Water Quality in Southland:
Current State and Trends

Technical Report

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1. Introduction

Environment Southland has produced the current report entitled "Water Quality in Southland 2000 – 2016: State and Trends", to inform the proposed Southland Water and Land Plan development process and address limited completeness in the availability of recent data and/or data analysis on the Land Air Water Aotearoa (LAWA, https://www.lawa.org.nz/) national environmental data web portal.

The report draws on Rivers, Lakes and Groundwater State of Environment monitoring network data sets collected by Environment Southland and Crown Research Institutes, National Institute of Water and Atmospheric Research (NIWA), and GNS Science. The report provides an assessment of the state and trends of water quality in Southland rivers, lakes and groundwater. The report does not assess cause and effect relationships or spatial relationships.

State is assessed against the compulsory objectives within the National Policy Statement for Freshwater Management (NPS-FM; New Zealand Government 2014) and the trigger values for physical and chemical stressors in New Zealand rivers from the ANZECC guidelines (ANZECC 2000). The state assessment is provided for data collected during a five year period January 2012 – December 2016. Where sufficient data was available, trend analysis is carried out for a five, ten and 17 year time periods ending in December 2016.

The methods used for analysis were reviewed by Dr Scott Larned: Manager - Freshwater Research at NIWA and Tom Heller: Director of Water and Environment Environmental Associates Ltd, prior to analysis being implemented. Tom Heller provided a review of the analytical results including confirmation the results were able to be replicated.

Results are presented graphically for both state and trends. Tables are used to summarise the number of sites with increasing, decreasing or indeterminate trend directions for each time period and parameter combination. Analytical output is included in Appendices for individual sites and parameter combinations.

2. Methods

2.1. Data acquisition and parameters reported

Water quality data for the period January 2000 to December 2016 was obtained from Environment Southland's Rivers, Lakes and Groundwater - State of Environment monitoring network datasets, and Crown Research Institutes, NIWA, and GNS Science. Environment Southland has operated a monthly river water quality monitoring network during the time period. NIWA operates the National River Water Quality Network (NRWQN) monthly for six sites in the Southland Region. GNS Science operates the National Groundwater Monitoring Program (NGMP) for seven sites in the Southland Region. During the time period, some changes to site numbers have been made.

Water quality state and trends for surface and ground waters are assessed for Environment Southland and NIWA datasets independently using parameters within the National Objectives Framework (NOF) of the NPSFM. For surface water, eight parameters are reported on; ammoniacal nitrogen (NH_4-N); nitrate-nitrite nitrogen (NO_3-N + NO_2-N); total nitrogen (TN); organic nitrogen (ON, calculated as ON = TN – [dissolved inorganic nitrogen (ammonium NH_4-N + NO_3-N + NO_2-N)]); dissolved reactive phosphorus (DRP); total phosphorus (TP); the faecal indicator bacterium *Escherichia coli (E.coli)*; and visual clarity (black disk). For groundwater; two parameters from Environment Southland data (NO_3-N + NO_2-N and DRP) and one parameter from GNS Science data (NO_3) are reported.

For lakes, the current analysis assesses the state of two glacial lakes, Lake Manapouri, and Lake Te Anau three shallow polymictic lakes; Lake George, Lake Vincent, and The Reservoir; and one ICOLL, Waituna Lagoon. The following lake specific attributes outlined in the NOF are reported on: Phytoplankton [Chlorophyll-*a*] (trophic state); Total Nitrogen (trophic state); Total Phosphorus (trophic state); Ammonia [adjusted to a pH of 8.0] (toxicity) (see Appendix 1); and E.*coli* (human health for recreation).

2.2. Data Processing

2.2.1. Surface and groundwater

The Environment Southland, NIWA and GNS data sets have different measurement units, laboratory detection limits, analytical methods and differing reporting structure. Therefore, each data set has been treated independently through the following data processing steps. This means that data from two different agencies at the same monitoring site are not combined, and avoids making direct comparisons between data sets collected and analysed by different agencies and or laboratories. Environment Southland laboratory methods through time are reported in Appendix 2.

After data extraction, data processing and analysis of state and trends were carried out in Time Trends® (version 6.01) (www.jowettconsulting.co.nz). The method for data processing is as follows:

1) Inspection of the data in time series plots to identify and correct obvious errors.
2) Handling of censored values, most censored values indicate that true values were less than a laboratory detection limit or above a reporting limit. Generally it is nutrient concentrations that are below detection limits and *E.coli* and visual clarity measurements that are above reporting limits. In addition there were a small number of missing values.
    a) For below-reporting-limit data, the raw or uncensored laboratory value is substituted if available.
    b) For the state assessment, Time Trends® was used to apply a regression on order statistics (ROS) to impute replacement values for less than reporting-limit data (Helsel, 2012). The ROS method developed probability plotting positions for each data point (censored and non-censored) based on the ordering of the non-censored data. A relationship between the observations and the non-censored probability plotting positions are fitted by a least squares regression, and this relationship was used to predict the concentrations for the censored values based on their

plotting positions. For above-reporting-limit data, a survival analysis procedure (Helsel, 2012) was used. Time Trends® applies ROS to the analysis of descriptive statistics but not to trend analysis. In this procedure, a parametric distribution was fitted to the non-censored values using maximum likelihood methods. The values for the censored values are then estimated by randomly sampling larger values from this distribution.

c) For the trend assessment Time Trends® treats censored values as ties irrespective of the existence of multiple reporting limits.

Both the ROS and survival analysis procedures are applicable to data sets with multiple detection and reporting limits, which were common in our aggregated data set.

3) For surface water sites, each site was geo-located using upland or lowland as in Larned et al. (2016). See Appendix 3 for the upland/lowland categories for surface water sites.

The settings applied in Time Trends® are documented in Appendix 3. The aggregated data set used for analysis is available electronically on request.

2.2.2. Lakes

Water quality data from Environment Southland's lake programmes was extracted solely for the period January 2012 to December 2016 (the most recent five years). Ammonia data was pre-adjusted using a virtual script in Hilltop Manager to account for pH at the time of sampling. Statistical analysis was undertaken using the programme R. Each dataset was cleansed and processed using the following steps:

1) Data was inspected in time series plots to identify and correct any obvious errors.
2) Censored values were processed according by:
   a) Below-reporting-limit data was substituted for the raw or uncensored laboratory value if available.
   b) All remaining below-reporting-limit values (< detection limit) were halved.
   c) All above-reporting-limit values (>) were extracted at their maximum value (e.g. >1000 becomes 1000).
3) Waituna samples were identified as to the lagoon's state (open or closed), as per the new procedure in the proposed amendments to the NOF for ICOLLs.
4) Values were rounded to appropriate decimal places to prevent errors when importing into R for analysis. Chlorophyll-*a* (chl-*a*) values were rounded to five decimal places; total phosphorus, total nitrogen, and adjusted ammoniacal nitrogen values were rounded to three decimal places; and E.*coli* values were rounded to zero decimal places.

2.3. Data Analysis

2.3.1. Surface and groundwater quality – State

To assess water quality state, data for the five year period January 2012 – December 2016 was used. It was considered that five years is an appropriate time period to use as it is consistent with previous time periods used for state assessment, represents an adequate number of samples (approximately 60 for monthly sampling of surface water sites and 20 for groundwater sites) to ensure confidence in the precision of summary statistics and reduces the influence of short-term climate variability on water quality.

The following rules were used to identify site and parameter combinations with adequate data for state assessment to be conducted:

1. Less than 50% of data for a parameter are censored.
2. There are more than 30 data points per parameter for surface water (applied for ES and NIWA data) or 10 data points per parameter for groundwater (applied for ES and GNS data).
3. Values are available for at least four of the five years.

Site median and/or 95th percentile or maximum (where relevant) values are calculated for each parameter and compared to numeric objectives for New Zealand Rivers and other guideline values (Table 1). Numeric objectives come from the New Zealand National Policy Statement for Freshwater Management 2014 (NPS-FM; New Zealand Government, 2014), and trigger values for physical and chemical stressors in New Zealand rivers from the ANZECC guidelines (Table 3.3.10 in ANZECC, 2000,). The NPS-FM bottom-line for NH_4-N toxicity is 1300 mg m^{-3} at pH 8. In order to compare NH_4-N concentrations at monitoring sites to the NPS-FM bottom-line, the measured NH_4-N concentrations was adjusted to pH 8 using the conversion ratios in the Draft Guide to Attributes in the NPS-FM (http://www.mfe.govt.nz/publications/fresh-water/draft-guide-attributes-appendix-2-national-policystatement-freshwater) (see Appendix for conversion table). The adjustments were limited to monitoring site–date combinations for which both pH and NH_4-N were measured. For NH_4-N data below the reporting limit, data values were halved prior to pH adjustment.

Results are presented on maps for each parameter in Section 3, grouped by the sample collection agency (Environment Southland, NIWA or GNS Science) and are summarised in tables by parameter.

Table 1: Water quality numeric objectives for the protection of human health and ecological values in New Zealand rivers, streams and groundwater.

Parameter (units)	**Numeric objective**		
Surface water			
NO_3-N toxicity [a] (gm^{-3})		Median	95th Percentile
	A	≤ 1.0	≤ 1.5
	B	>1.0 and ≤ 2.4	>1.5 and ≤ 3.5
	C	>2.4 and ≤ 6.9	>3.5 and ≤ 9.8
	D	> 6.9	> 9.8
NH_4-N toxicity [a] (gm^{-3})		Median	Maximum
	A	≤ 0.03	≤ 0.05
	B	>0.03 and ≤ 0.24	>0.05 and ≤ 0.4
	C	>0.24 and ≤ 1.3	>0.4 and ≤ 2.2
	D	> 1.3	> 2.2
Human Health Recreation [a] (*E.coli*/100 mL)		Median[#]	
	A	≤ 260	
	B	> 260 and ≤ 540	
	C	> 540 and ≤ 1000	
	D	> 1000	
		Upland Median	Lowland Median
Water clarity [b] (m)		>0.8	>0.6
NH_4-N [b] (g m^{-3})		<0.01	<0.021
NO_3-N [b] (g m^{-3})		<0.167	<0.444
TN [b] (g m^{-3})		<0.295	<0.617
DRP [b] (g m^{-3})		<0.009	<0.01
TP [b] (g m^{-3})		<0.026	<0.033
Groundwater			
		Median	
NO_3-N drinking water [c] (gm^{-3})		> 11.3	
NO_3-N toxicity [a*] (gm^{-3}) – Surface water		Median	95th Percentile
	A	≤ 1.0	≤ 1.5
	B	>1.0 and ≤ 2.4	>1.5 and ≤ 3.5
	C	>2.4 and ≤ 6.9	>3.5 and ≤ 9.8
	D	> 6.9	> 9.8

[#]Secondary contact recreation

[a] New Zealand Government (2014).

[b] ANZECC (2000).

[c] MoH (2005)

* This is not a numeric objective. Comparison of groundwater to surface water objectives is intended to be indicative of the risk elevated nitrate in groundwater poses to ecosystem health and is not an assessment of direct toxicity as the realised surface water concentrations may be influenced by subsequent transformations i.e. denitrification, dilution.

2.3.2. Lake water quality – State

The current analysis was run on data collected between January 1st 2012 and December 31st 2016. Data was imported into R, and analysed according to the script in Appendix 10. A brief summary of the function of this script is as follows:

1. Pre-cleansed and de-censored data was imported to R and formatted for analysis.
2. Data was split into subsets belonging to the following categories: stratified glacial lakes, stratified glacial lakes bathing data, polymictic lakes, Waituna Lagoon – open, and Waituna Lagoon – closed. Stratified glacial lake bathing data was identified as a separate category because it originates from the ES Freshwater Bathing Programme, rather than the SoE Lake Water Quality programme, and has sites that are targeted to bathing activity. These sites are not used for any other attribute calculation, hence it was easier to process them separately.
3. Each subset was run through a series of mini-scripts using the package 'plyr' to create a summary table for each NOF attribute (see Section 3). These tables included: site information, the number of samples in the five year period (n), the minimum value, the maximum value, and the median value. The recreational contact assessment (*E. coli*) table also included the 95th percentile value.
4. A further mini-script used the summary table to define appropriate bandings for each attribute. When two calculations were combined to define the NOF band (e.g. median and maximum chl-*a* for phytoplankton), this script defaulted to the worst calculated band. For example, a lake site with an annual median chl-*a* concentration of 3mg/m^3 and a maximum of 40mg/m^3 would score a 'B' for the median calculation and a 'C' for the maximum value. In this example, our analysis would score this site a 'C'. The recreational contact assessment (*E. coli*) included two band columns, one for primary contact and the other for secondary contact.
5. Final tables were exported to excel and included in this report.

No trend analysis has been included for lake water quality. This is due to a limited dataset for polymictic lakes (2015 onwards), and a large number of samples reported at the minimum laboratory detection limits for glacial lake analyses.

Table 2: Relevant NOF attributes for the lake water quality assessment.

Parameter (units)		Numeric objective	
TN (mg/m^3)		Median Stratified	Median Polymictic
	A	≤ 160	≤ 300
	B	>160 and ≤ 350	>300 and ≤ 500
	C	>350 and ≤ 750	>500 and ≤ 800
	D	> 750	> 800
TP (mg/m^3)		Median	
	A	≤ 10	
	B	>10 and ≤ 20	
	C	>20 and ≤ 50	
	D	> 50	
Phytoplankton (mg/m^3)		Median	Maximum
	A	≤ 2	≤ 10
	B	>2 and ≤ 5	>10 and ≤ 25
	C	>5 and ≤ 12	>25 and ≤ 60
	D	> 12	> 60
NH4-N toxicity (mg/L)		Median	Maximum
	A	≤ 0.03	≤ 0.05
	B	>0.03 and ≤ 0.24	>0.05 and ≤ 0.4
	C	>0.24 and ≤ 1.3	>0.4 and ≤ 2.2
	D	> 1.3	> 2.2
Primary Contact - Human Health Recreation (E.coli/100 mL)		95^{th} Percentile	
	A	≤ 260	
	B	> 260 and ≤ 540	
Secondary Contact - Human Health Recreation (E.coli/100 mL)		Median	
	A	≤ 260	
	B	> 260 and ≤ 540	
	C	> 540 and ≤ 1000	
	D	> 1000	

2.3.3. Water quality trends

We used three time periods for trend analysis:

a) January 2000 – December 2016 (17 years)
b) January 2007 – December 2016 (10 years)
c) January 2012 – December 2016 (5 years)

The three time periods provide a good range of temporal coverage, reduce the number of sites and parameters with insufficient data for analysis and include consideration of the most recent five year trend period. Two inclusion rules were applied for each unique site and parameter combination:

1. Data is available for more than 90% of sampling dates within the respective time period, either 12 samples per year per parameter for surface water (applied for NIWA and ES) or 4 samples per year per parameter for groundwater (applied for ES and GNS data).
2. Imputed values account for less than 15 % of the observations.

Trend analysis is carried out in three steps:

1. Estimation of slope magnitude and direction
2. Calculation of a two symmetric one-sided 90% confidence interval around the slope
3. Determination of confidence of slope direction
4. Calculate the relative trend (Sen slope/median)

Flow adjustment was not carried out to show overall trends in respective water quality parameters, rather than the relative role of flow in contaminant transport. Furthermore, continuous flow (stage-discharge relationships) are not available for all sites, thus an application of flow adjustment would limit the number of sites able to be included.

For each site and water quality parameter combination, if the confidence interval did not contain zero, the trend direction is considered to be established with confidence. Where the confidence interval is negative, the trend direction is considered to be a decrease in concentration or clarity. Where the confidence interval is positive, the trend direction is considered to be an increase in concentration or clarity. If the confidence interval included zero, it was concluded that the trend direction was unable to be determined with confidence, see Larned et al. (2016) and McBride et al. (2015) for a full explanation. The sen slope estimator can be used to qualify the magnitude of a trend by dividing the sen slope by the respective median value to give a % change per year (see Appendix 5). To summarise trend results are tabulated for each time period and parameter combination.

3. Results

Results are presented in graphical form as maps, using a coloured key to illustrate state with respect to each parameter listed in Table 1. and a summary table per management unit accompanies each map. The summary statistics exported from Time Trends® are used to assess state with respect to the relevant numerical objective or guideline. These are located in Appendix 5, along with Time Trends® trend analysis outputs.

3.1. Water quality state: Surface water

3.1.1. River water quality – Environment Southland operated sites

Tables associated with the Environment Southland State maps are available in Appendix 6: ES Surface water state results.

Total Nitrogen

The assessment of Total Nitrogen (TN) concentration in surface waters illustrates that median Total Nitrogen concentrations are greater than the respective ANZECC 2000 guideline at 41 of 55 sites (Figure 1). Of the sites classified as upland, half (or 11 of 22) have a Total Nitrogen concentration above the upland guideline. Of the remaining 33 lowland sites, three have a median Total Nitrogen concentration below the lowland guideline, and 30 sites are above the guideline.

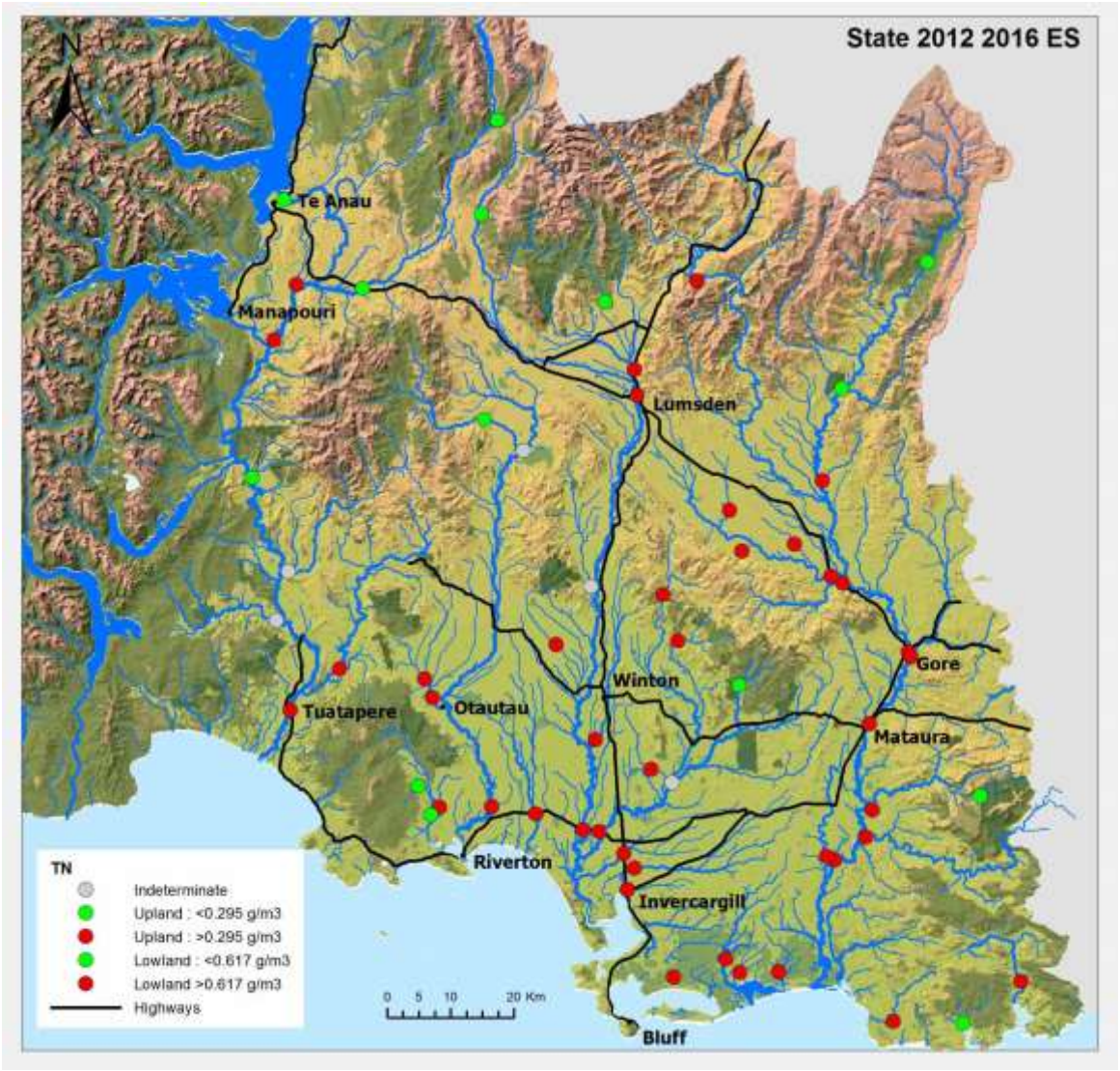

Figure 1: ES surface water quality state for TN (2012-2016).

NO_3-N Toxicity

Assessment of Nitrate Nitrite Nitrogen against the fish toxicity concentration objectives illustrates that none of the 55 sites are in the D band (Figure 2). Nine sites are in the C band, 17 in the B band and 29 in the A band.

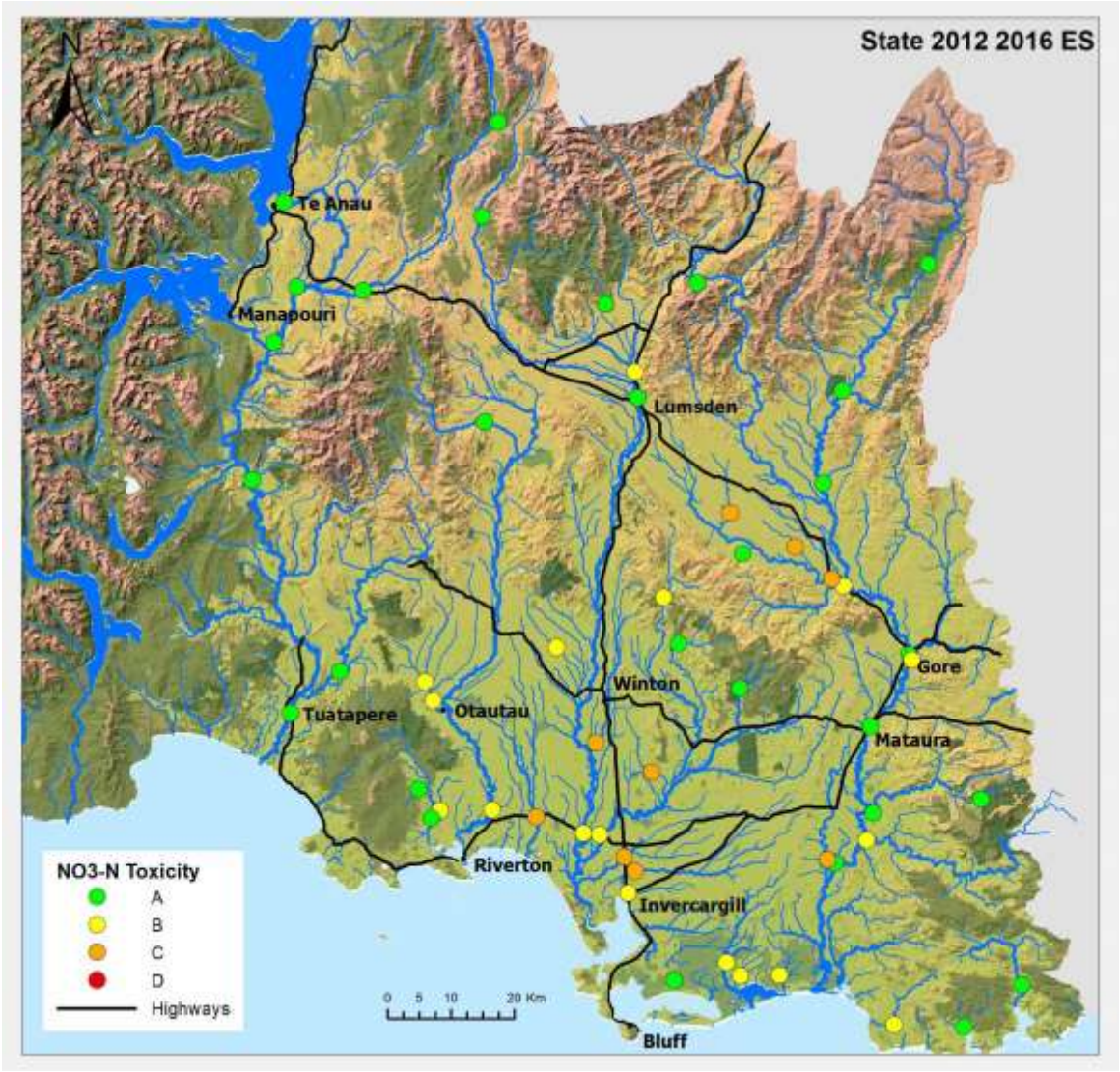

Figure 2: ES surface water quality state for NO_3-N toxicity (2012-2016).

