
Awaroa River (Waiuku) at Otua Rd Br opp Moseley Rd	5 <sup>3</sup>	7 <sup>3</sup>	2 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	4 <sup>3</sup>	1 <sup>3</sup>	1 <sup>3</sup>	5 <sup>3</sup>	N <sup>3</sup>	2 <sup>3</sup>	6 <sup>3</sup>	0 <sup>3</sup>	6 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	7 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	7 <sup>1</sup>	9 <sup>1</sup>	N <sup>1</sup>	1 <sup>1</sup>	9 <sup>1</sup>	4 <sup>1</sup>	11 <sup>1</sup>	3 <sup>1</sup>	6 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Karapiro Stm at Hickey Rd Bridge - Cambridge	8 <sup>2</sup>	10 <sup>2</sup>	2 <sup>2</sup>	10 <sup>2</sup>	6 <sup>2</sup>	0 <sup>2</sup>	4 <sup>2</sup>	1 <sup>3</sup>	9 <sup>2</sup>	N <sup>2</sup>	3 <sup>2</sup>	9 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	2 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>3</sup>	N <sup>2</sup>	
Kirikiroa Stm at Tauhara Dr	1 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	1 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	5 <sup>1</sup>	N <sup>1</sup>	0 <sup>1</sup>	5 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Komakorau Stm at Henry Rd	0 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	9 <sup>1</sup>	7 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	1 <sup>1</sup>	N <sup>1</sup>	0 <sup>1</sup>	1 <sup>1</sup>	0 <sup>1</sup>	2 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Little Waipa Stm at Arapuni - Putaruru Rd	8 <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	5 <sup>2</sup>	7 <sup>2</sup>	N <sup>2</sup>	2 <sup>2</sup>	3 <sup>2</sup>	7 <sup>2</sup>	9 <sup>2</sup>	5 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>	
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	10 <sup>2</sup>	9 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	3 <sup>2</sup>	N <sup>2</sup>	1 <sup>2</sup>	7 <sup>2</sup>	0 <sup>2</sup>	3 <sup>2</sup>	2 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>	
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	11 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	2 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	7 <sup>1</sup>	4 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Mangaone Stm (Waikato) at Annebrooke Rd Br	3 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	1 <sup>1</sup>	N <sup>1</sup>	0 <sup>1</sup>	11 <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>1</sup>	N <sup>1</sup>	
Mangaonua Stm at Hoeka Rd	3 <sup>2</sup>	10 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	3 <sup>2</sup>	0 <sup>2</sup>	1 <sup>2</sup>	N <sup>2</sup>	N <sup>2</sup>	0 <sup>2</sup>	8 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	2 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>	
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	10 <sup>2</sup>	10 <sup>2</sup>	9 <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	10 <sup>2</sup>	6 <sup>2</sup>	4 <sup>2</sup>	9 <sup>2</sup>	N <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	2 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>	
Mangatangi River at SH2 Maramarua	8 <sup>3</sup>	9 <sup>3</sup>	2 <sup>3</sup>	9 <sup>3</sup>	2 <sup>3</sup>	5 <sup>3</sup>	5 <sup>3</sup>	0 <sup>3</sup>	1 <sup>3</sup>	N <sup>3</sup>	1 <sup>3</sup>	7 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	
Mangatawhiri River at Lyons Rd At Buckingham Br	9 <sup>3</sup>	9 <sup>3</sup>	6 <sup>3</sup>	9 <sup>3</sup>	2 <sup>3</sup>	7 <sup>3</sup>	8 <sup>3</sup>	5 <sup>3</sup>	5 <sup>3</sup>	N <sup>3</sup>	9 <sup>3</sup>	7 <sup>3</sup>	5 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	2 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	
Mangawara Stm at Rutherford Rd Br	0 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	1 <sup>1</sup>	N <sup>1</sup>	0 <sup>1</sup>	6 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	3 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	10 <sup>2</sup>	9 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	3 <sup>2</sup>	N <sup>2</sup>	1 <sup>2</sup>	8 <sup>2</sup>	0 <sup>2</sup>	8 <sup>2</sup>	2 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>	