NO_3-N Ecosystem Health

Assessment of Nitrate Nitrite Nitrogen concentration illustrates that at 38 of 55 sites median Nitrate Nitrite Nitrogen concentrations are greater than the respective ANZECC 2000 guideline (Figure 3). Of the sites classified as upland, 12 of 22 have a Nitrate Nitrite Nitrogen concentration above and the other 10 have a concentration below the upland guideline. Seven of 33 Lowland sites have a median Nitrate Nitrite Nitrogen concentration below the lowland guideline, and 26 sites are above the guideline.

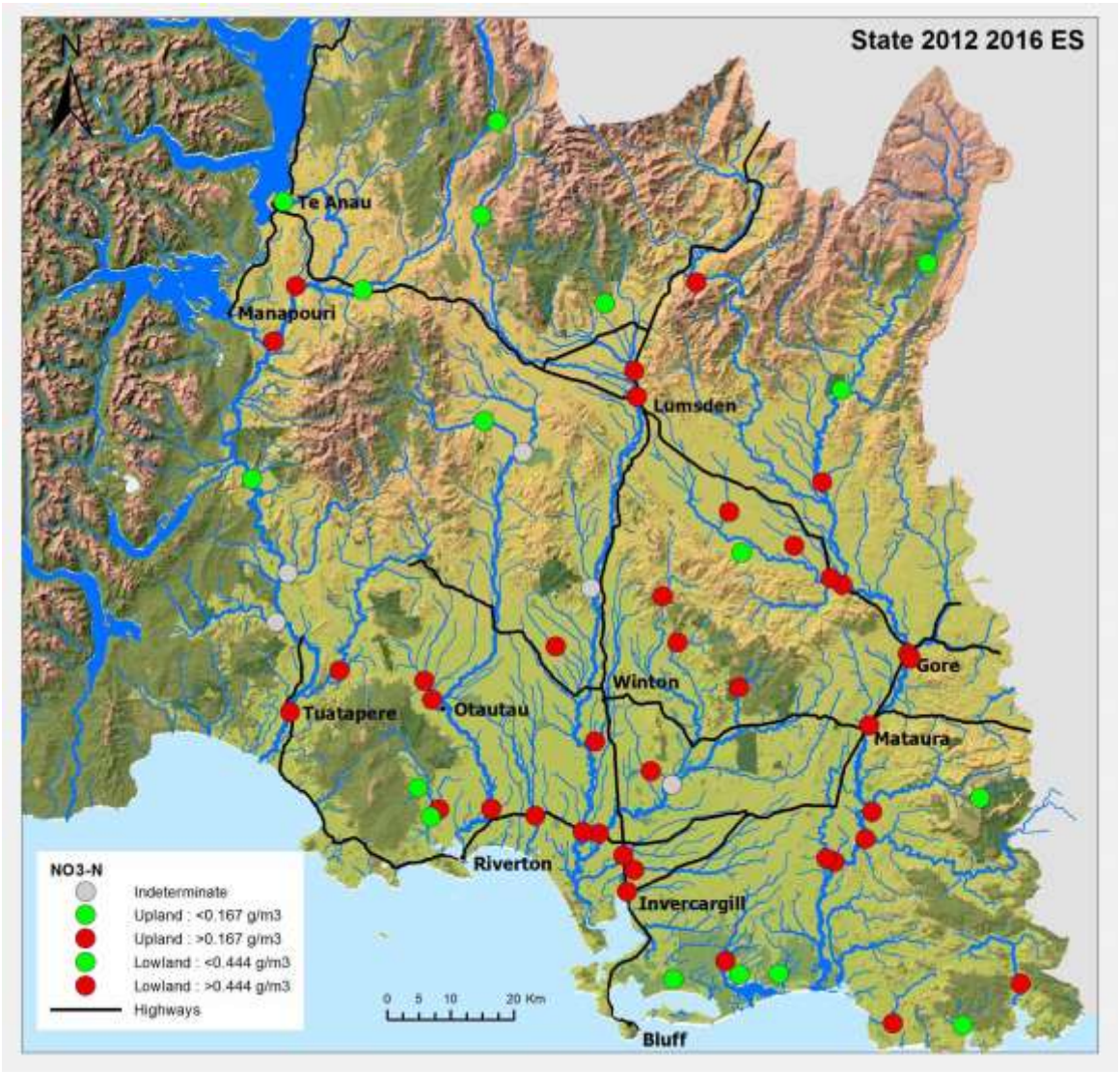

Figure 3: ES surface water quality state for NO_3-N (2012-2016).

NH_4-N Toxicity

Assessment of Ammoniacal Nitrogen against the fish toxicity concentration objectives illustrates that none of the 55 sites are in the D band (Figure 4). Four sites are in the C band, 20 in the B band and 31 in the A band.

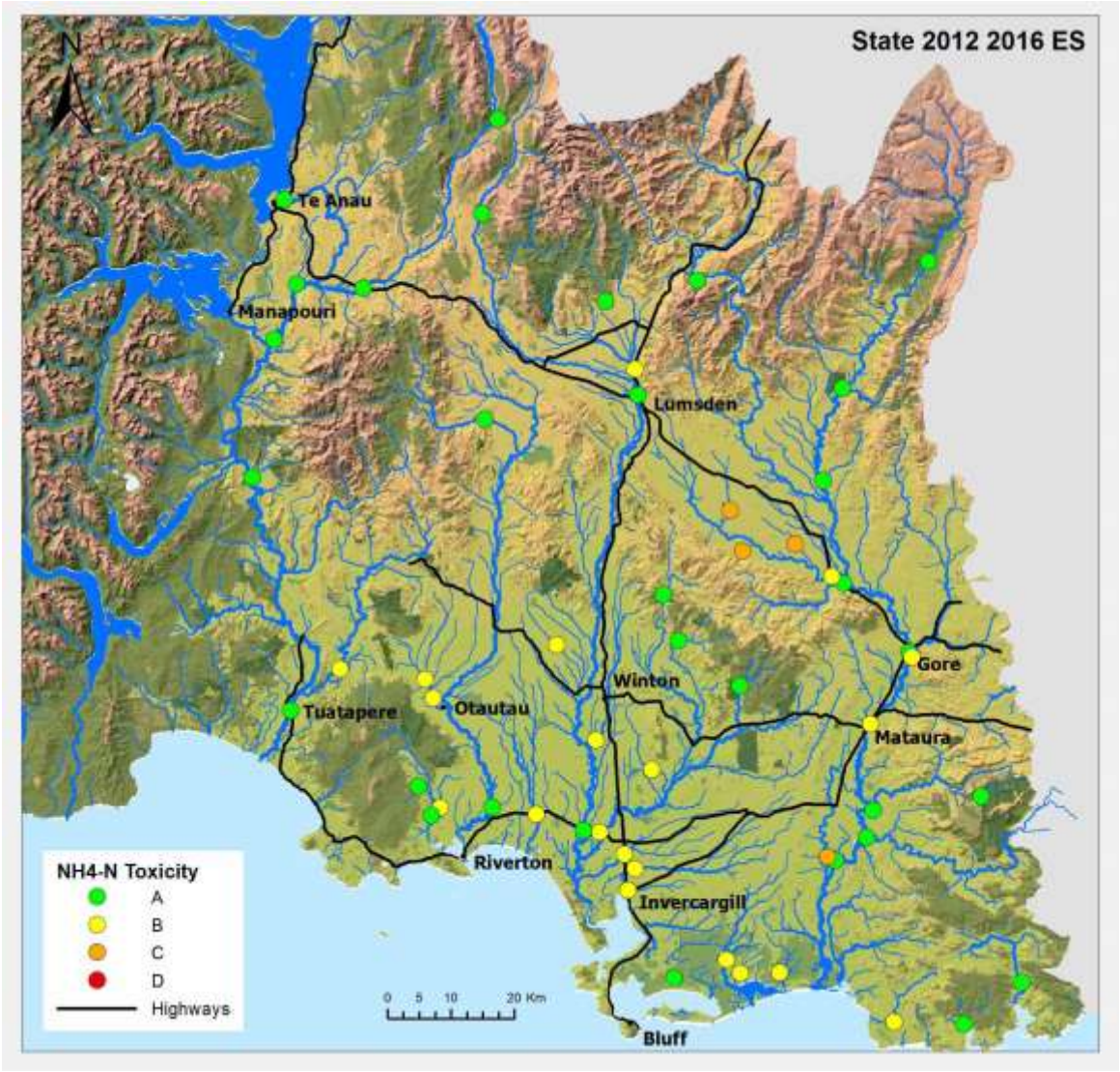

Figure 4: ES data state for NH_4-N toxicity (2012-2016).

NH_4-N Ecosystem Health

Assessment of Ammoniacal Nitrogen concentration illustrates that at 47 of 54 sites median Ammoniacal Nitrogen concentrations are less than the respective ANZECC 2000 guideline (Figure 5). Of the sites classified as upland, 1 of 22 have a median concentration above and the other 21 have a median concentration below the upland guideline. 26 of 32 Lowland sites have a median Ammoniacal Nitrogen concentration below the lowland guideline, and six sites are above the guideline.

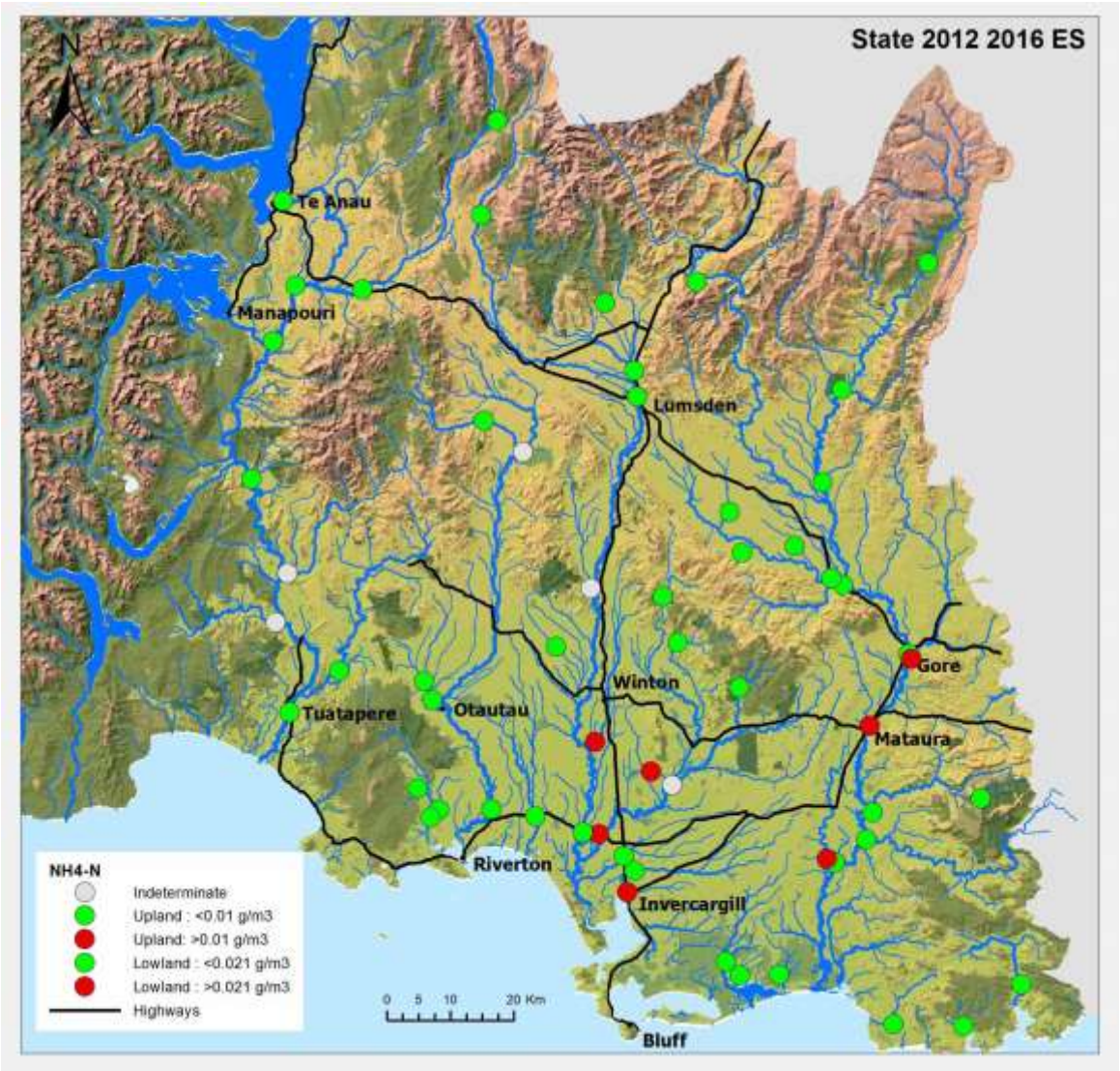

Figure 5: ES surface water quality state for NH_4-N (2012-2016).

Total Phosphorus

Assessment of Total Phosphorus (TP) concentrations illustrates that at 33 of 55 sites median Total Phosphorus concentrations are less than the respective ANZECC 2000 guideline, 22 sites were above the guideline (Figure 6). Of the sites classified as upland, 1 of 22 have a Total Phosphorus concentration above and the other 21 have a concentration below the upland guideline. One of 32 lowland sites had a median Total Phosphorus concentration below the lowland guideline, and 21 sites are above the guideline.

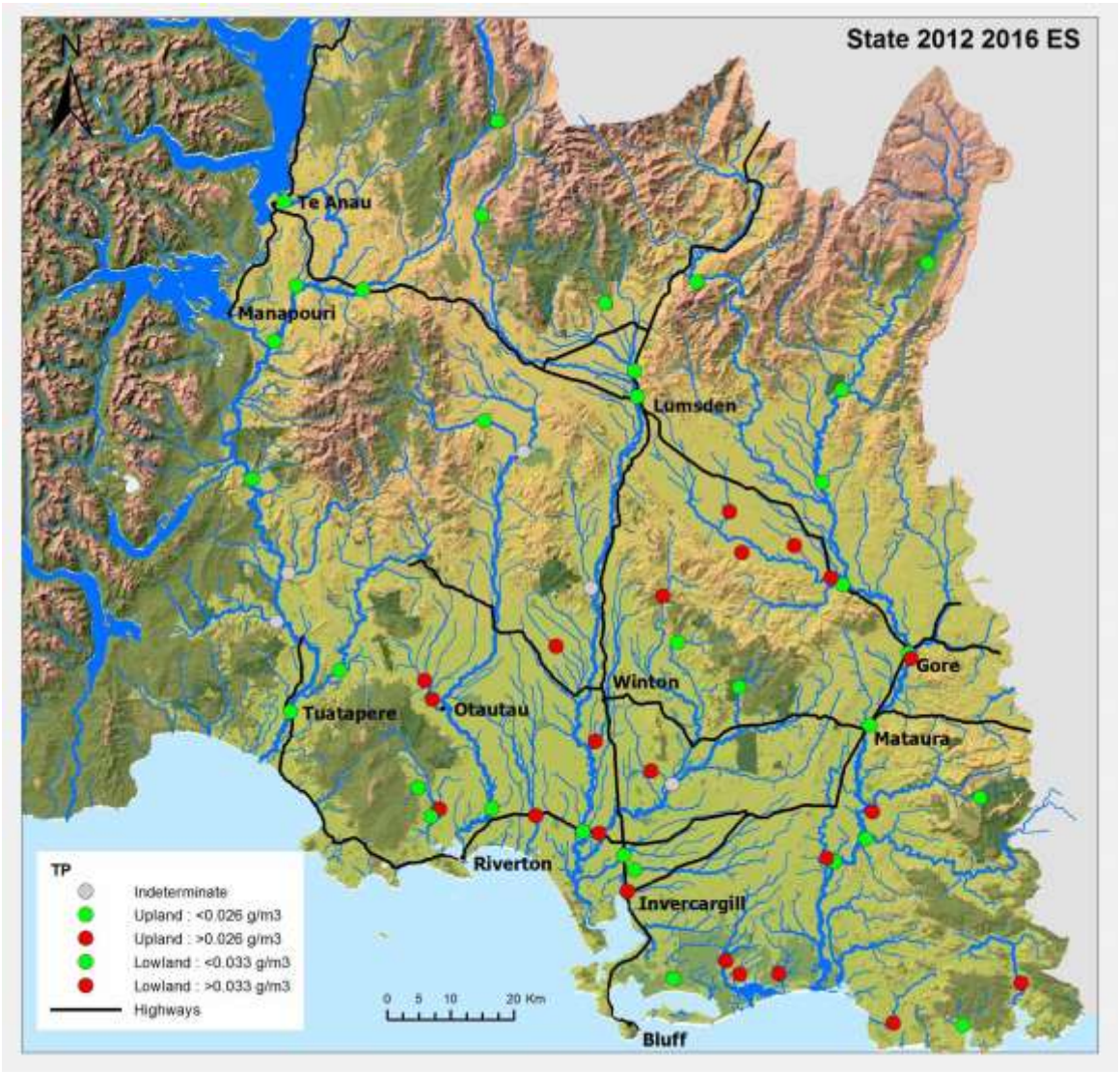

Figure 6: ES surface water quality state for TP (2012-2016).

Dissolved Reactive Phosphorus

Assessment of Dissolved Reactive Phosphorus (DRP) concentrations illustrates that at 25 of 55 sites median Dissolved Reactive Phosphorus concentrations are less than the respective ANZECC 2000 guideline, 27 sites were above the guideline (Figure 7). Of the sites classified as upland, 4 of 19 sites have a Dissolved Reactive Phosphorus concentration above and 15 sites have a concentration below the upland guideline. 10 of 33 lowland sites had a median Dissolved Reactive Phosphorus concentration below the lowland guideline, and 23 sites are above the guideline.

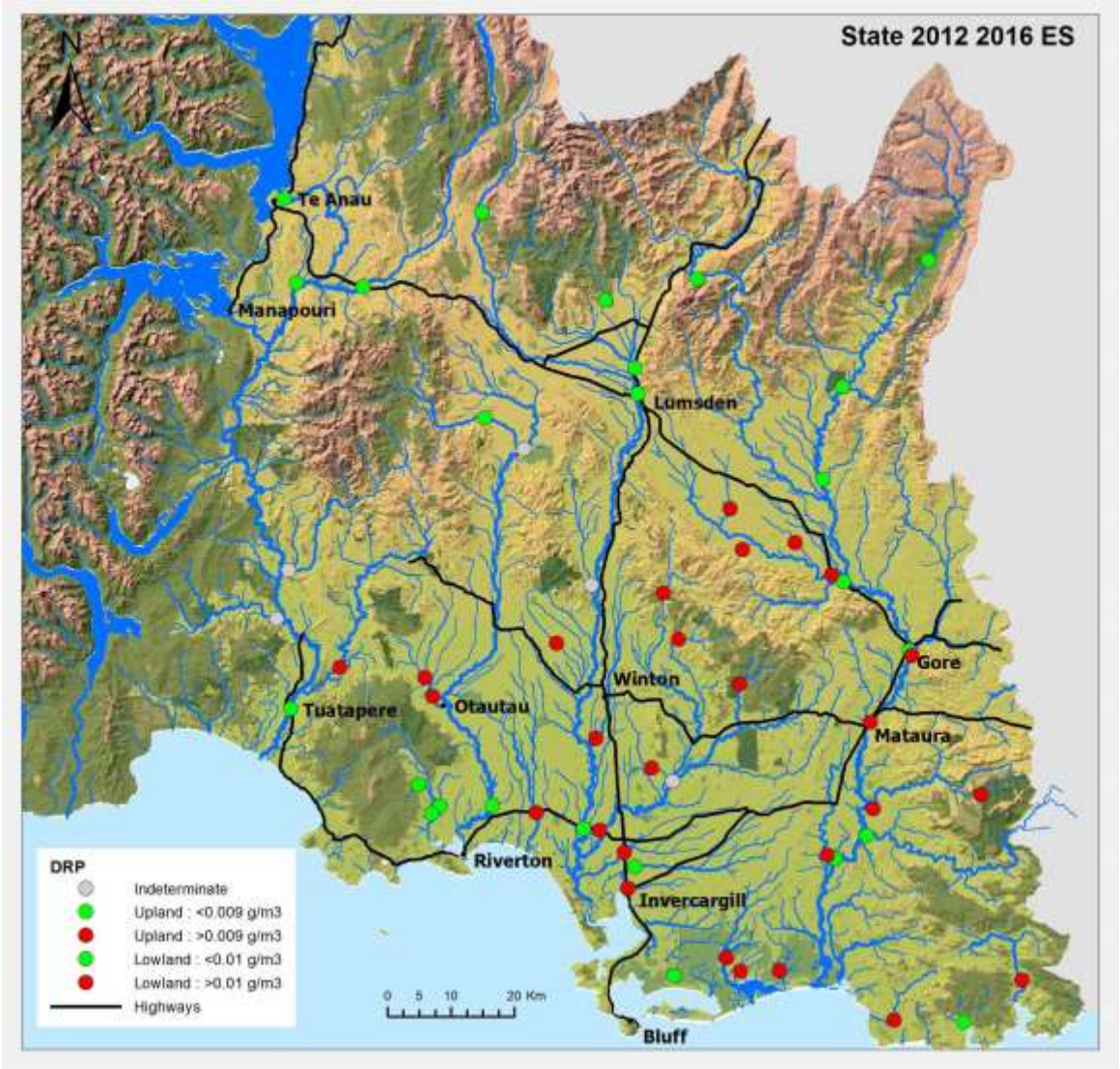

Figure 7: ES surface water quality state for DRP (2012-2016).

Clarity

Assessment of clarity illustrates that at six of 54 sites, median clarity is worse than the ANZECC 2000 guideline and at 48 sites clarity is better than the guideline (Figure 8). Of the sites classified as upland, 21 of 22 sites had clarity better than the guideline and the remaining site had clarity worse than the upland guideline. At five of 32 lowland sites, clarity is worse than the lowland guideline and better than the guideline at 22 sites.