Matahuru Stm at Waiterimu Road Below Confluence	9 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	0 <sup>1</sup>	3 <sup>1</sup>	-	2 <sup>1</sup>	N <sup>1</sup>	0 <sup>1</sup>	8 <sup>1</sup>	0 <sup>1</sup>	10 <sup>1</sup>	3 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	-	N <sup>1</sup>	
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Control Gates	4 <sup>1</sup>	9 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	3 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	Y <sup>3</sup>	1 <sup>4</sup>	9 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	
Ohaeroa Stm at SH22 Br	9 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	9 <sup>3</sup>	7 <sup>3</sup>	6 <sup>3</sup>	0 <sup>3</sup>	0 <sup>4</sup>	3 <sup>3</sup>	N <sup>3</sup>	3 <sup>3</sup>	8 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>4</sup>	N <sup>3</sup>	
Opuatia Stm at Ponganui Rd	9 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	9 <sup>3</sup>	5 <sup>3</sup>	6 <sup>3</sup>	0 <sup>3</sup>	0 <sup>4</sup>	6 <sup>3</sup>	N <sup>3</sup>	6 <sup>3</sup>	9 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>4</sup>	N <sup>3</sup>	
Pokaiwhenua Stm at Puketurua	11 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	5 <sup>1</sup>	N <sup>1</sup>	7 <sup>1</sup>	9 <sup>1</sup>	2 <sup>1</sup>	10 <sup>1</sup>	5 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Waahi Stm at Te Ohaki Rd	8 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	11 <sup>1</sup>	Y <sup>1</sup>	5 <sup>1</sup>	8 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	N <sup>1</sup>	
Waerenga Stm at Taniwha Rd	9 <sup>3</sup>	9 <sup>3</sup>	4 <sup>3</sup>	9 <sup>3</sup>	7 <sup>3</sup>	2 <sup>3</sup>	2 <sup>3</sup>	2 <sup>3</sup>	3 <sup>3</sup>	N <sup>3</sup>	4 <sup>3</sup>	8 <sup>3</sup>	1 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	
Waitawhiriwhiri Stm at Edgecumbe Street	4 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	10 <sup>1</sup>	5 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	2 <sup>1</sup>	N <sup>1</sup>	0 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Whakapipi Stm at SH22 Br	6 <sup>3</sup>	9 <sup>3</sup>	5 <sup>3</sup>	9 <sup>3</sup>	5 <sup>3</sup>	4 <sup>3</sup>	0 <sup>3</sup>	5 <sup>3</sup>	6 <sup>3</sup>	N <sup>3</sup>	3 <sup>3</sup>	8 <sup>3</sup>	2 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	1 <sup>3</sup>	N <sup>3</sup>	
Whakauru Stm at U/S SH1 Br	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	10 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	10 <sup>1</sup>	7 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>	
Whangamarino River at Island Block Rd	4 <sup>3</sup>	9 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	7 <sup>3</sup>	Y <sup>3</sup>	3 <sup>3</sup>	5 <sup>3</sup>	0 <sup>3</sup>	3 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	
Whangamarino River at Jefferies Rd Br	1 <sup>3</sup>	9 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	7 <sup>3</sup>	0 <sup>3</sup>	5 <sup>3</sup>	0 <sup>3</sup>	5 <sup>3</sup>	N <sup>3</sup>	0 <sup>3</sup>	6 <sup>3</sup>	0 <sup>3</sup>	8 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	
Whangape Stm at Rangiriri-Glen Murray Rd	5 <sup>3</sup>	9 <sup>3</sup>	0 <sup>3</sup>	9 <sup>3</sup>	2 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	8 <sup>3</sup>	Y <sup>3</sup>	2 <sup>3</sup>	9 <sup>3</sup>	0 <sup>3</sup>	8 <sup>3</sup>	1 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	N <sup>3</sup>	

West Coast																				
Awakino River at Gribbon Rd	10 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	8 <sup>2</sup>	10 <sup>2</sup>	6 <sup>2</sup>	7 <sup>2</sup>	Y <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	6 <sup>2</sup>	10 <sup>2</sup>	6 <sup>2</sup>	0 <sup>2</sup>	3 <sup>2</sup>	1 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>
Awakino River at SH3 Awakau Rd Junction	10 <sup>2</sup>	10 <sup>2</sup>	4 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	7 <sup>2</sup>	6 <sup>2</sup>	3 <sup>2</sup>	7 <sup>2</sup>	N <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	3 <sup>2</sup>	10 <sup>2</sup>	1 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	2 <sup>2</sup>	N <sup>2</sup>
Manganui River at Off Manganui Rd	10 <sup>2</sup>	10 <sup>2</sup>	6 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	6 <sup>2</sup>	9 <sup>2</sup>	2 <sup>2</sup>	7 <sup>2</sup>	N <sup>2</sup>	10 <sup>2</sup>	9 <sup>2</sup>	2 <sup>2</sup>	10 <sup>2</sup>	5 <sup>2</sup>	0 <sup>2</sup>	3 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>
Mangaotaki River at SH3 Br	10 <sup>2</sup>	10 <sup>2</sup>	5 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	7 <sup>2</sup>	1 <sup>2</sup>	2 <sup>2</sup>	6 <sup>2</sup>	N <sup>2</sup>	10 <sup>2</sup>	10 <sup>2</sup>	2 <sup>2</sup>	10 <sup>2</sup>	4 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>
Marokopa River at Speedies Rd (Off Te Anga Rd)	11 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	2 <sup>1</sup>	6 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	4 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>
Mokau River at Awakau Rd	10 <sup>2</sup>	10 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	6 <sup>2</sup>	4 <sup>2</sup>	0 <sup>2</sup>	7 <sup>2</sup>	N <sup>2</sup>	7 <sup>2</sup>	7 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	1 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>
Mokau River at Mangaokewa Rd (Off SH30)	10 <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	10 <sup>2</sup>	10 <sup>2</sup>	5 <sup>2</sup>	4 <sup>2</sup>	3 <sup>3</sup>	7 <sup>2</sup>	N <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	2 <sup>2</sup>	10 <sup>2</sup>	5 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>3</sup>	1 <sup>2</sup>	N <sup>2</sup>
Mokau River at Totoro Rd Recorder	10 <sup>2</sup>	10 <sup>2</sup>	4 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	6 <sup>2</sup>	2 <sup>2</sup>	3 <sup>3</sup>	7 <sup>2</sup>	N <sup>2</sup>	10 <sup>2</sup>	8 <sup>2</sup>	2 <sup>2</sup>	10 <sup>2</sup>	1 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>3</sup>	0 <sup>2</sup>	N <sup>2</sup>
Mokauiti Stm at Three Way Point - Aria	9 <sup>2</sup>	10 <sup>2</sup>	3 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	4 <sup>2</sup>	4 <sup>2</sup>	1 <sup>2</sup>	8 <sup>2</sup>	N <sup>2</sup>	3 <sup>2</sup>	8 <sup>2</sup>	0 <sup>2</sup>	10 <sup>2</sup>	1 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	0 <sup>2</sup>	N <sup>2</sup>
Ohautira Stm at Waingaro Te Uku Rd	11 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	6 <sup>1</sup>	7 <sup>1</sup>	3 <sup>1</sup>	5 <sup>1</sup>	N <sup>1</sup>	11 <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>1</sup>	0 <sup>1</sup>	N <sup>1</sup>
Oparau River at Langdon Rd (Off Okupata Rd)	11 <sup>1</sup>	10 <sup>1</sup>	8 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	4 <sup>1</sup>	7 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	8 <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>1</sup>	1 <sup>1</sup>	N <sup>1</sup>
Tawarau River at Off Speedies Rd	11 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	9 <sup>1</sup>	9 <sup>1</sup>	1 <sup>1</sup>	6 <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>	0 <sup>1</sup>	0 <sup>1</sup>	N <sup>1</sup>
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	11 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	8 <sup>1</sup>	5 <sup>1</sup>	1 <sup>1</sup>	10 <sup>1</sup>	N <sup>1</sup>	9 <sup>1</sup>	7 <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>1</sup>	0 <sup>1</sup>	N <sup>1</sup>
Waitetuna River at Te Uku-Waingaro Rd	11 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	9 <sup>1</sup>	7 <sup>1</sup>	2 <sup>1</sup>	9 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	9 <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>1</sup>	0 <sup>1</sup>	N <sup>1</sup>