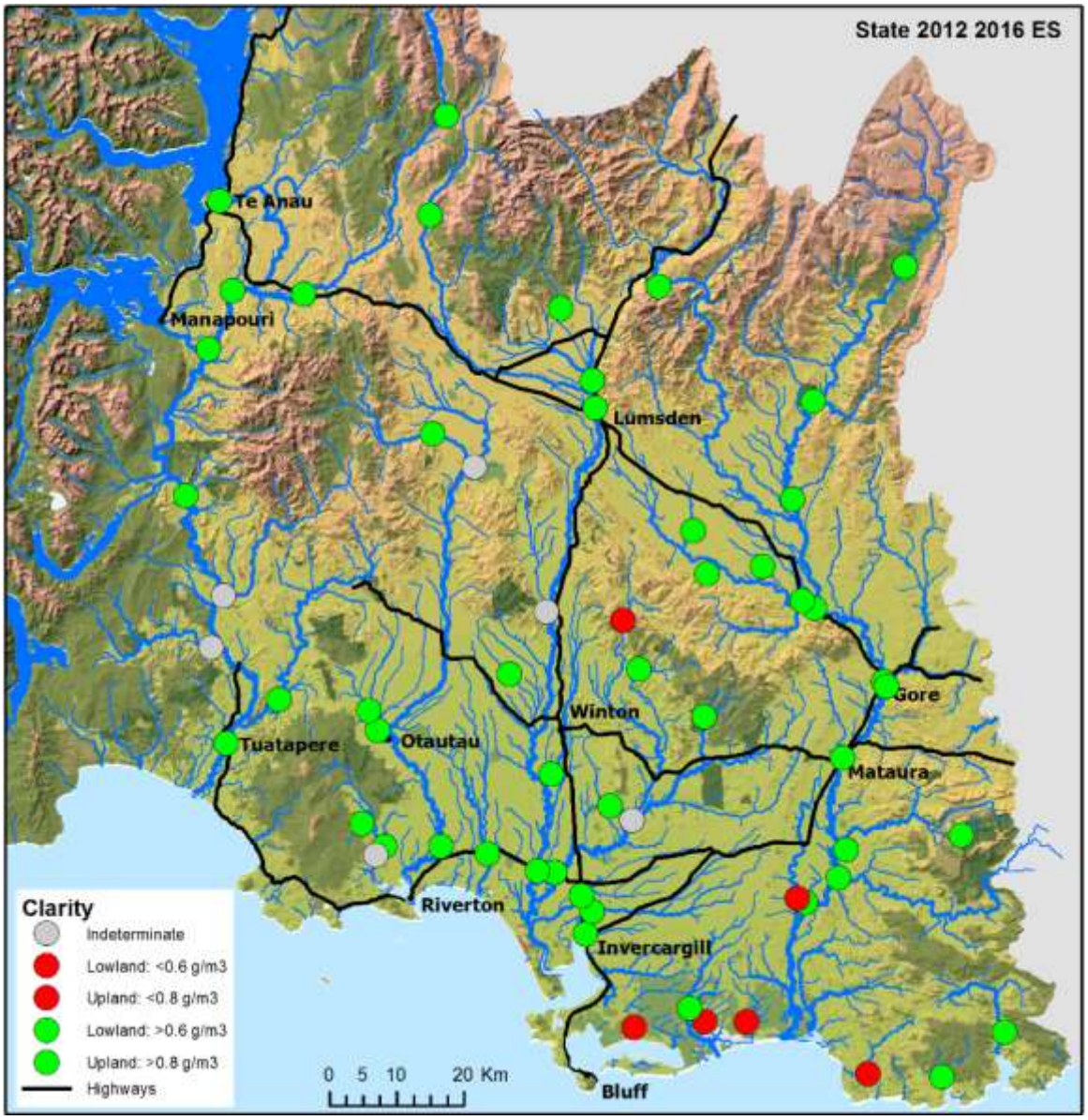

Figure 8: ES surface water quality state for clarity (2012-2016).

Human Health: Secondary Contact Recreation

Assessment of *E.coli* concentrations against the Human Health objectives illustrates that four sites are in the C band, 20 in the B band and 25 in the A band (Figure 9). Six sites are in the D band.

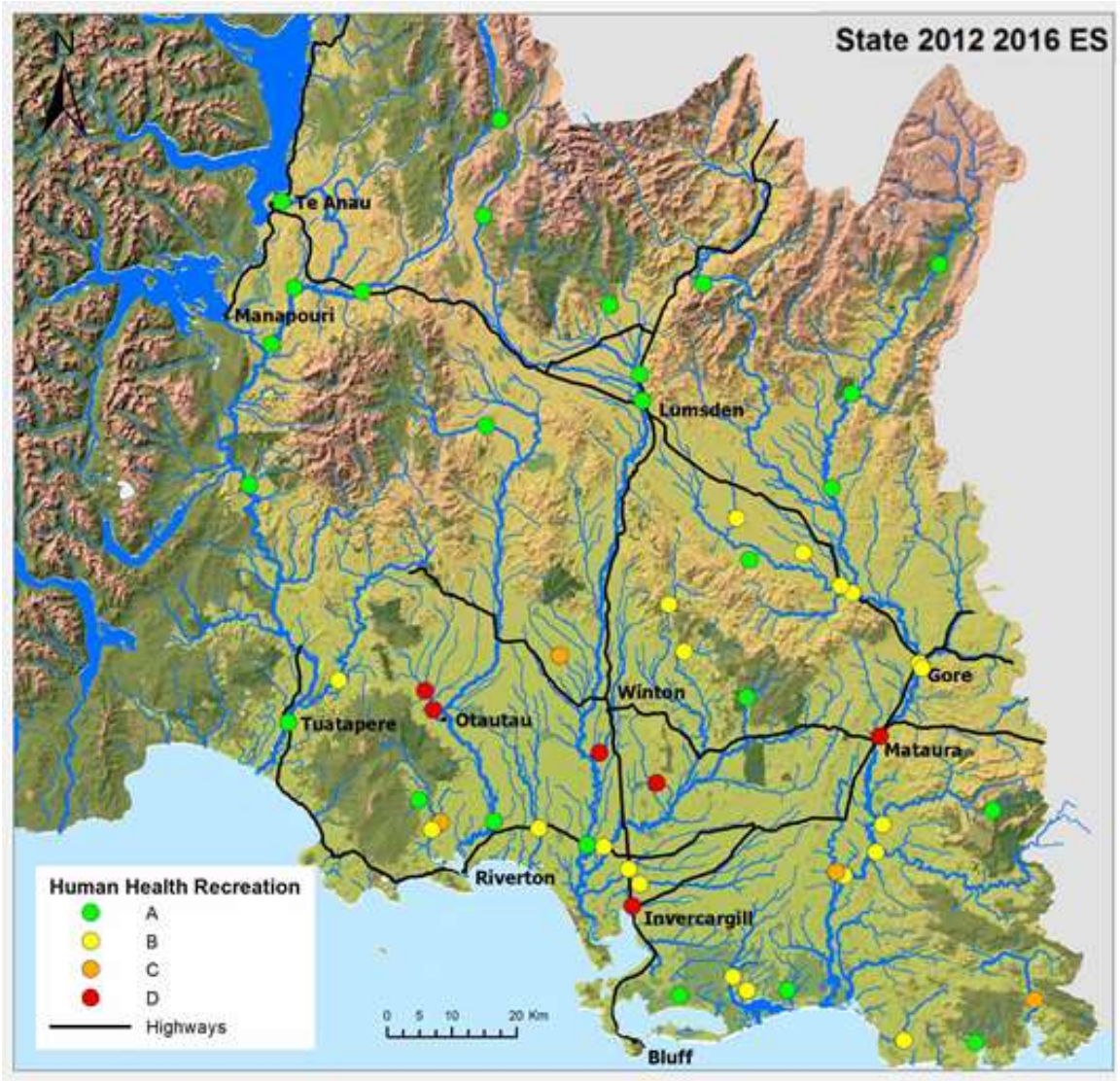

Figure 9: ES surface water quality state for Human Health: Secondary Contact Recreation, Secondary contact (E.*coli*/100 mL) (2012-2016).

3.1.2. River water quality – NIWA operated sites

Tables associated with the NIWA State maps are available in Appendix 7: NIWA Surface water state results.

Total Nitrogen

Assessment of Total Nitrogen concentrations illustrates that at one of six NIWA operated sites median Total Nitrogen (TN) concentrations are less than the respective ANZECC 2000 guideline, five sites were above the guideline (Figure 10).

Figure 10: NIWA surface water quality state for TN (2012-2016).

NO_3-N Toxicity

Assessment of Nitrate Nitrite Nitrogen against the fish toxicity concentration objectives illustrates that none of the six NIWA operated sites are in the D band. Two are in the B band and four in the A band (Figure 11).

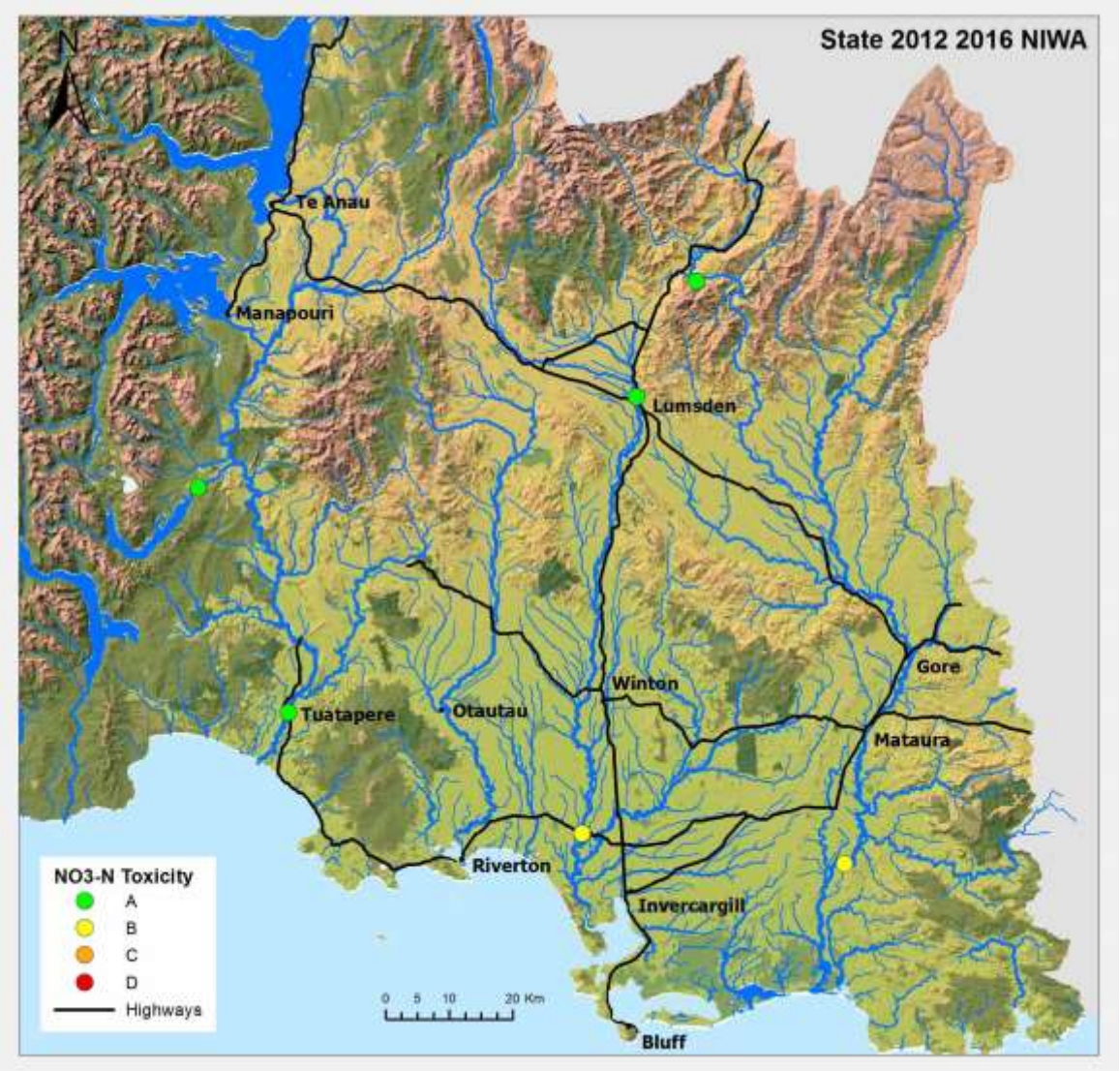

Figure 11: NIWA surface water quality state for NO_3-N toxicity (2012-2016).

NO_3-N Ecosystem Health

Assessment of Nitrate Nitrite Nitrogen concentration illustrates that at five of six NIWA operated sites median Nitrate Nitrite Nitrogen concentrations are greater than the respective ANZECC 2000 guideline (Figure 12).

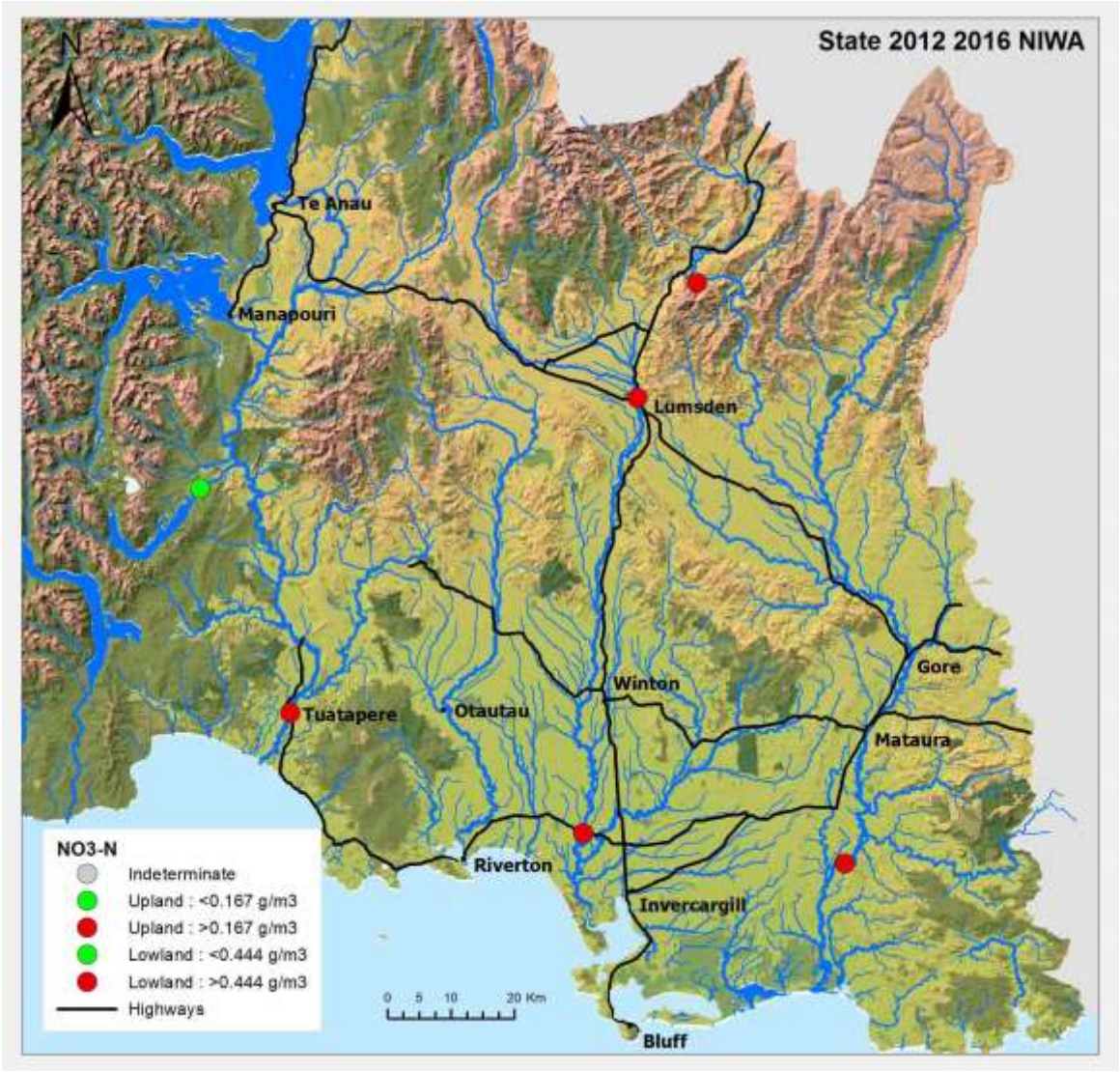

Figure 12: NIWA surface water quality state for NO_3-N ecosystem health (2012-2016).

NH_4-N Toxicity

Assessment of Ammoniacal Nitrogen against the fish toxicity concentration objectives illustrates that all six of the NIWA operated sites are in the A band (Figure 13).

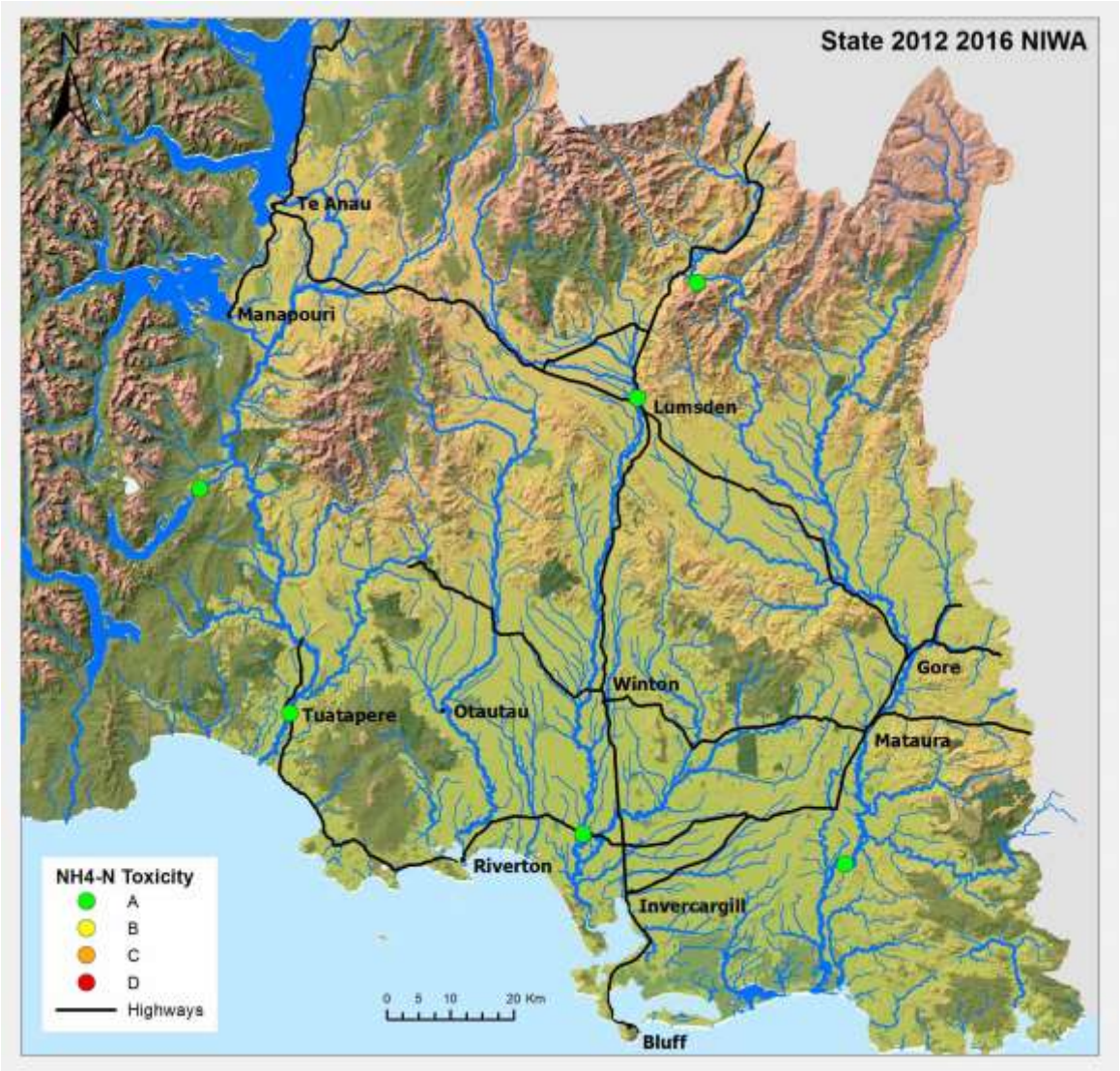

Figure 13: NIWA surface water quality state for NH_4-N toxicity (2012-2016).

NH_4-N Ecosystem Health

Assessment of Ammoniacal Nitrogen concentration illustrates that at five of six NIWA operated sites median Ammoniacal Nitrogen concentrations are less than the respective ANZECC 2000 guideline, and one site has Ammoniacal Nitrogen in excess of the guideline (Figure 14).

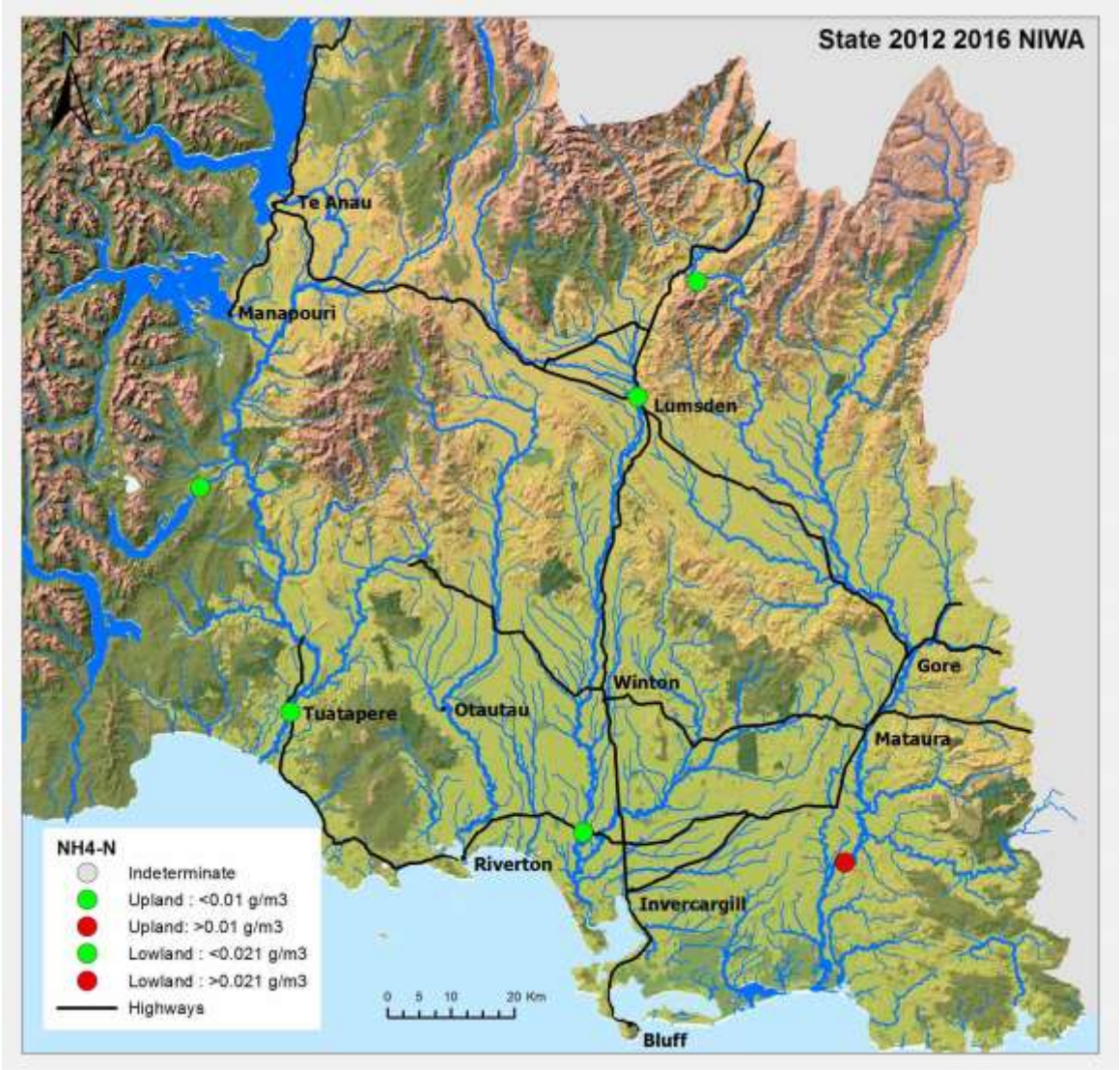

Figure 14: NIWA surface water quality state for NH_4-N ecosystem health (2012-2016).

Total Phosphorus

Assessment of Total Phosphorus concentrations illustrates that at five of six NIWA operated sites median Total Phosphorus concentrations are less than the respective ANZECC 2000 guideline, one site was above the guideline (Figure 15).

Figure 15: NIWA surface water quality state for TP (2012-2016).

Dissolved Reactive Phosphorus

Assessment of Dissolved Reactive Phosphorus concentrations illustrates that at five of six sites median Dissolved Reactive Phosphorus concentrations are less than the respective ANZECC 2000 guideline, one site is greater than the guideline (Figure 16).

Figure 16: NIWA surface water quality state for DRP (2012-2016)

Clarity

Assessment of clarity illustrates that at all six of the NIWA operated sites median clarity is better than the respective ANZECC 2000 guideline (Figure 17).

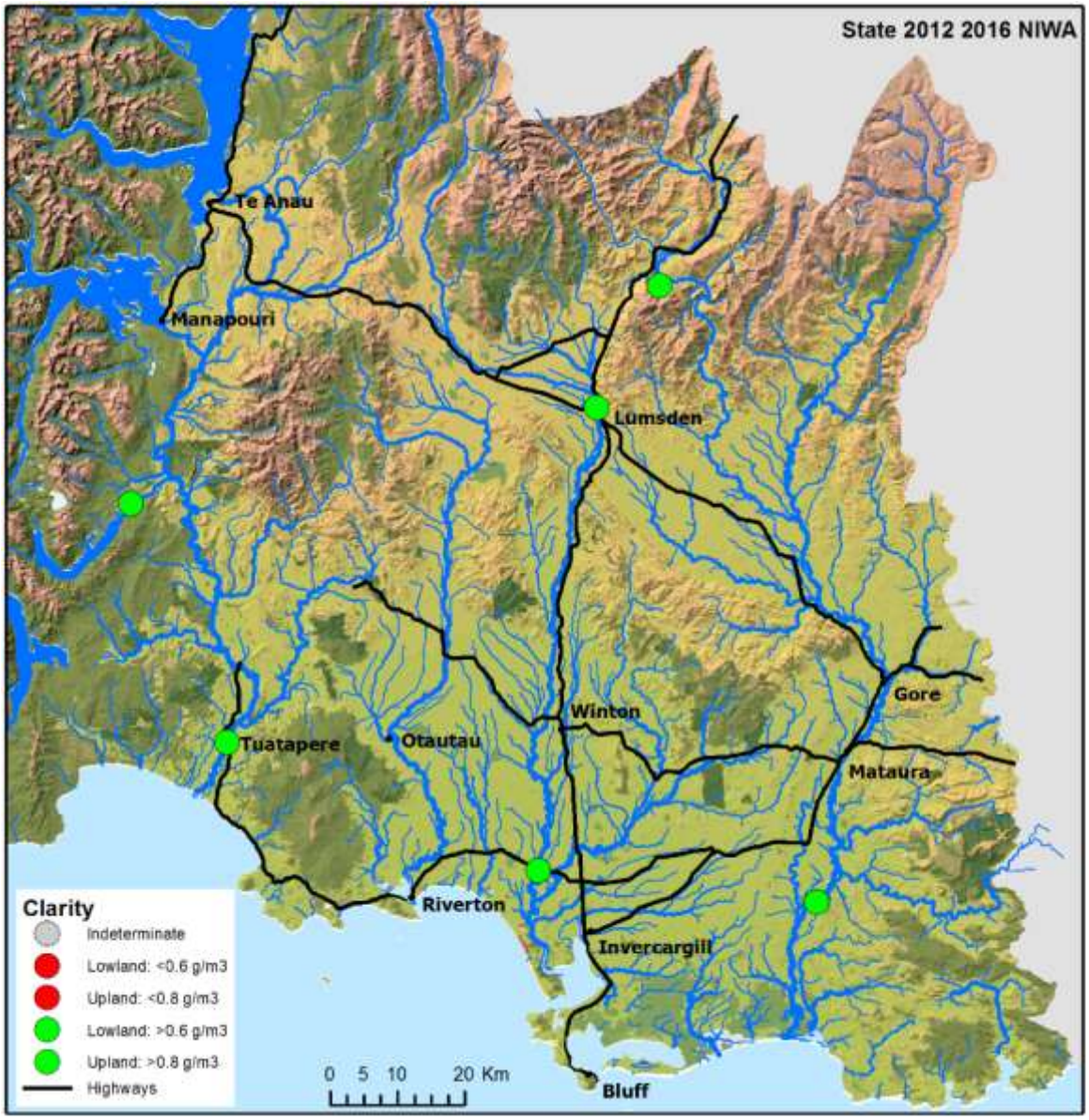

Figure 17: NIWA surface water quality state for clarity (2012-2016).

Human Health: Secondary Contact Recreation

Assessment of E.*coli* concentrations at NIWA operated sites against the Human Health objectives illustrates that one site is in the B band and five are in the A band. No sites are in the D band.

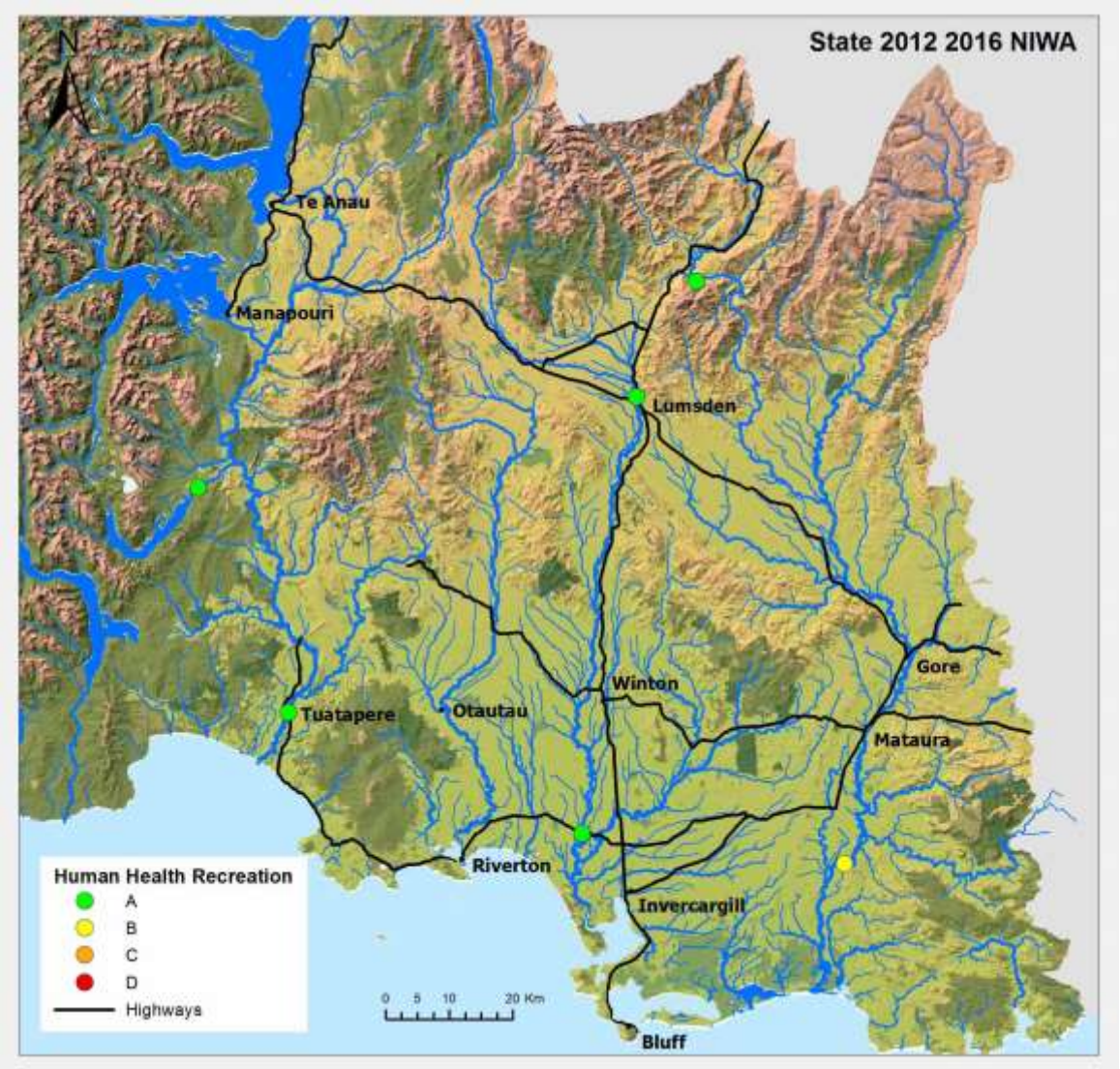

Figure 18: NIWA surface water quality state for Human Health Recreation (E.coli/100 mL) (2012-2016).

3.1.3. Lake water quality – Environment Southland operated sites

The following section details the results for each relevant attribute in the National Objectives Framework (NOF). Lakes are depicted in map figures by the minimum band score across all sites on that lake. Waituna Lagoon has two markers; the marker off the coast represents the lagoon when open to the sea while the other represents closed periods.

Total Nitrogen (Trophic State)

Figure 19 is a spatial representation of the summary statistics tabulated in Table 3, and shows NOF assessment results for Total Nitrogen concentrations across all monitored lakes in the Southland region. Southland's two monitored glacial lakes were ranked within the A attribute band of the NOF for Total Nitrogen, with 5 year medians ranging from 55 (Lake Te Anau at South Fiord Top) to 94 mg/m^3 (Lake Manapouri at Stony Point). Lake George and The Reservoir had elevated median Total Nitrogen concentrations (C band). Lake Vincent's five year median exceeded the national bottom line by 14.4% at the 'North' site and 22.5% at the 'Centre' site. Waituna Lagoon also exhibited high Total Nitrogen concentrations, which were highest when the lagoon was closed to the sea. Under these conditions, the 'Centre' site exceeded the national bottom line for polymictic lakes by 2.5%, and the 'Western' site by 1.25%. The national bottom line for Total Nitrogen in Waituna Lagoon (Closed) and Lake Vincent was exceeded.

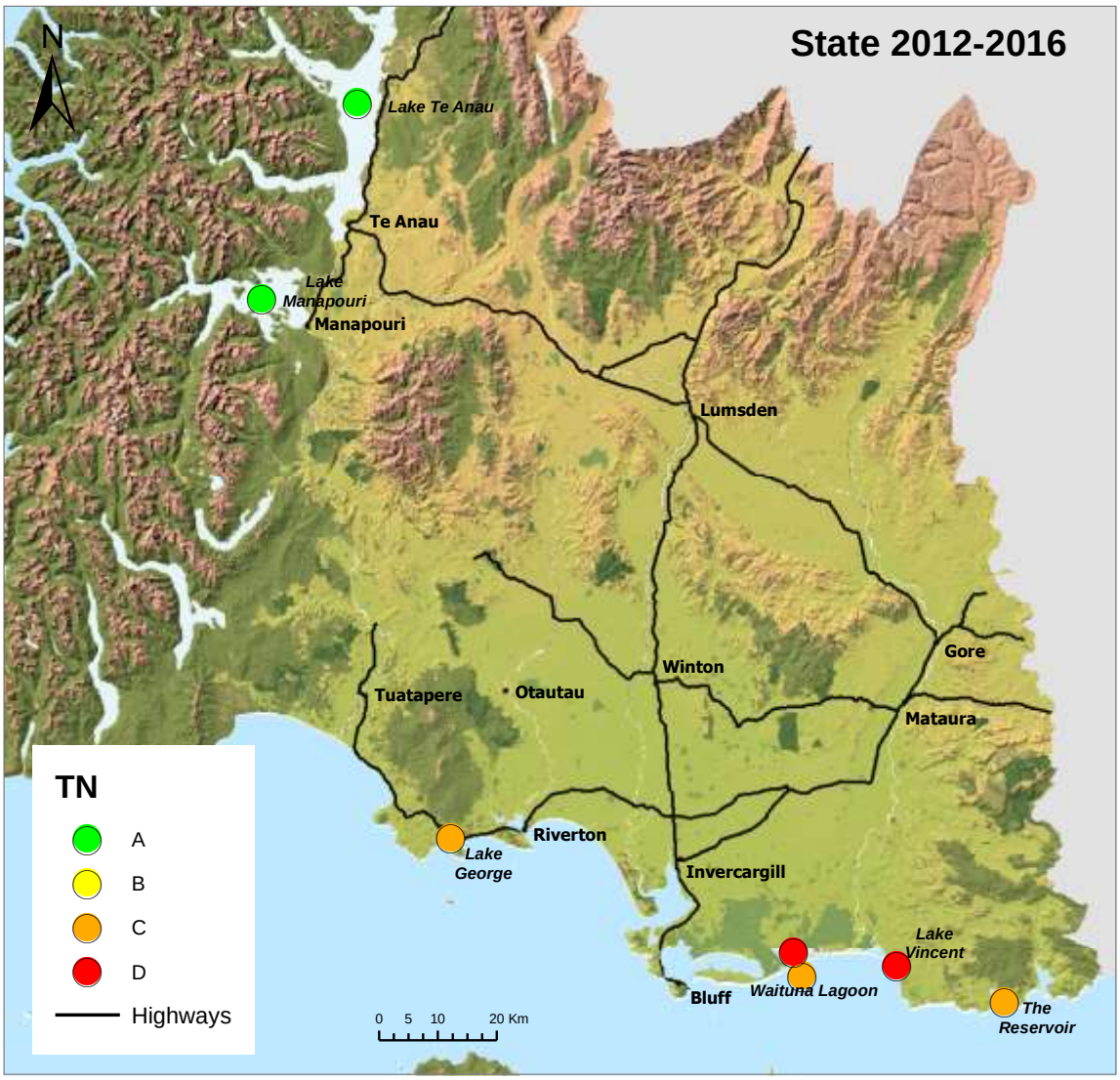

Figure 19: Analysis of regional TN lake water quality data against the National Objectives Framework (NOF).

Table 3: Breakdown of TN (mg/m^3) statistics and NOF bandings for all sites across Southland's monitored lakes.

Site	Lake Type	Minimum	Maximum	Median	n	Band
Lake Manapouri at Pomona Island Top	Stratified	55	150	77.5	16	A
Lake Manapouri at Stony Point Top	Stratified	55	130	94	17	A
Lake Manapouri near Frazers Beach Top	Stratified	55	210	79	17	A
Lake Te Anau at Blue Gum Point Top	Stratified	55	170	75	17	A
Lake Te Anau at South Fiord Top	Stratified	55	110	55	17	A
Waituna Lagoon at Lagoon Centre	ICOLL - Open	137	2800	315	36	B
Waituna Lagoon at Lagoon South	ICOLL - Open	91	2600	200	37	B
Lake George NE	Polymictic	330	2400	520	20	C
Lake George SW	Polymictic	240	2300	535	20	C
The Reservoir Centre	Polymictic	480	780	605	20	C
The Reservoir West	Polymictic	450	750	595	20	C
Waituna Lagoon at Lagoon East	ICOL - Closed	300	2500	730	44	C
Waituna Lagoon at Lagoon East	ICOLL - Open	150	2100	590	37	C
Waituna Lagoon at Lagoon South	ICOL - Closed	240	2700	710	46	C
Waituna Lagoon at Lagoon West	ICOLL - Open	150	3100	360	38	C
Lake Vincent Centre	Polymictic	530	1590	980	20	D
Lake Vincent North	Polymictic	460	1610	915	20	D
Waituna Lagoon at Lagoon Centre	ICOL - Closed	500	2700	820	46	D
Waituna Lagoon at Lagoon West	ICOL - Closed	330	3100	810	46	D

Total Phosphorus (Trophic State)

Figure 20 represents the Total Phosphorus summary data tabulated in Table 4. Total Phosphorus concentrations in Southland's glacial lakes are very low, with all sites regularly producing results below the laboratory's minimum detection limits (4mg/m^3). The median value for all glacial lake sites was 2mg/m^3 which are an artefact of the processing method for lower detection limit censored values, i.e. the values are halved. Polymictic sites ranged from a median of 22.5mg/m^3 (Lake George NE) to 31mg/m^3 (The Reservoir Centre), placing all sites within the 'C' band of the NOF. Sites at Waituna Lagoon were similar, with only two sites (Waituna Lagoon at Lagoon Centre and Waituna Lagoon at Lagoon South) scoring higher than a 'C' when the lagoon was open. During closed periods, median Total Phosphorus concentrations at Lagoon Centre and Lagoon South sites were 67% and 30% higher than during open periods, resulting in a shift from a 'B' to 'C' NOF ranking. Total Phosphorus concentrations also increased with closure by 52% at the Lagoon West site, while The Eastern was seen to drop by approximately 2%.

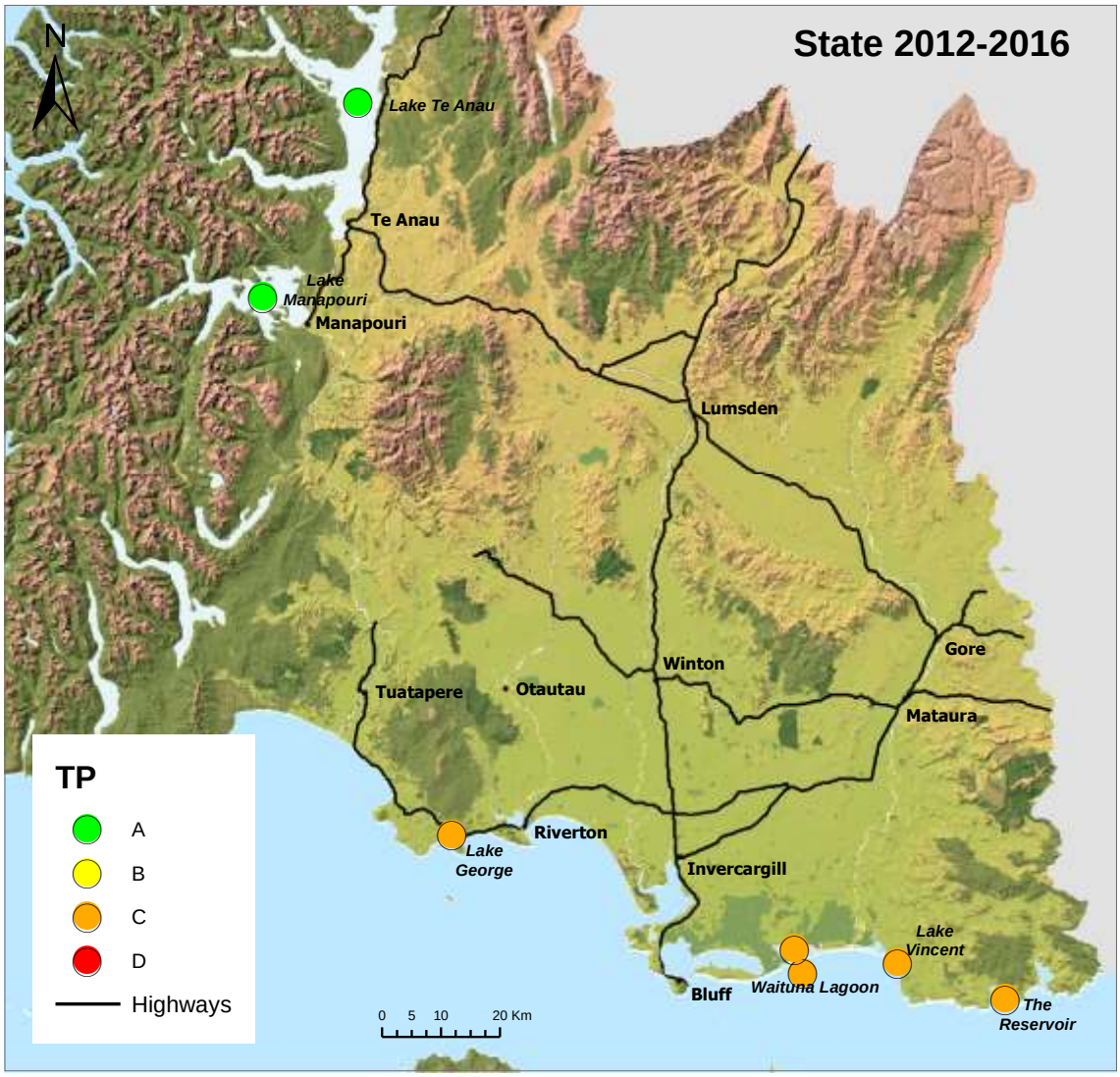

Figure 20: Analysis of regional TP lake water quality data against the National Objectives Framework (NOF).

Table 4: Breakdown of TP (mg/m^3) statistics and NOF bandings for all sites across Southland's monitored lakes.

Site	Lake Type	Minimum	Maximum	Median	n	Band
Lake Manapouri at Pomona Island Top	Stratified	1	13	2	15	A
Lake Manapouri at Stony Point Top	Stratified	0	6	2	16	A
Lake Manapouri near Frazers Beach Top	Stratified	1	14	2	16	A
Lake Te Anau at Blue Gum Point Top	Stratified	1	6	2	16	A
Lake Te Anau at South Fiord Top	Stratified	2	5	2	16	A
Waituna Lagoon at Lagoon Centre	ICOLL - Open	9	101	18	37	B
Waituna Lagoon at Lagoon South	ICOLL - Open	8	92	20	37	B
Waituna Lagoon at Lagoon East	ICOLL - Open	12	139	27	37	C
Waituna Lagoon at Lagoon West	ICOLL - Open	7	130	24	38	C
Waituna Lagoon at Lagoon Centre	ICOL - Closed	19	64	30	46	C
Waituna Lagoon at Lagoon East	ICOL - Closed	12	74	26.5	44	C
Waituna Lagoon at Lagoon South	ICOL - Closed	15	64	26	46	C
Waituna Lagoon at Lagoon West	ICOL - Closed	17	130	36.5	46	C
Lake George NE	Polymictic	7	230	22.5	20	C
Lake George SW	Polymictic	7	162	28	20	C
Lake Vincent Centre	Polymictic	14	58	28	20	C
Lake Vincent North	Polymictic	14	41	22	20	C
The Reservoir Centre	Polymictic	18	45	31	20	C
The Reservoir West	Polymictic	19	45	30	20	C

Phytoplankton [chlorophyll-a] (Trophic State)

A region-wide NOF assessment for phytoplankton is depicted in Figure 21, and summary data is tabulated in Table 5. Sites ranged from a five year median chl-*a* concentration of 0.45mg/m^3 at Lake Manapouri at Pomona Island Top ('A' band), to 12.6 mg/m^3 at The Reservoir Centre ('D' band). Southland's stratified glacial lake sites all scored within the highest attribute band, while polymictic lakes and ICOLLs all had at least one site that was ranked a 'B' or lower. The Reservoir West site had a median chl-*a* concentration approximately 413% higher than the next highest polymictic lake, placing this site in a 'C' band, just above the national bottom line. The Reservoir Centre site breached the bottom line with a median concentration of 12.6mg/m^3.