Inflows to Lake Taupo																				
Hinemaiaia River at SH1	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	4 <sup>1</sup>	3 <sup>1</sup>	10 <sup>1</sup>	N <sup>1</sup>
Kuratau River at SH41 Moerangi	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>	8 <sup>1</sup>	6 <sup>1</sup>	7 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	3 <sup>1</sup>	4 <sup>1</sup>	7 <sup>1</sup>	N <sup>1</sup>
Kuratau River at Te Rae Street T10	10 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	-	11 <sup>1</sup>	Y <sup>1</sup>	10 <sup>1</sup>	10 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	-	4 <sup>1</sup>	N <sup>1</sup>
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	10 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	3 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>	1 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	2 <sup>1</sup>	N <sup>1</sup>
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	11 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	8 <sup>1</sup>	6 <sup>1</sup>	10 <sup>1</sup>	N <sup>1</sup>
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	-	11 <sup>1</sup>	Y <sup>1</sup>	9 <sup>1</sup>	10 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	2 <sup>1</sup>	8 <sup>1</sup>	-	10 <sup>1</sup>	Y <sup>1</sup>
Tokaanu Stm at Off SH41 Turangi	5 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	10 <sup>1</sup>	-	11 <sup>1</sup>	Y <sup>1</sup>	0 <sup>1</sup>	9 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	-	10 <sup>1</sup>	Y <sup>1</sup>
Waihaha River at SH32	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	0 <sup>1</sup>	4 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>
Waitahanui River at Blake Rd	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	Y <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	4 <sup>1</sup>	9 <sup>1</sup>	N <sup>1</sup>
Whangamata Stm (Kinloch) at Whangamata Rd	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	-	11 <sup>1</sup>	N <sup>1</sup>	10 <sup>1</sup>	10 <sup>1</sup>	8 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	-	0 <sup>1</sup>	N <sup>1</sup>
Whanganui Stm at Lakeside Lake Taupo T8	10 <sup>2</sup>	10 <sup>2</sup>	9 <sup>2</sup>	10 <sup>2</sup>	10 <sup>2</sup>	10 <sup>2</sup>	10 <sup>2</sup>	-	10 <sup>2</sup>	Y <sup>2</sup>	9 <sup>2</sup>	9 <sup>2</sup>	6 <sup>2</sup>	10 <sup>2</sup>	7 <sup>2</sup>	1 <sup>2</sup>	0 <sup>2</sup>	-	4 <sup>2</sup>	N <sup>2</sup>
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	0 <sup>1</sup>	-	11 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	-	0 <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 <126/100 ml or the excellent guideline of <23/100 ml for recreational use

- = not measured

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# Appendix I: Water quality guidelines and standards

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

Parameter	Critical Value(s)	Source
Dissolved oxygen	>80% of saturation concentration	RMA Third Schedule, Classes AE, F, and FS.
pH	6.5–9	ANZECC (1992) and Canadian guidelines for freshwater aquatic life (1987).
Turbidity	<5 NTU	Studies of adverse effects on underwater light—and thus on plant and invertebrate production—in certain South Island streams (Davies-Colley 1991).
Ammoniacal-nitrogen	<0.88 g N/m <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 @ 25oC. 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	Filtered sample. Molybdenum blue colourimetry. Flow injection analyser. APHA 4500-P G (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)	Phenol/hypochlorite colourimetry. Flow injection analyser. Filtration. APHA method 4500-NH <sub>3</sub> H (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
TP (new)	Total Phosphorus	Total phosphorus digestion, automated ascorbic acid colorimetry. Flow Injection Analyser. APHA 4500-P H (modified) 23rd ed. 2017
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