The concentration of chl-*a* in Waituna Lagoon depended on if the lagoon was open or closed to the sea, with open periods experiencing lower chl-*a* concentration at all sites (maximum 'B' band). All closed sites either had median chl-*a* concentrations, or maximum concentration spikes that were of magnitude to rank them in the 'C' attribute band.

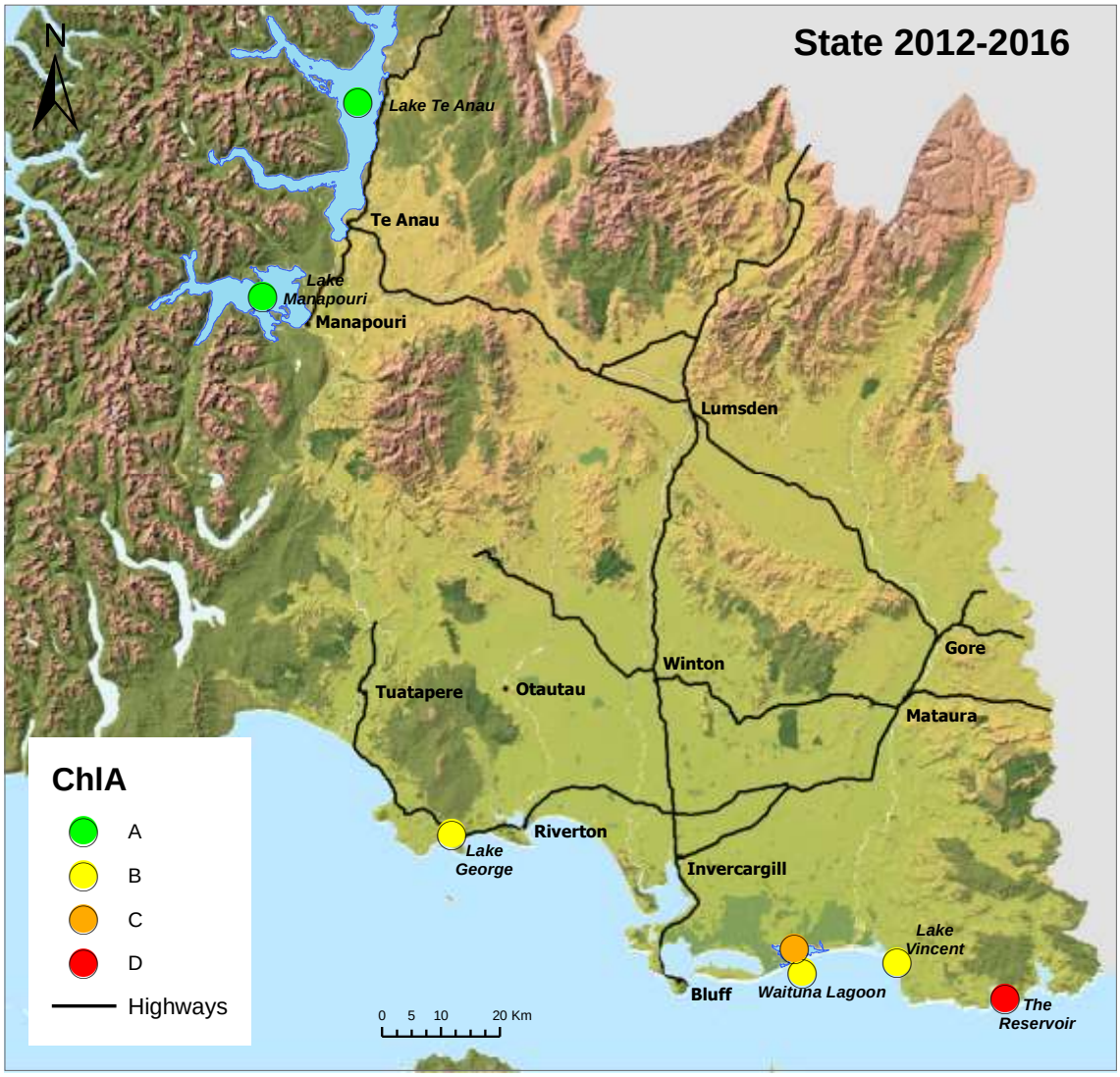

Figure 21: Analysis of regional Chl-*a* lake water quality data against the National Objectives Framework (NOF).

Table 5: Assessment of Southland's lakes against the NOF for the phytoplankton (Chl-*a* mg/m^3) attribute.

Site	Lake Type	Minimum	Maximum	Median	n	Band
Lake Manapouri at Pomona Island Top	Stratified	0.1	1.5	0.45	16	A
Lake Manapouri at Stony Point Top	Stratified	0.2	1.5	0.675	16	A
Lake Manapouri near Frazers Beach Top	Stratified	0.1	1.5	0.7	17	A
Lake Te Anau at Blue Gum Point Top	Stratified	0.25	1.5	0.6	17	A
Lake Te Anau at South Fiord Top	Stratified	0.2	1.5	0.7	17	A
Waituna Lagoon at Lagoon South	ICOLL - Open	0.1	5.3	0.8	28	A
Waituna Lagoon at Lagoon West	ICOLL - Open	0.1	4.9	0.7	28	A
Lake George NE	Polymictic	0.25	22	2.75	20	B
Lake George SW	Polymictic	0.7	12	3.3	20	B
Lake Vincent Centre	Polymictic	0.25	17	2.75	20	B
Lake Vincent North	Polymictic	0.25	18	2.75	20	B
Waituna Lagoon at Lagoon Centre	ICOLL - Open	0.2	14.6	0.9	37	B
Waituna Lagoon at Lagoon East	ICOLL - Open	0.2	14	1	28	B
The Reservoir West	Polymictic	2.5	28	11.35	20	C
Waituna Lagoon at Lagoon Centre	ICOL - Closed	0.2	31	2.2	46	C
Waituna Lagoon at Lagoon East	ICOL - Closed	0.3	29	1.5	42	C
Waituna Lagoon at Lagoon South	ICOL - Closed	0.1	26	2.25	44	C
Waituna Lagoon at Lagoon West	ICOL - Closed	0.5	39	2.45	44	C
The Reservoir Centre	Polymictic	2.5	37	12.6	20	D

Ammonia [total ammoniacal nitrogen adjusted to a pH of 8.0] (Toxicity)

Figure 22 shows the regional NOF assessment for Ammonia (total ammoniacal N adjusted to a pH of 8.0), which is based on the information in Table 6. All but six sites were ranked in the 'A' attribute band of the NOF. Once site on Lake George (Lake George NE), two on Lake Vincent, and three at Waituna Lagoon while open to the sea (Waituna Lagoon at Lagoon Centre, Waituna Lagoon at Lagoon East, and Waituna Lagoon at Lagoon West) had maximum ammonia concentrations that resulted in a 'B' NOF banding (NPS-FM; New Zealand Government, 2014).

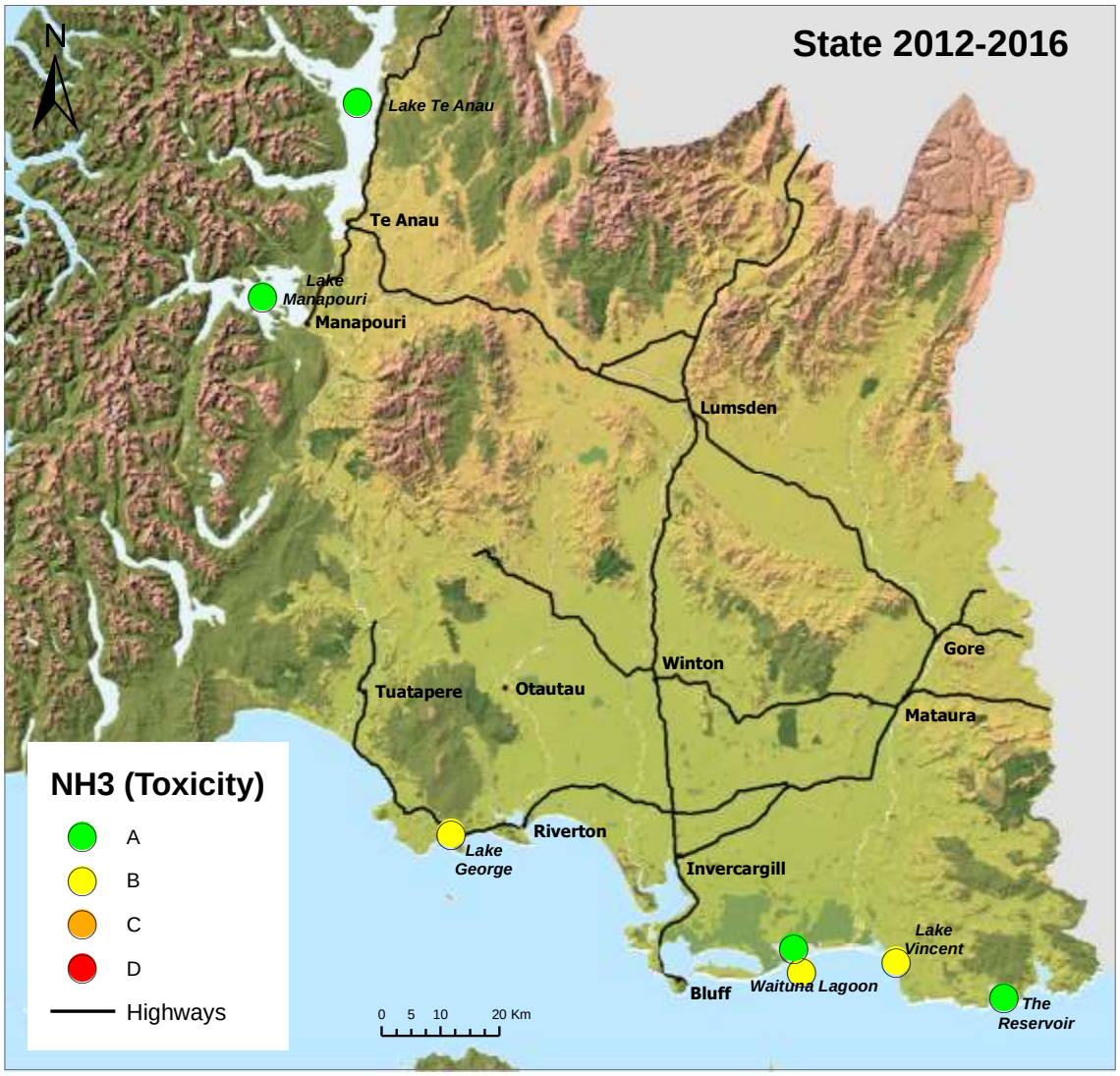

Figure 22: Analysis of regional NH_3 lake water quality data against toxicity thresholds in the National Objectives Framework (NOF).

Table 6: Breakdown of Ammonia toxicity (total ammoniacal nitrogen adjusted to a pH of 8.0, mg/L) statistics and NOF bandings for all sites across Southland's monitored lakes.

Site	Lake Type	Minimum	Maximum	Median	n	Band
Lake George SW	Polymictic	0.002	0.032	0.003	20	A
The Reservoir Centre	Polymictic	0.002	0.008	0.003	20	A
The Reservoir West	Polymictic	0.002	0.008	0.003	20	A
Lake Manapouri at Pomona Island Top	Stratified	0.002	0.003	0.002	22	A
Lake Manapouri at Stony Point Top	Stratified	0.002	0.003	0.002	23	A
Lake Manapouri near Frazers Beach Top	Stratified	0.002	0.003	0.002	23	A
Lake Te Anau at Blue Gum Point Top	Stratified	0.002	0.003	0.002	23	A
Lake Te Anau at South Fiord Top	Stratified	0.002	0.007	0.002	23	A
Waituna Lagoon at Lagoon South	ICOLL - Open	0.004	0.03	0.006	21	A
Waituna Lagoon at Lagoon Centre	ICOLL - Closed	0.003	0.042	0.006	26	A
Waituna Lagoon at Lagoon East	ICOLL - Closed	0.003	0.024	0.008	23	A
Waituna Lagoon at Lagoon South	ICOLL - Closed	0.003	0.026	0.005	27	A
Waituna Lagoon at Lagoon West	ICOLL - Closed	0.002	0.048	0.006	27	A
Lake George NE	Polymictic	0.002	0.094	0.003	20	B
Lake Vincent Centre	Polymictic	0.003	0.083	0.009	20	B
Lake Vincent North	Polymictic	0.003	0.075	0.0125	20	B
Waituna Lagoon at Lagoon Centre	ICOLL - Open	0.003	0.106	0.006	21	B
Waituna Lagoon at Lagoon East	ICOLL - Open	0.003	0.078	0.006	21	B
Waituna Lagoon at Lagoon West	ICOLL - Open	0.003	0.074	0.005	21	B

E. coli (Recreational Contact)

Figure 23 and Figure 24 show how Southland's monitored lakes compare when assessed against the primary and secondary contact attribute in the NOF. These figures are based on the summary statistics in Table 7 which summarises monthly data for each site.

- **Primary Contact**

  Lake Te Anau and Lake Manapouri were sampled at Boat Harbour Beach, and Frazer's Beach respectively. Both of these sites are used by the community for swimming activities, and the current results indicate that it is safe to do so with both lakes scoring an 'A' for primary contact. Lake Vincent and The Reservoir are valued by the local community for water-skiing (primary contact) and other secondary contact activities. These lakes both score an 'A' for primary contact recreation. Lake George is only 1.2m deep and is therefore not valued as a community swimming spot, however it is still of a quality suitable for primary contact ('B' band). One site at Waituna Lagoon did not meet the minimum standard for primary contact during both open (Waituna Lagoon at Lagoon East) and closed (Waituna Lagoon at Lagoon West) periods. All other sites met the required standards for primary contact, scoring either an 'A' or 'B'. Waituna Lagoon is valued for hunting, fishing and other activities that do not require submersion. Therefore the failure of primary contact swimming standards set out in the NOF is unlikely to compromise any associated community values.

- **Secondary Contact**

  All monitored sites were deemed suitable for secondary contact.

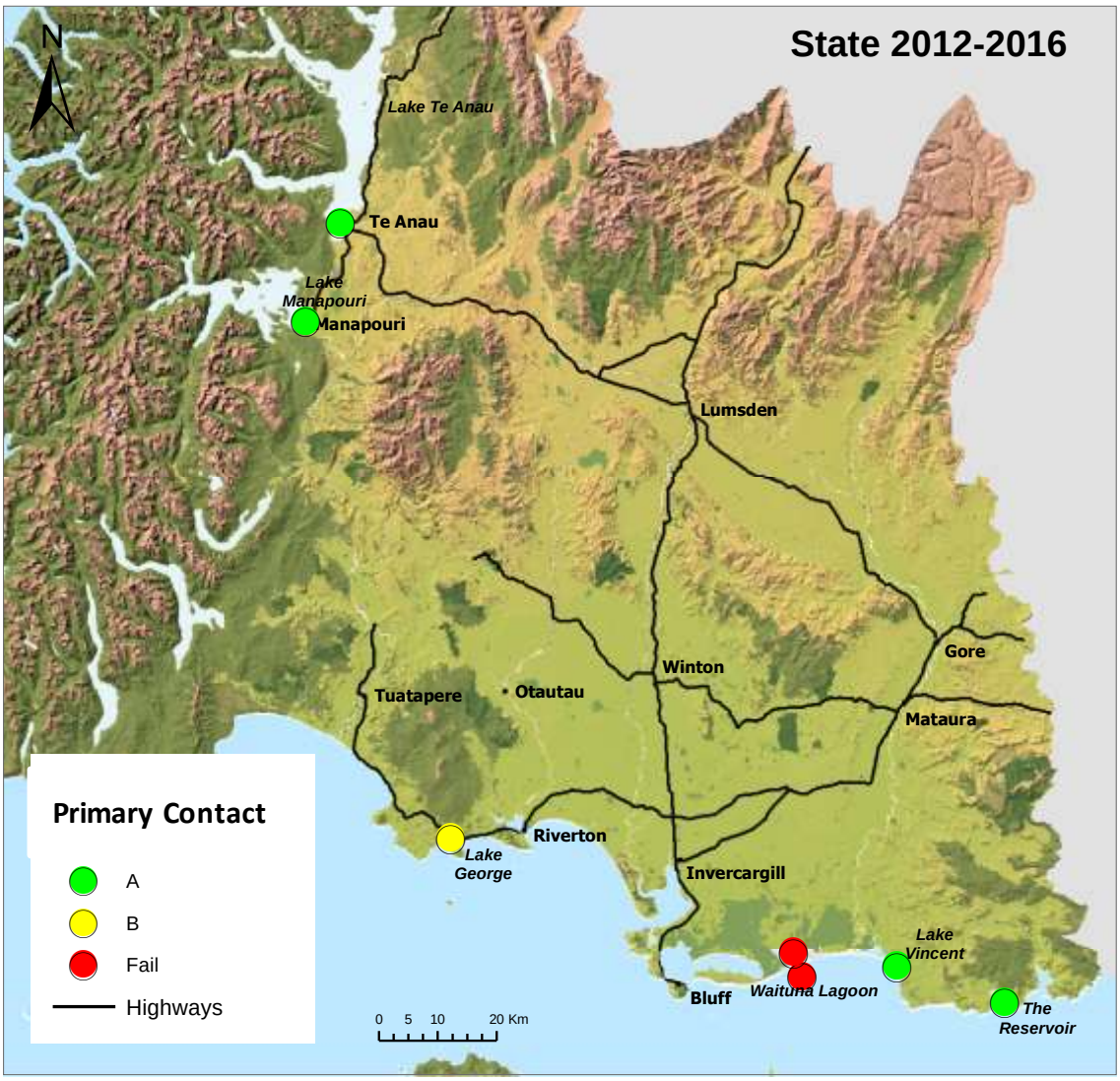

Figure 23: Analysis of *E.Coli* data as an indicator of faecal contamination, against primary contact standards in the National Objectives Framework (NOF).

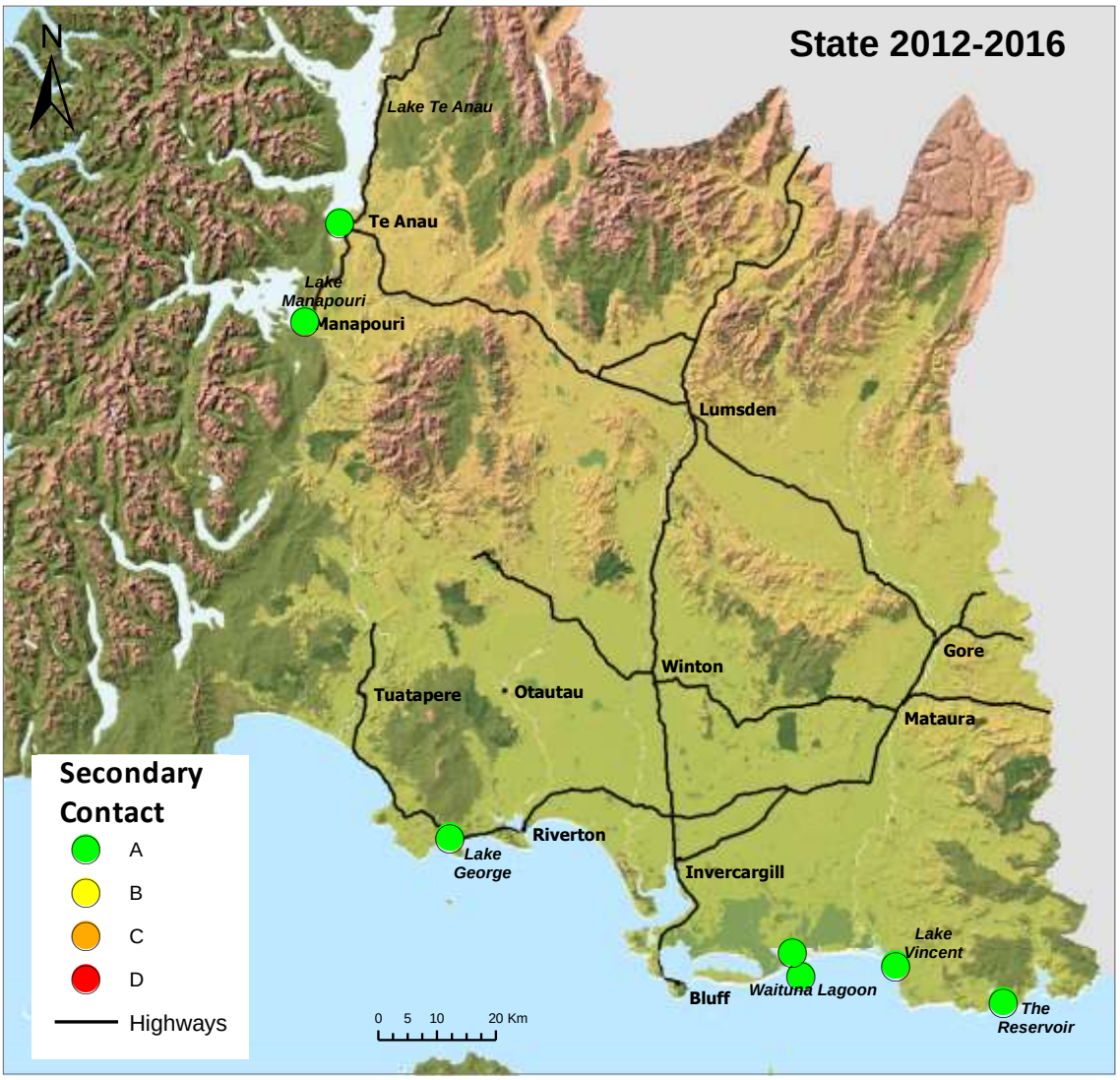

Figure 24: Analysis of *E.coli* data as an indicator of faecal contamination, against secondary contact standards in the National Objectives Framework (NOF).

Table 7: Breakdown of *E. coli* (cfu) statistics and NOF bandings for all sites across Southland's monitored lakes.

Site	Lake Type	Min	Max	Med	n	95th %ile	Primary Contact	Secondary Contact
Lake George NE	Polymictic	0	200	50	15	186	A	A
Lake Manapouri at Frazers Beach	Stratified - Bathing	1	170	5	45	112	A	A
Lake Te Anau at Boat Harbour Beach	Stratified - Bathing	1	30	5	43	19	A	A
Lake Vincent Centre	Polymictic	0	120	25	12	109	A	A
Lake Vincent North	Polymictic	0	50	10	12	33.5	A	A
The Reservoir Centre	Polymictic	0	80	25	12	63.5	A	A
The Reservoir West	Polymictic	0	100	10	12	67	A	A
Waituna Lagoon at Lagoon Centre	ICOLL - Closed	0	8000	20	23	198	A	A
Waituna Lagoon at Lagoon East	ICOLL - Closed	0	260	10	22	79	A	A
Waituna Lagoon at Lagoon South	ICOLL - Open	0	700	3	17	212	A	A
Waituna Lagoon at Lagoon South	ICOLL - Closed	0	180	13	22	160	A	A
Lake George SW	Polymictic	10	560	140	15	378	B	A
Waituna Lagoon at Lagoon Centre	ICOLL - Open	0	1300	5	17	540	B	A
Waituna Lagoon at Lagoon West	ICOLL - Open	2	1100	27	17	340	B	A
Waituna Lagoon at Lagoon East	ICOLL - Open	2	3600	19	17	840	Fail	A
Waituna Lagoon at Lagoon West	ICOLL - Closed	0	17000	15	22	574.25	Fail	A

3.2. Water quality state: Groundwater

3.2.1. Groundwater quality – Environment Southland operated sites

The tables associated with the respective maps are in Appendix 9.

NO_3-N Drinking water

Assessment of groundwater Nitrate Nitrite Nitrogen concentrations against the drinking water standard illustrates that median concentrations were worse than drinking water standards in 19 of 159 bores.

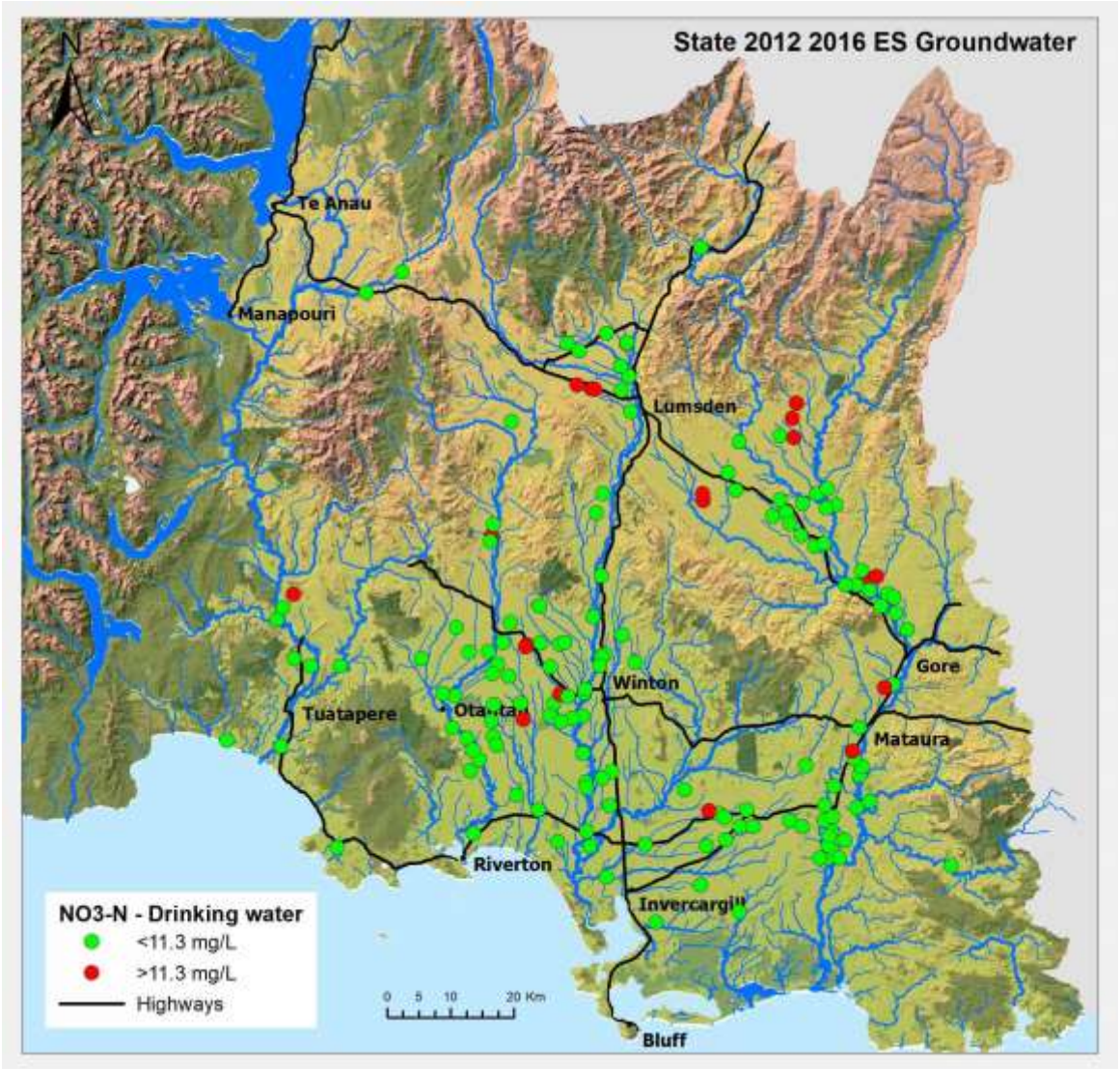

Figure 25: ES groundwater quality state for NO_3-N drinking water (2012-2016).

NO_3-N Toxicity

In Figure 26 groundwater Nitrate Nitrite Nitrogen concentrations are compared against the surface water toxicity objectives. These are **not** numerical objectives for groundwater and this assessment is included for comparative purposes only. The consideration of Nitrate Nitrite Nitrogen concentrations is not intended to be a binary pass fail test. Rather it is indicative of the risk accumulation of Nitrate Nitrite Nitrogen in groundwater may pose to stream ecosystem health where groundwater contributes a high proportion of surface flow. The actual level of toxicity indicated in Figure 26 may not be realised in a particular connected stream owing to the existence of one or a combination of processes including: dilution; denitrification prior to discharge to the stream; instream plant uptake.

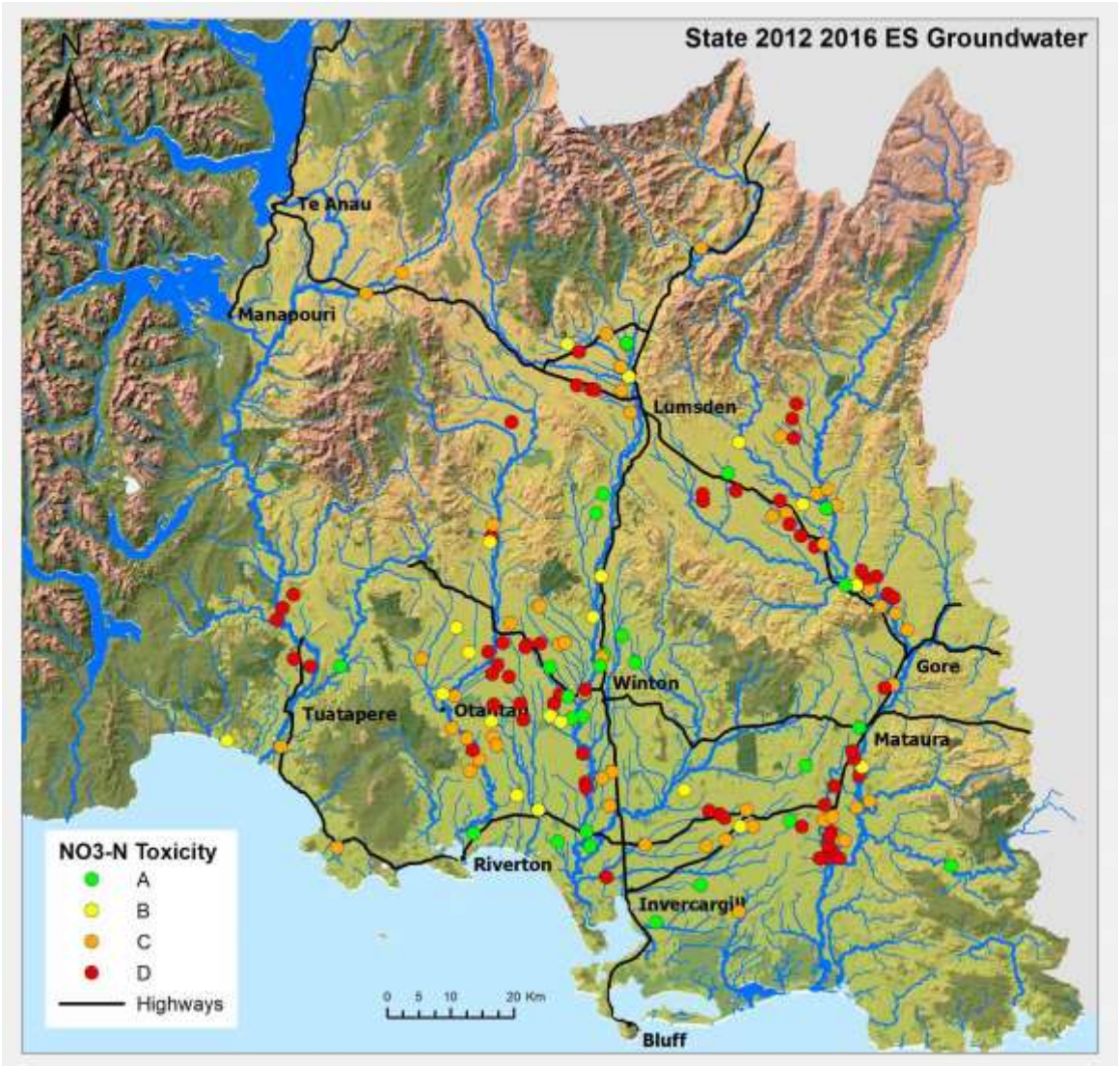

Figure 26: ES groundwater quality state for NO_3-N surface water toxicity (2012-2016).

3.2.2. Groundwater quality – GNS operated sites

The tables associated with the respective maps are in Appendix 8.

NO_3-N Drinking water

Assessment of groundwater Nitrate Nitrite Nitrogen concentrations in GNS operated sites, against the drinking water standard illustrates that median concentrations are better than drinking water standards in all six bores (Figure 27).

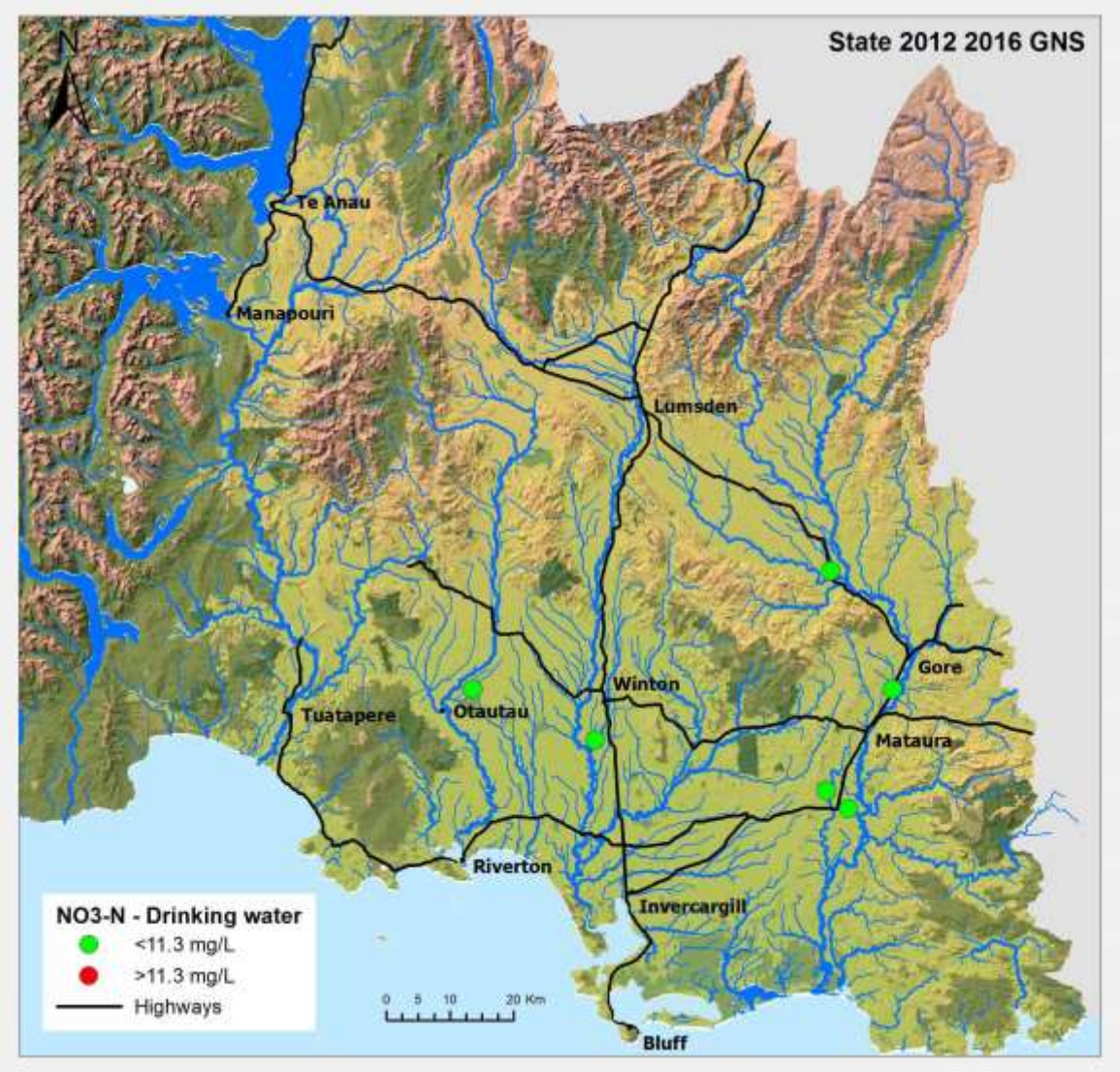

Figure 27: GNS groundwater quality state for NO_3-N drinking water (2012-2016).

3.3. Water quality trends: Surface water Environment Southland operated sites

3.3.1. ES River water quality trends 2012-2016

Trends at Environment Southland operated sites for the 5 year time period January 2012 through December 2016 are presented graphically in Figures 28 to 35 and summarised by parameter in Table 8.

Table 8: ES surface water quality trends between 2012 and 2016 for each parameter.

Variable	Clarity	*E.Coli*	NNN	TN	NH_4	ON	DRP	TP
Number sites analysed	32	54	49	46	18	46	38	45
Indeterminate	25	51	38	39	15	37	34	44
Decrease	7	0	9	7	3	0	1	0
Increase	0	3	2	0	0	9	3	1

For TN, seven of 46 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 28). For the remaining 39 sites the trend direction is unable to be confidently determined.

For NH_4, three of 18 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 29). For the remaining 15 sites the trend direction is unable to be confidently determined.

For NNN, nine of 49 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 30). Two sites have an increasing trend and for the remaining 38 sites the trend direction is unable to be confidently determined.

For ON, nine of 46 sites with sufficient data for analysis have an increasing trend in concentration (Figure 31). For the remaining 37 sites the trend direction is unable to be confidently determined.

For TP one of 45 sites with sufficient data for analysis has an increasing trend in concentration (Figure 32). For the remaining 44 sites the trend direction is unable to be confidently determined.

For DRP, three of 38 sites with sufficient data for analysis have an increasing trend in concentration (Figure 33). One site has a decrease in concentration. For the remaining 34 sites the trend direction is unable to be confidently determined.

For clarity, seven of 32 sites with sufficient data for trend analysis have deterioration in clarity (Figure 34). No sites have an improvement and the trend direction was unable to be confidently determined for the remaining 25 sites.

For *E.coli*, three of 54 sites with sufficient data for analysis have an increasing trend in *E.coli* concentration (Figure 35). No sites have a decreasing *E.coli* concentration and for the remaining 51 sites the trend direction was unable to be confidently determined.

Figure 28: ES surface water quality trend between 2012 and 2016 for TN

Figure 29: ES surface water quality trend between 2012 and 2016 for NH_4-N.

Figure 30: ES surface water quality trend between 2012 and 2016 for NO_3-N + NO_2-N.

Figure 31: ES surface water quality trend between 2012 and 2016 for ON.

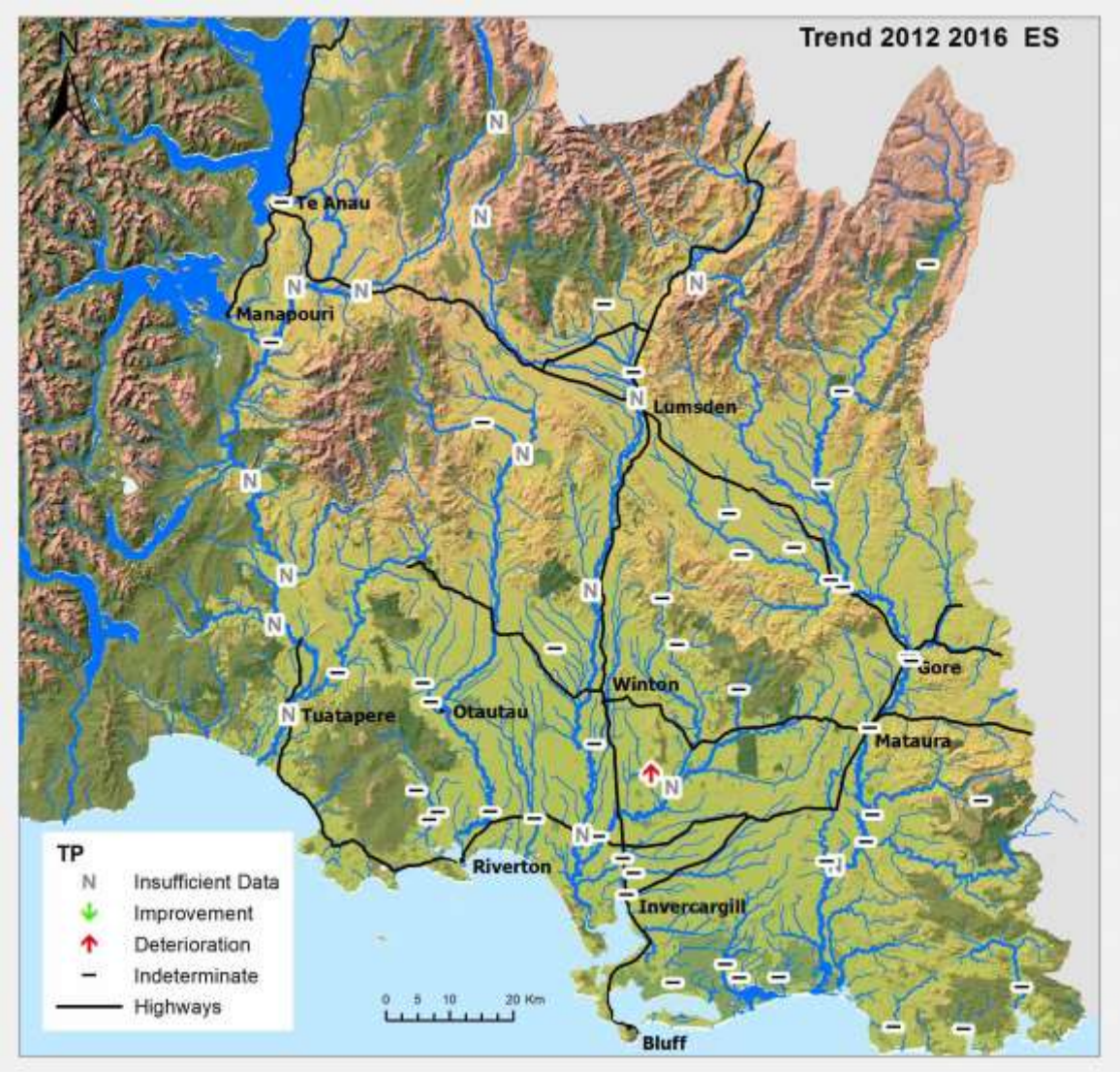

Figure 32: ES surface water quality trend between 2012 and 2016 for TP.

Figure 33: ES surface water quality trend between 2012 and 2016 for DRP.

Figure 34: ES surface water quality trend between 2012 and 2016 for clarity.

Figure 35: ES surface water quality trend between 2012 and 2016 for *E.coli*.

3.3.2. ES River water quality trends 2007-2016

Trends at Environment Southland operated sites for the 10 year time period January 2007 through December 2016 are presented graphically in Figures 36 to 43 and summarised by parameter in Table 9.

Table 9: ES surface water quality trends between 2007 and 2016 for each parameter.

Variable	Clarity	*E.Coli*	NNN	TN	NH4	ON	DRP	TP
Number sites analysed	35	54	49	46	11	46	35	40
Indeterminate	26	47	32	33	2	33	25	24
Decrease	9	2	12	3	9	0	3	14
Increase	0	5	5	10	0	13	7	2

For TN, three of 46 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 36). 10 sites have an increasing concentration. For the remaining 33 sites the trend direction is unable to be confidently determined.

For NH_4, nine of 11 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 37). For the remaining two sites the trend direction is unable to be confidently determined.

For NNN, 12 of 49 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 38). Five sites have an increasing trend and for the remaining 32 sites the trend direction is unable to be confidently determined.

For ON, 13 of 46 sites with sufficient data for analysis have an increasing trend in concentration (Figure 39). For the remaining 33 sites the trend direction is unable to be confidently determined.

For TP two of 40 sites with sufficient data for analysis have an increasing trend in concentration (Figure 40). 14 sites have a decreasing trend in concentration. For the remaining 24 sites the trend direction is unable to be confidently determined.

For DRP, seven of 35 sites with sufficient data for analysis have an increasing trend in concentration (Figure 41). Three sites have a decrease in concentration. For the remaining 25 sites the trend direction is unable to be confidently determined.

For clarity, nine of 35 sites with sufficient data for trend analysis have deterioration in clarity (Figure 42). No sites have an improvement and the trend direction was unable to be confidently determined for the remaining 26 sites.

For *E.coli*, five of 54 sites with sufficient data for analysis have an increasing trend in *E.coli* concentration (Figure 43). Two sites have a decreasing *E.coli* concentration and for the remaining 47 sites the trend direction was unable to be confidently determined.

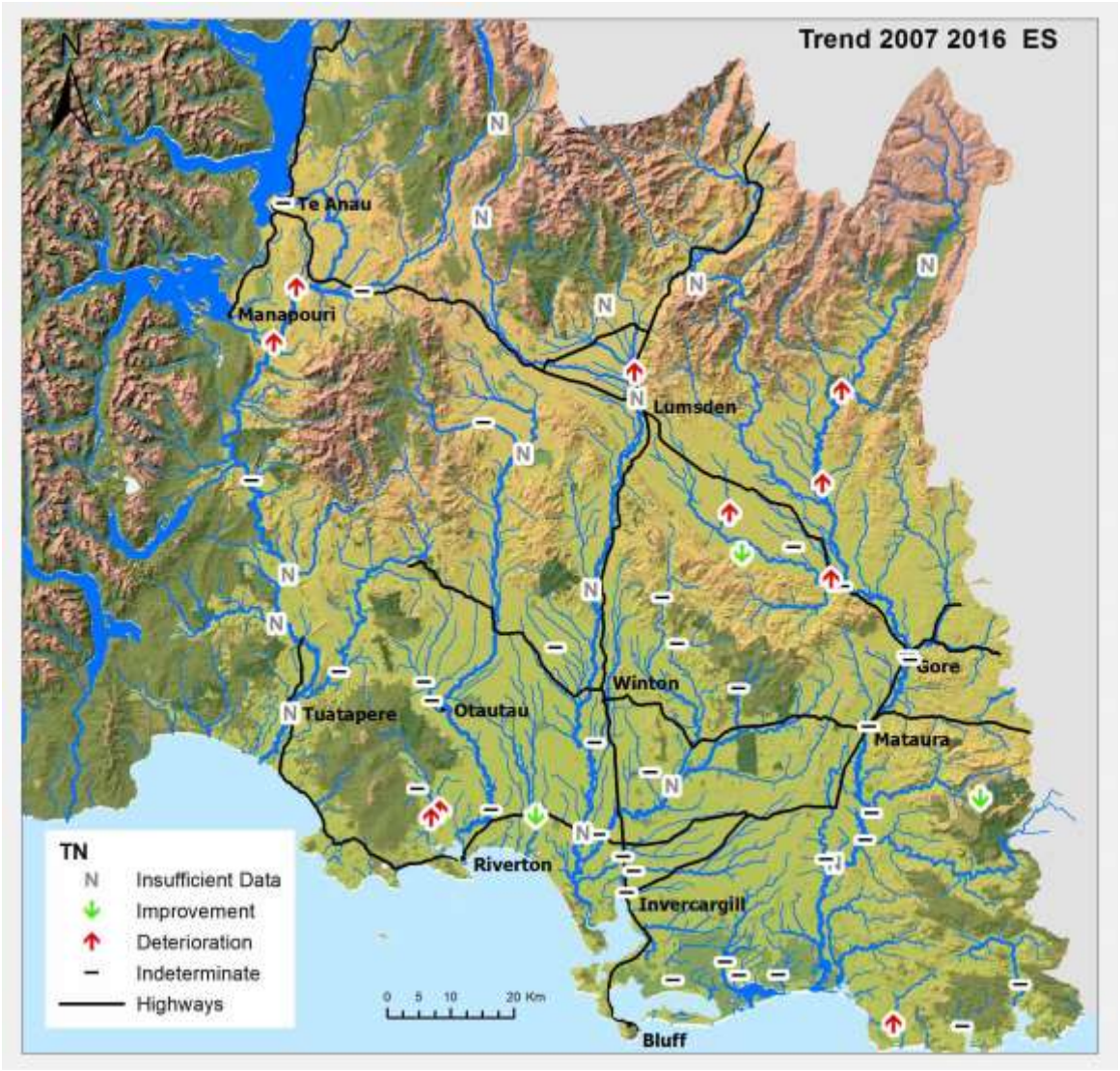

Figure 36: ES surface water quality trend between 2007 and 2016 for TN.

Figure 37: ES surface water quality trend between 2007 and 2016 for NH_4-N.

Figure 38: ES surface water quality trend between 2007 and 2016 for NO_3-N+NO_2-N.

Figure 39: ES surface water quality trend between 2007 and 2016 for ON.

Figure 40: ES surface water quality trend between 2007 and 2016 for TP.

Figure 41: ES surface water quality trend between 2007 and 2016 for DRP.

Figure 42: ES surface water quality trend between 2007 and 2016 for clarity.

Figure 43: ES surface water quality trend between 2007 and 2016 for *E.coli*.

3.3.3. ES River water quality trends 2000-2016

Trends at Environment Southland operated sites for the 17 year time period January 2000 through December 2016 are presented graphically in Figures 44 to 51 and summarised by parameter in Table 10.

Table 10: ES surface water quality trends between 2000 and 2016 for each parameter.

Variable	Clarity	*E.coli*	NNN	TN	NH4	ON	DRP	TP
Number sites analysed	29	40	35	34	13	29	20	21
Indeterminate	19	33	18	22	4	24	9	12
Decrease	5	3	2	1	8	1	11	9
Increase	5	4	15	11	1	4	0	0

For TN, one of 34 sites with sufficient data for analysis has a decreasing trend in concentration (Figure 44). 11 sites have an increasing concentration. For the remaining 34 sites the trend direction is unable to be confidently determined.

For NH_4, eight of 13 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 45). One site has an increasing trend in concentration. For the remaining four sites the trend direction is unable to be confidently determined.

For NNN, 15 of 35 sites with sufficient data for analysis have an increasing trend in concentration (Figure 46). Two sites have a decreasing trend and for the remaining 18 sites the trend direction is unable to be confidently determined.

For ON, four of 29 sites with sufficient data for analysis have an increasing trend in concentration (Figure 47). One site has a decreasing trend in concentration. For the remaining 24 sites the trend direction is unable to be confidently determined.

For TP nine of 21 sites with sufficient data for analysis sites have a decreasing trend in concentration (Figure 48). For the remaining 12 sites the trend direction is unable to be confidently determined.

For DRP, 11 of 20 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 49). For the remaining nine sites the trend direction is unable to be confidently determined.

For clarity, five of 29 sites with sufficient data for trend analysis have deterioration in clarity (Figure 50) while five sites have an improvement (or increase). The trend direction was unable to be confidently determined for the remaining 19 sites.

For *E.coli*, four of 40 sites with sufficient data for analysis have an increasing trend in *E.coli* concentration (Figure 51). Three sites have a decreasing *E.coli* concentration and for the remaining 33 sites the trend direction was unable to be confidently determined.

Figure 44: ES surface water quality trend between 2000 and 2016 for TN.

Figure 45: ES surface water quality trend between 2000 and 2016 for NH_4-N.

Figure 46: ES surface water quality trend between 2000 and 2016 for NO_3-N+NO_2-N.

Figure 47: ES surface water quality trend between 2000 and 2016 for ON.

Figure 48: ES surface water quality trend between 2000 and 2016 for TP.

Figure 49: ES surface water quality trend between 2000 and 2016 for DRP.

Figure 50: ES surface water quality trend between 2000 and 2016 for clarity.

Figure 51: ES surface water quality trend between 2000 and 2016 for *E.coli.*

3.4. Water quality trends: Surface water NIWA operated sites

3.4.1. NIWA River water quality trends 2012-2016

Trend analysis for NIWA operated sites for the time period 2012 -2016 are not presented graphically as trends for all NIWA operated sites during the time period are either indeterminate or there is insufficient data available for analysis.

3.4.2. NIWA River water quality trends 2007-2016

Trends at NIWA operated sites for the 10 year time period January 2007 through December 2016 are presented graphically in Figures 52 to 59 and summarised by parameter in Table 11.

Table 11: NIWA surface water quality trends between 2007 and 2016 for each parameter.

Variable	Clarity	*E.coli*	NNN	TN	NH4	ON	DRP	TP
Number sites analysed	6	5	5	6	6	6	5	6
Indeterminate	6	4	3	4	5	4	4	6
Decrease	0	0	0	0	1	0	1	0
Increase	0	1	2	2	0	2	0	0

For TN, two of six sites with sufficient data for analysis have an increasing trend in concentration (Figure 52). For the remaining two sites the trend direction is unable to be confidently determined.

For NH_4, one of six sites with sufficient data for analysis has a decreasing trend in concentration (Figure 53). For the remaining five sites the trend direction is unable to be confidently determined.

For NNN, two of five sites with sufficient data for analysis have an increasing trend in concentration (Figure 54). For the remaining three sites the trend direction is unable to be confidently determined.

For ON, two of six sites with sufficient data for analysis have an increasing trend in concentration (Figure 55). For the remaining four sites the trend direction is unable to be confidently determined.

For TP the trend direction is unable to be confidently determined for all six sites (Figure 56).

For DRP, one of five sites with sufficient data for analysis has a decreasing trend in concentration (Figure 57). For the remaining four sites the trend direction is unable to be confidently determined.

For clarity, six NIWA operated sites had sufficient data for trend analysis, however the trend direction was unable to be confidently determined for all sites (Figure 58).

For *E.coli*, four of five sites with sufficient data for analysis, the trend direction was unable to be confidently determined (Figure 59). An increase in *E.coli* concentration was identified at one site.

Figure 52: NIWA surface water quality trend between 2007 and 2016 for TN.

Figure 53: NIWA surface water quality trend between 2007 and 2016 for NH_4-N.

Figure 54: NIWA surface water quality trend between 2007 and 2016 for NO_3-N+NO_2-N.

Figure 55: NIWA surface water quality trend between 2007 and 2016 for ON.

Figure 56: NIWA surface water quality trend between 2007 and 2016 for TP.

Figure 57: NIWA surface water quality trend between 2007 and 2016 for DRP.

Figure 58: NIWA surface water quality trend between 2007 and 2016 for clarity.

Figure 59: NIWA surface water quality trend between 2007 and 2016 for *E.coli*.

3.4.3. NIWA River water quality trends 2000-2016

Trends at NIWA operated sites for the 17 year time period January 2000 through December 2016 are presented graphically in Figures 60 to 67 and summarised by parameter in Table 12.

Table 12: NIWA surface water quality trends between 2007 and 2016 for each parameter.

Variable	Clarity	*E.coli*	NNN	TN	NH4	ON	DRP	TP
Number sites analysed	6	6	6	6	6	6	5	6
Indeterminate	5	6	1	0	5	2	4	5
Decrease	0	0	0	1	1	2	1	1
Increase	1	0	5	5	0	2	0	0

For TN, five of six sites with sufficient data for analysis have an increasing trend in concentration (Figure 60). One site has a decreasing trend in concentration.

For NH_4, one of six sites with sufficient data for analysis has a decreasing trend in concentration (Figure 61). For the remaining five sites the trend direction is unable to be confidently determined.

For NNN, five of six sites with sufficient data for analysis have an increasing trend in concentration (Figure 62). For the remaining site the trend direction is unable to be confidently determined.

For ON, two of six sites with sufficient data for analysis have an increasing trend in concentration (Figure 63). Two sites have a decreasing trend in concentration. For the remaining two sites the trend direction is unable to be confidently determined.

For TP one of five sites with sufficient data for analysis has a decreasing trend in concentration (Figure 64). The trend direction is unable to be confidently determined for the remaining five sites.

For DRP, one of five sites with sufficient data for analysis has a decreasing trend in concentration (Figure 65). For the remaining four sites the trend direction is unable to be confidently determined.

For clarity, one of six NIWA operated sites that have sufficient data for trend analysis has an increasing trend in clarity which is an improvement, however the trend direction was unable to be confidently determined for the remaining 5 sites (Figure 66).

For *E.coli*, none of the NIWA operated sites have sufficient data for analysis.

Figure 60: NIWA surface water quality trend between 2000 and 2016 for TN.

Figure 61: NIWA surface water quality trend between 2000 and 2016 for NH_4-N.

Figure 62: NIWA surface water quality trend between 2000 and 2016 for NO_3-N+NO_2-N.

Figure 63: NIWA surface water quality trend between 2000 and 2016 for ON.

Figure 64: NIWA surface water quality trend between 2000 and 2016 for TP.

Figure 65: NIWA surface water quality trend between 2000 and 2016 for DRP.

Figure 66: NIWA surface water quality trend between 2000 and 2016 for visual clarity.

3.5. Water quality trends: Groundwater Environment Southland operated sites

3.5.1. ES Groundwater quality trends 2012-2016

Trends at Environment Southland operated sites for the 5 year time period 2012 – 2016 are presented graphically in Figures 67 and 68 and are summarised by parameter in Table 13.

Table 13: ES Groundwater trends for NNN and DRP between 2012 and 2016.

Variable	NNN	DRP
Number sites analysed	25	23
Indeterminate	14	22
Decrease	6	0
Increase	5	1

For Nitrate Nitrite Nitrogen (NNN), five of 25 sites with sufficient data for analysis have an increasing trend in concentration (Figure 67). Six sites have a decreasing trend in concentration. For the remaining 25 sites the trend direction is unable to be confidently determined.

For DRP, one of 23 sites with sufficient data for analysis has a decreasing trend in concentration (Figure 68). For the remaining 22 sites the trend direction is unable to be confidently determined.

Figure 67: ES groundwater quality trend between 2012 and 2016 for NO_3-N+NO_2-N.

Figure 68: ES groundwater quality trend between 2012 and 2016 for DRP.

3.5.2. ES Groundwater quality trends 2007-2016

Trends at Environment Southland operated sites for the 10 year time period 2007 – 2016 are presented graphically in Figures 69 and 70 and are summarised by parameter in Table 14.

Table 14: ES Groundwater trends for NNN and DRP between 2007 and 2016.

Variable	NNN	DRP
Number sites analysed	25	23
Indeterminate	9	17
Decrease	6	6
Increase	10	0

For NNN, 10 of 25 sites with sufficient data for analysis have an increasing trend in concentration (Figure 69). Six sites have a decreasing trend in concentration. For the remaining 25 sites the trend direction is unable to be confidently determined.

For DRP, six of 23 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 70). For the remaining 17 sites the trend direction is unable to be confidently determined.

Figure 69: ES groundwater quality trend between 2007 and 2016 for NO_3-N+NO_2-N.

Figure 70: ES groundwater quality trend between 2007 and 2016 for DRP.

3.5.3. ES Groundwater quality trends 2000-2016

Trends at Environment Southland operated sites for the 17 year time period 2000 – 2016 are presented graphically in Figures 71 and 72 and are summarised by parameter in Table 15.

Table 15: ES Groundwater trends for NNN and DRP between 2000 and 2016.

Variable	NNN	DRP
Number sites analysed	23	19
Indeterminate	5	7
Decrease	3	9
Increase	15	3

For NNN, 15 of 23 sites with sufficient data for analysis have an increasing trend in concentration (Figure 71). Three sites have a decreasing trend in concentration. For the remaining five sites the trend direction is unable to be confidently determined.

For DRP, nine of 19 sites with sufficient data for analysis have a decreasing trend in concentration (Figure 72). Three sites have an increasing trend in concentration. For the remaining seven sites the trend direction is unable to be confidently determined.

Figure 71: ES groundwater quality trend between 2000 and 2016 for NO_3-N+NO_2-N.

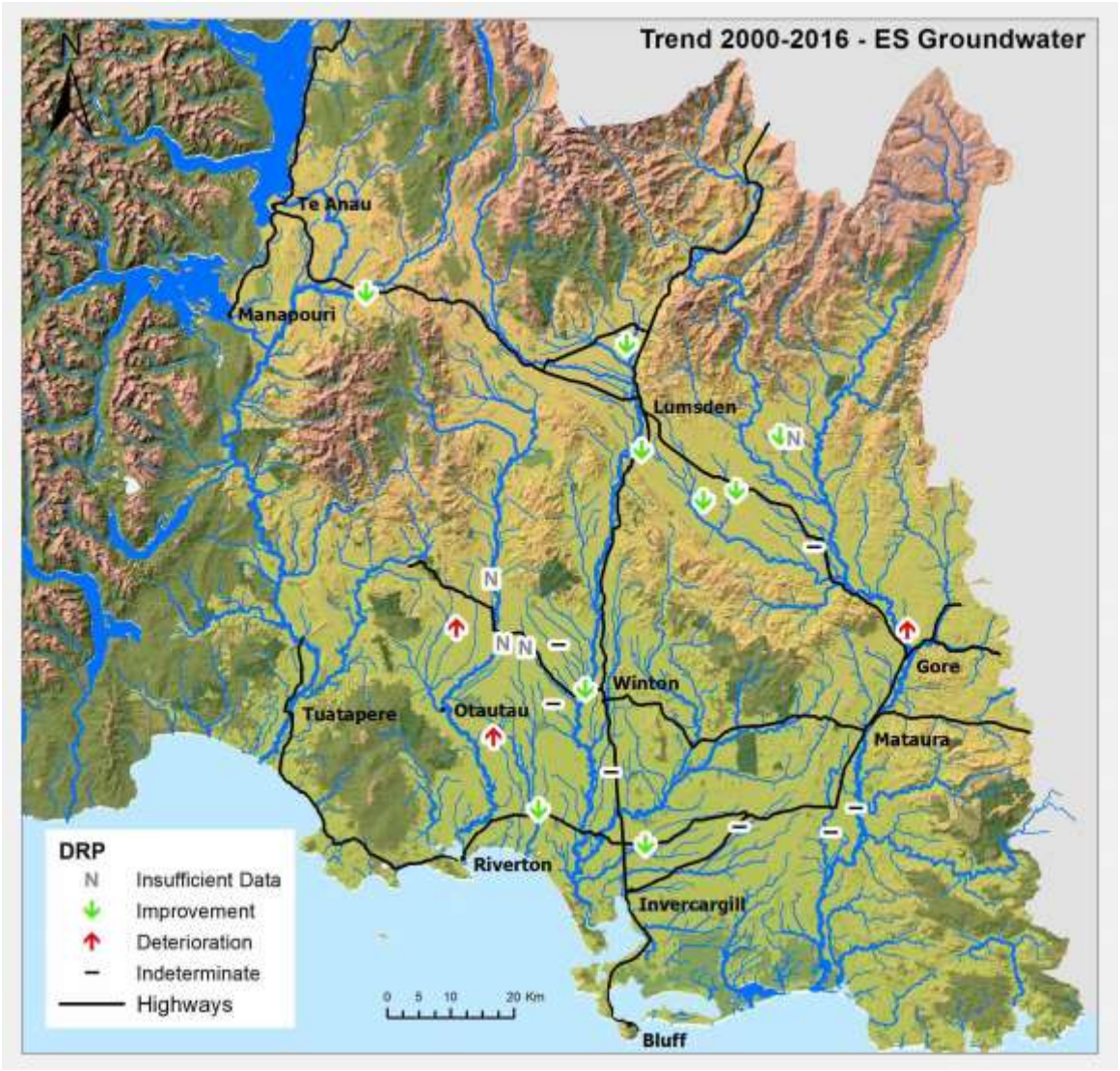

Figure 72: ES groundwater quality trend between 2000 and 2016 for DRP.

3.6. Water quality trends: Groundwater GNS Science operated sites

3.6.1. GNS Science Groundwater quality trends 2012-2016

Trends at GNS operated sites for the 5 year time period 2012 – 2016 are presented graphically in Figure 73.

For NNN, two of six sites with sufficient data for analysis have a decreasing trend in concentration. For the remaining four sites the trend direction is unable to be confidently determined.

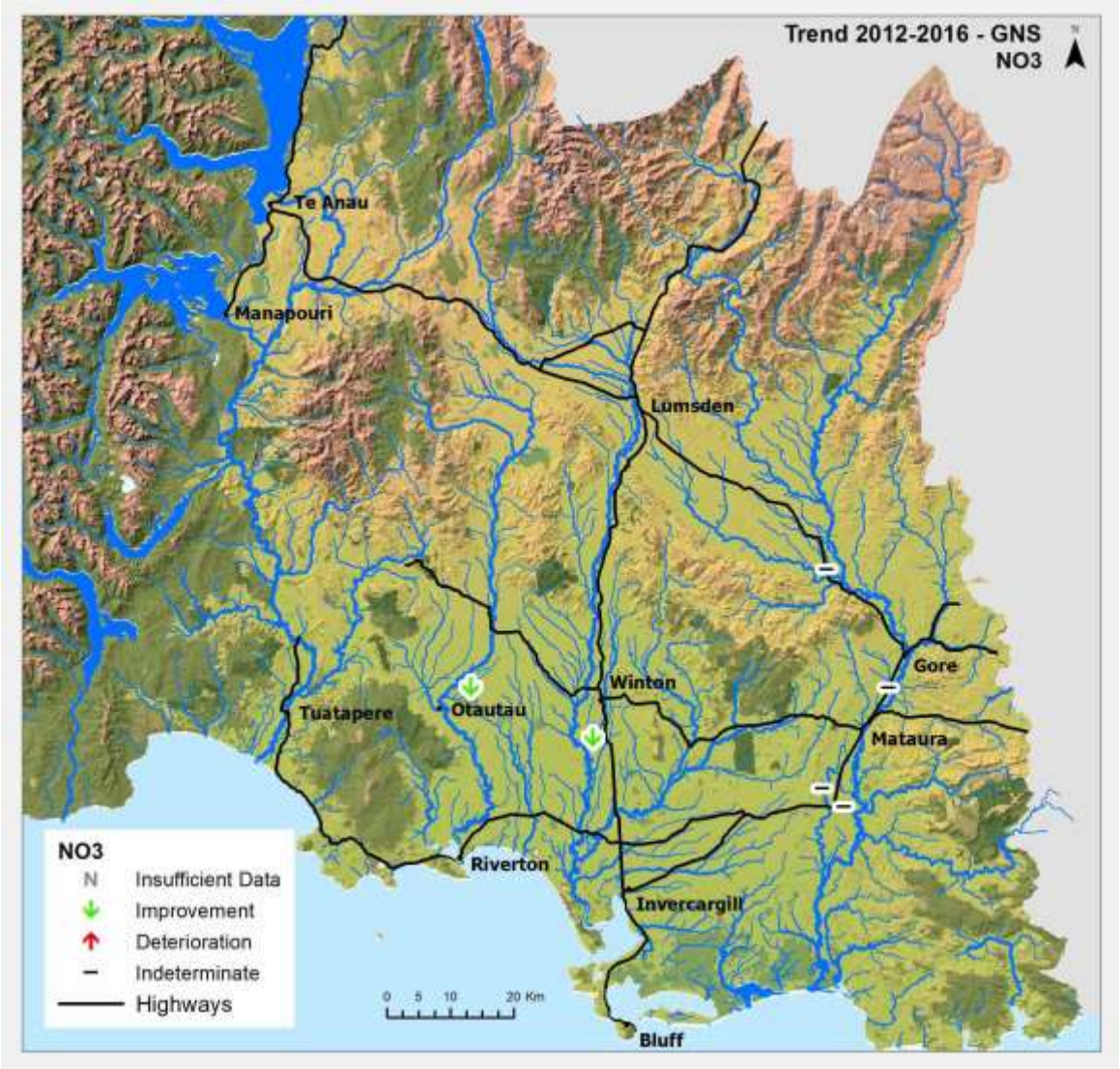

Figure 73: GNS groundwater quality trend between 2012 and 2016 for NO_3-N.

3.6.2. GNS Science Groundwater quality trends 2007-2016

Trends at GNS operated sites for the 10 year time period 2007 – 2016 are presented graphically in Figure 74.

For NNN, one of six sites with sufficient data for analysis has a decreasing trend in concentration. One has an increasing trend. For the remaining four sites the trend direction is unable to be confidently determined.

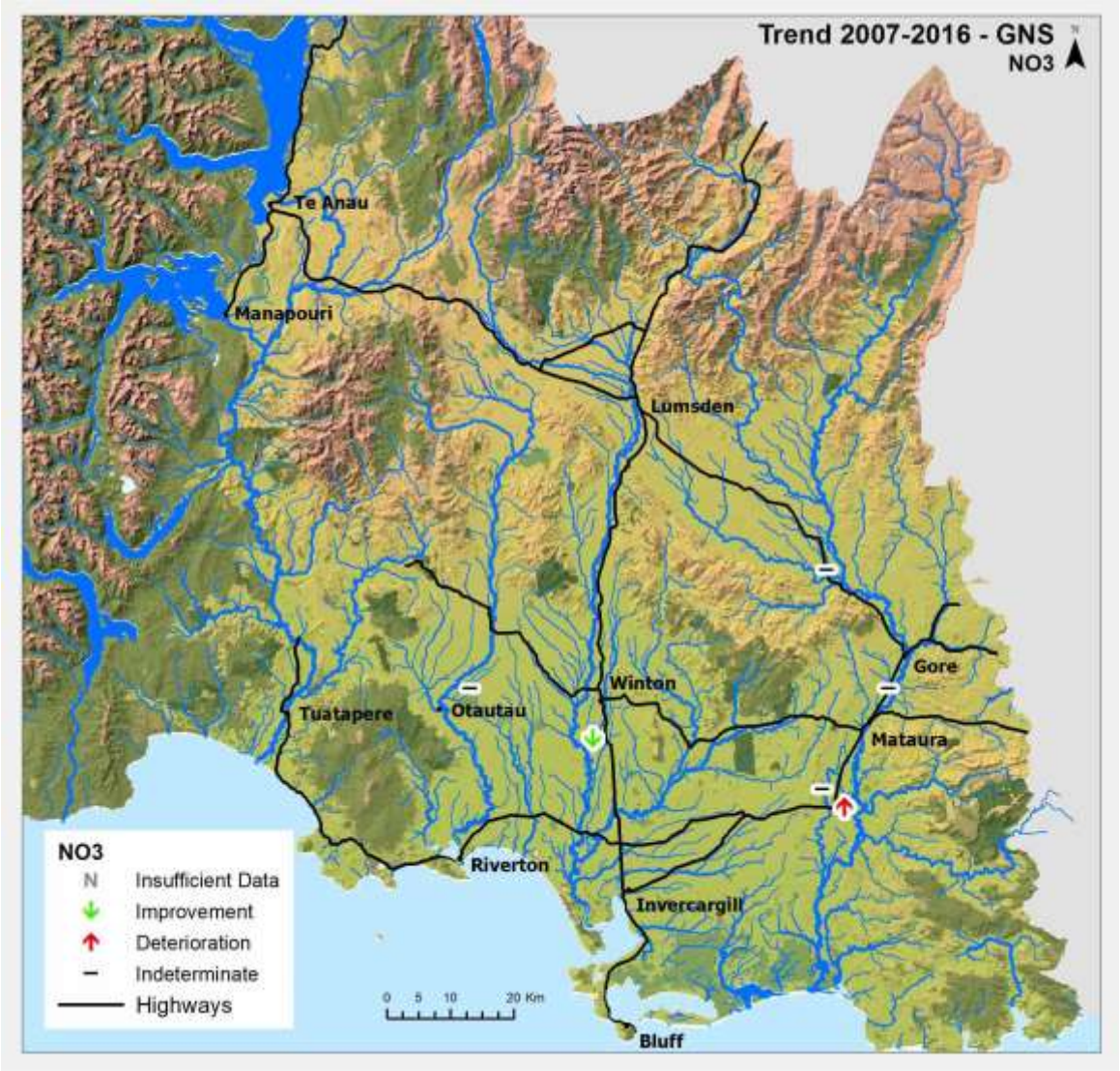

Figure 74: GNS groundwater quality trend between 2007 and 2016 for NO_3-N.

3.6.3. GNS Science Groundwater quality trends 2000-2016

Trends at GNS operated sites for the 17 year time period 2000 – 2016 are presented graphically in Figure 75.

For NNN, one of six sites with sufficient data for analysis has a decreasing trend in concentration. One has an increasing trend. For the remaining four sites the trend direction is unable to be confidently determined.

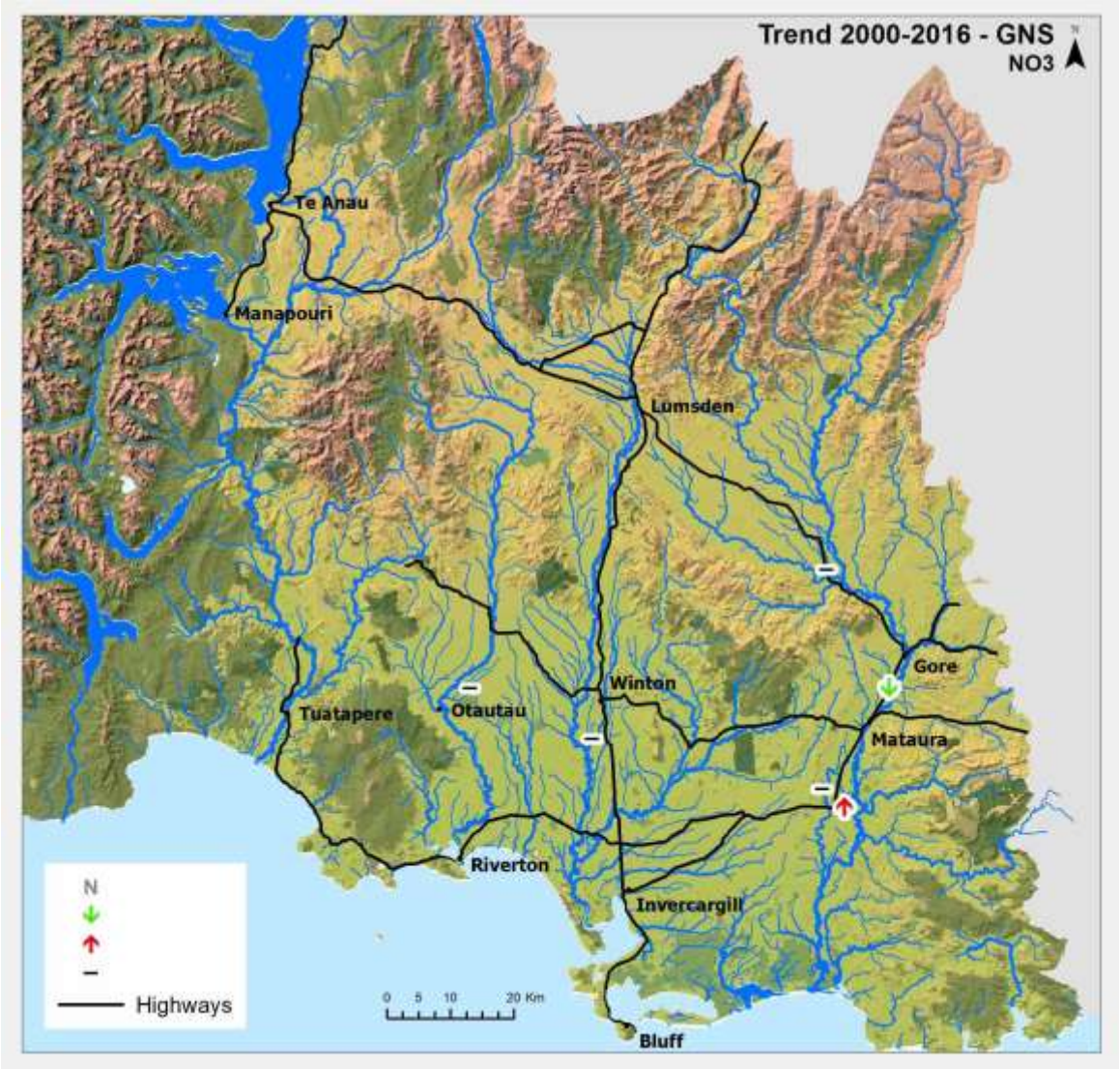

Figure 75: GNS groundwater quality trend between 2000 and 2016 for NO_3-N.

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Appendices

Appendix 1: Total ammoniacal nitrogen conversion table to standard pH for comparison with ANZECC (2000) guidelines

pH	Ratio relative to pH 8
6	2.86
6.1	2.84
6.2	2.82
6.3	2.8
6.4	2.77
6.5	2.73
6.6	2.7
6.7	2.64
6.8	2.59
6.9	2.51
7	2.42
7.1	2.31
7.2	2.21
7.3	2.09
7.4	1.94
7.5	1.79
7.6	1.63
7.7	1.47
7.8	1.31
7.9	1.14
8	1
8.1	0.87
8.2	0.73
8.3	0.62
8.4	0.53
8.5	0.44
8.6	0.38
8.7	0.32
8.8	0.27
8.9	0.23
9	0.2

Conversion = Measured concentration / pH ratio for measured average or 95 percentile pH value

Note: for pH values greater than 9.0 or less than 6, a maximum ratio from pH 9 or a minimum ratio from pH 6 should be used.

Appendix 2: Laboratory and analytical techniques for parameters analysed by Environment Southland Surface and Ground water quality samples (Adapted from: White (2006); and Wilson et al. (2010))

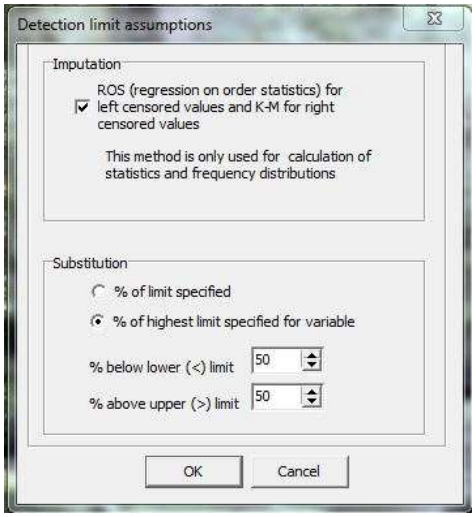
Parameter	ES in house Lab 1975-April 2005 >1999 FIA	MLS Envirolab May 2005-June 2008	RJ Hills July 2008 - present
	APHA 4500 - NO3 B [FIA]	APHA 4500 - NO3 B [FIA]	Filtered sample from Christchurch. Total oxidised nitrogen.
Nitrate-Nitrite Nitrogen			Automated cadmium reduction, flow injection analyser.
			APHA4500-NO3- I 22nd ed. 2012 (modified).
	APHA 4500 - NH3 [FIA	APHA 4500 - NH3 [FIA]	Filtered sample from Christchurch. Phenol/hypochlorite colorimetry. Discrete analyser. (NH4-N = NH4+-N + NH3-N).
Ammoniacal N (NH_3 + NH_4)			APHA 4500-NH3 F (modified from manual analysis) 22nd ed. 2012.
	APHA - N C [FIA]	APHA - N C [FIA]	Calculation: TKN + Nitrate-N + Nitrite-N. Total Kjeldahl digestion, phenol/ hypochlorite colorimetry. Discrete Analyser.
Total Nitrogen			APHA 4500-Norg D. (modified) 4500 NH3 F
			(modified) 22nd ed. 2012.
	APHA 4500 - P [FIA]	APHA 4500 - P [FIA]	Filtered sample from Christchurch. Molybdenum blue colorimetry. Discrete analyser.
Dissolved Reactive Phosphorus			APHA 4500-P E (modified from manual analysis) 22nd ed. 2012.
	APHA 4500 - P B G [FIA]	APHA 4500 - P B G [FIA]	Total phosphorus digestion, ascorbic acid colorimetry. Discrete analyser.
Total phosphorus			APHA 4500-P B & E (modified from manual

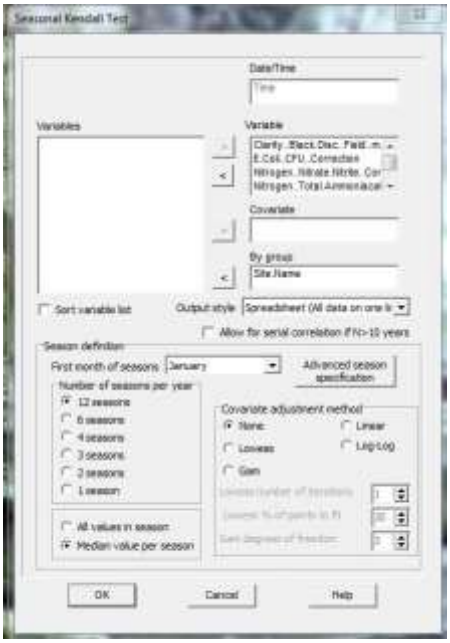
			analysis)22nd ed. 2012. Also modified to include the use of a reductant to eliminate interference from arsenic present in the sample. NWASCA, Water & soil Miscellaneous Publication No. 38, 1982.
E. coli bacteria	APHA 9222 G	APHA 9222 G	Membrane filtration, Count on mFC agar, Incubated at 44.5°C for 22 hours, Confirmation analysed at Hill Laboratories - Microbiology; 101c Waterloo Road, Hornby, Christchurch. APHA 9222 G, 22nd ed. 2012

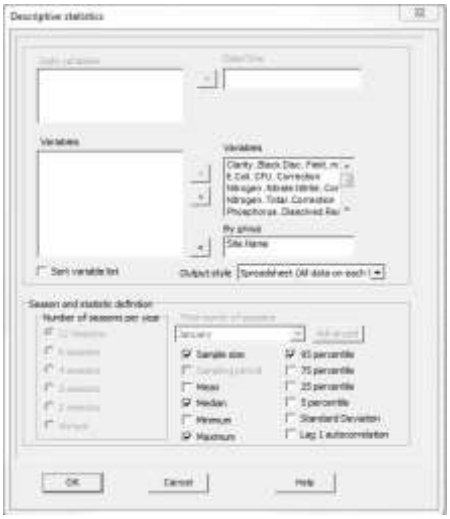
Appendix 3: Upland/Lowland categories for surface water sites (ES and NIWA).

Site	NZ segment	Elevation (catchment)	Slope (catchment)	Category
Aparima River at Dunrobin	15277297	731	18	upland
Aparima River at Thornbury	15312477	336	7	lowland
Bog Burn d/s Hundred Line Road	15299427	206	5	lowland
Carran Creek at Waituna Lagoon Road	15319279	19	1	lowland
Cascade Stream at Pourakino Valley Road	15311046	300	8	lowland
Cromel Stream at Selbie Road	15264307	862	23	upland
Dipton Stream at South Hillend-Dipton Rd	15294225	239	8	lowland
Dunsdale Stream at Dunsdale Reserve	15302981	364	13	upland
Hamilton Burn at Affleck Road	15280148	411	7	upland
Hedgehope Stream 20m u/s Makarewa Confl	15310842	147	5	lowland
Irthing Stream at Ellis Road	15271780	708	15	upland
Lill Burn at Lill Burn-Monowai Road	15297404	279	11	lowland
Longridge Stream at Sandstone	15286902	197	2	lowland
Makarewa River at Lora Gorge Road	15299251	289	10	lowland
Makarewa River at Wallacetown	15313548	150	5	lowland
Mararoa River at South Mavora Lake	15245105	1109	24	upland
Mararoa River at The Key	15263069	855	18	upland
Mararoa River at Weir Road	15267818	694	14	upland
Mataura at Parawa	15262084	760	21	upland
Mataura at Seaward Down	15314940	461	12	upland
Mataura River 200m d/s Mataura Bridge	15306430	518	12	upland
Mataura River at Gore	15299973	574	14	upland
Mataura River at Mataura Island Bridge	15314856	25	0	lowland
Mataura River at Parawa	15262084	760	21	upland
Mimihau Stream at Wyndham	15312542	290	10	lowland
Mimihau Stream Tributary at Venlaw Forest	15311744	444	12	upland
Moffat Creek at Moffat Road	15319333	15	0	lowland
Mokoreta River at Wyndham River Road	15313907	212	8	lowland
Mokotua Stream at Awarua	15319462	10	0	lowland
Monowai below Gates	15284361	671	23	upland
North Peak Stream at Waimea Valley Road	15290864	284	11	lowland
Opouriki Stream at Tweedie Road	15312378	62	3	lowland
Orauea River at Orawia Pukemaori Road	15301693	246	8	lowland
Oreti at Lumsden	15274581	692	15	upland
Oreti at Riverton HW Br	15314100	442	10	upland
Oreti River at Lumsden Bridge	15274581	692	15	upland
Oreti River at Three Kings	15254930	1003	21	upland
Oreti River at Wallacetown	15314100	442	10	upland
Otamita Stream at Mandeville	15293926	320	11	lowland
Otapiri Stream at Otapiri Gorge	15294727	364	11	upland
Otautau Stream at Otautau-Tuatapere Road	15304031	141	3	lowland
Otautau Stream at Waikouro	15302569	140	5	lowland
Otepuni Creek at Nith Street	15316408	21	0	lowland
Oteramika Stream at Seaward Downs	15314528	51	1	lowland
Pourakino River at Traill Road	15312921	238	8	lowland
Sandstone Stream at Kingston Crossing Rd	15290336	163	1	lowland
Tokanui River at Fortrose Otara Road	15320438	89	6	lowland
Tussock Creek at Cooper Road	15310151	82	3	lowland
Upukerora River at Te Anau Milford Road	15253416	726	15	upland
Waiau at Tuatapere	15305046	637	19	upland
Waiau River at Sunnyside	15283270	711	21	upland
Waiau River at Tuatapere	15305046	637	19	upland
Waihopai River u/s Queens Drive	15315475	48	0	lowland
Waikaia River at Waikaia	15273874	869	15	upland
Waikaia River at Waipounamu Bridge Road	15283637	780	15	upland
Waikaia River u/s Piano Flat	15260248	1196	15	upland
Waikaka Stream at Gore	15300377	219	6	lowland
Waikawa River at Progress Valley	15319599	163	9	lowland
Waikiwi Stream at North Road	15314522	34	0	lowland
Waikopikopiko Stream at Haldane CurioBay	15320424	199	9	lowland
Waimatuku Stream at Lorneville Riverton Hwy	15312806	58	0	lowland
Waimea Stream at Mandeville	15293327	191	4	lowland
Wairaki River ds Blackmount Road	15292848	559	15	upland
Waituna Creek at Marshall Road	15318944	33	0	lowland
Whitestone River d/s Manapouri-Hillside	15262148	571	11	upland
Winton Stream at Lochiel	15307710	166	5	lowland

Appendix 4: State and Trend Analysis Configuration in TimeTrends®






Descriptive statistics
Variables
Variables
Clarity, Black Disc, Field, m
E.Coli, CFU, Corrected
Nitrogen, Nitrate Nitrite, Cor
Nitrogen, Total, Corrected
Phosphorus, Dissolved Rea
By group
Site Name
Sort variable list
Output style
Season and statistic definition
Number of seasons per year
Sample size
Mean
Median
Minimum
Maximum
95 percentile
75 percentile
25 percentile
5 percentile
Standard Deviation
Lag 1 autocorrelation
OK
Cancel
Help

Appendix 5: State and Trend Analysis exported from Time Trends®

State 2012-2016 - ES data - Export TimeTrends					
Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Aparima River at Dunrobin	Clarity..Black.Disc..Field..m.	N = 49, 11 missing, 0 <s, 0 >s	9	4.44	8.647
Aparima River at Dunrobin	E.Coli..CFU..Correction	N = 60, 0 missing, 2 <s, 0 >s	8000	60	700
Aparima River at Dunrobin	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.185	0.025	0.114
Aparima River at Dunrobin	Nitrogen..Total..Correction	N = 60, 0 missing, 3 <s, 0 >s	1.24	0.11	0.385
Aparima River at Dunrobin	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 8 <s, 0 >s	0.007	0.0027	0.0045
Aparima River at Dunrobin	Phosphorus..Total..Correction	N = 60, 0 missing, 6 <s, 0 >s	0.43	0.004	0.0515
Aparima River at Dunrobin	Organic.Nitrogen.Correction	N = 60, 0 missing, 3 <s, 0 >s	1.2291	0.0844	0.325
Aparima River at Dunrobin	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0068	0.0029	0.0065
Aparima River at Thornbury	Clarity..Black.Disc..Field..m.	N = 54, 6 missing, 0 <s, 0 >s	5.72	2.025	4.52
Aparima River at Thornbury	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	23000	195	4100
Aparima River at Thornbury	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.77	0.675	1.595
Aparima River at Thornbury	Nitrogen..Total..Correction	N = 59, 1 missing, 0 <s, 0 >s	2.1	0.92	2
Aparima River at Thornbury	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 9 <s, 0 >s	0.024	0.0065	0.0155
Aparima River at Thornbury	Phosphorus..Total..Correction	N = 59, 1 missing, 2 <s, 0 >s	0.21	0.015	0.0741
Aparima River at Thornbury	Organic.Nitrogen.Correction	N = 59, 1 missing, 0 <s, 0 >s	1.4789	0.216	0.7091
Aparima River at Thornbury	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.034	0.0038	0.0148
Bog Burn d/s Hundred Line Road	Clarity..Black.Disc..Field..m.	N = 58, 2 missing, 0 <s, 1 >s	2.2	0.88	1.46
Bog Burn d/s Hundred Line Road	E.Coli..CFU..Correction	N = 60, 0 missing, 1 <s, 0 >s	20000	800	6800
Bog Burn d/s Hundred Line Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	6.1	1.05	3.5
Bog Burn d/s Hundred Line Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	6.7	1.495	4.5
Bog Burn d/s Hundred Line Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.072	0.0275	0.0415
Bog Burn d/s Hundred Line Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.49	0.0505	0.113
Bog Burn d/s Hundred Line Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	3.012	0.416	0.9505
Bog Burn d/s Hundred Line Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.09	0.0089	0.0311
Carran Creek at Waituna Lagoon Road	Clarity..Black.Disc..Field..m.	N = 52, 7 missing, 0 <s, 0 >s	0.78	0.42	0.636
Carran Creek at Waituna Lagoon Road	E.Coli..CFU..Correction	N = 59, 0 missing, 3 <s, 0 >s	30000	220	16850
Carran Creek at Waituna Lagoon Road	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.82	0.35	1.587
Carran Creek at Waituna Lagoon Road	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	3.5	1.09	2.9
Carran Creek at Waituna Lagoon Road	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.098	0.044	0.0831
Carran Creek at Waituna Lagoon Road	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.53	0.118	0.323
Carran Creek at Waituna Lagoon Road	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	2.13	0.714	1.4385
Carran Creek at Waituna Lagoon Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 1 missing, 0 <s, 0 >s	0.1705	0.0161	0.0791
Cascade Stream at Pourakino Valley Road	Clarity..Black.Disc..Field..m.	N = 56, 4 missing, 0 <s, 0 >s	3.47	1.61	3.019
Cascade Stream at Pourakino Valley Road	E.Coli..CFU..Correction	N = 59, 1 missing, 1 <s, 0 >s	2200	110	1275
Cascade Stream at Pourakino Valley Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 2 <s, 0 >s	0.114	0.014	0.04
Cascade Stream at Pourakino Valley Road	Nitrogen..Total..Correction	N = 60, 0 missing, 3 <s, 0 >s	0.53	0.165	0.41
Cascade Stream at Pourakino Valley Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 21 <s, 0 >s	0.006	0.002	0.0034
Cascade Stream at Pourakino Valley Road	Phosphorus..Total..Correction	N = 60, 0 missing, 4 <s, 0 >s	0.031	0.007	0.025
Cascade Stream at Pourakino Valley Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 4 <s, 0 >s	0.519	0.14	0.4016
Cascade Stream at Pourakino Valley Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0054	0.0019	0.0029
Cromel Stream at Selbie Road	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	14.3	4.3	8.516
Cromel Stream at Selbie Road	E.Coli..CFU..Correction	N = 60, 0 missing, 13 <s, 0 >s	400	20	220
Cromel Stream at Selbie Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 2 <s, 0 >s	0.036	0.007	0.019
Cromel Stream at Selbie Road	Nitrogen..Total..Correction	N = 60, 0 missing, 15 <s, 0 >s	0.33	0.0836	0.185
Cromel Stream at Selbie Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 22 <s, 0 >s	0.004	0.0016	0.003
Cromel Stream at Selbie Road	Phosphorus..Total..Correction	N = 60, 0 missing, 8 <s, 0 >s	0.029	0.004	0.014
Cromel Stream at Selbie Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 15 <s, 0 >s	0.3096	0.0749	0.179
Cromel Stream at Selbie Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0072	0.0019	0.0044
Dunsdale Stream at Dunsdale Reserve	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	4.7	1.43	3.0475
Dunsdale Stream at Dunsdale Reserve	E.Coli..CFU..Correction	N = 59, 1 missing, 2 <s, 0 >s	1100	110	610
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.43	0.1775	0.335
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Total..Correction	N = 60, 0 missing, 3 <s, 0 >s	1.56	0.295	0.63
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 1 <s, 0 >s	0.018	0.01	0.0155
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.14	0.019	0.0505
Dunsdale Stream at Dunsdale Reserve	Organic.Nitrogen.Correction	N = 59, 1 missing, 3 <s, 0 >s	1.3493	0.1258	0.2817

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Dunsdale Stream at Dunsdale Reserve	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0104	0.0029	0.006
Irthing Stream at Ellis Road	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	7.2	3.22	5.829
Irthing Stream at Ellis Road	E.Coli..CFU..Correction	N = 60, 0 missing, 1 <s, 0 >s	7000	100	3050
Irthing Stream at Ellis Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	3.3	1.46	2.85
Irthing Stream at Ellis Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	3.5	1.635	3.05
Irthing Stream at Ellis Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 16 <s, 0 >s	0.013	0.003	0.005
Irthing Stream at Ellis Road	Phosphorus..Total..Correction	N = 60, 0 missing, 3 <s, 0 >s	0.106	0.008	0.0645
Irthing Stream at Ellis Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	0.7022	0.1766	0.5065
Irthing Stream at Ellis Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0866	0.0023	0.0077
Longridge Stream at Sandstone	Clarity..Black.Disc..Field..m.	N = 55, 3 missing, 0 <s, 0 >s	2.1	1.05	1.6625
Longridge Stream at Sandstone	E.Coli..CFU..Correction	N = 58, 0 missing, 0 <s, 0 >s	130000	300	16200
Longridge Stream at Sandstone	Nitrogen..Nitrate.Nitrite..Correction	N = 58, 0 missing, 0 <s, 0 >s	7.8	3.45	5.64
Longridge Stream at Sandstone	Nitrogen..Total..Correction	N = 58, 0 missing, 0 <s, 0 >s	9.3	4.1	6.12
Longridge Stream at Sandstone	Phosphorus..Dissolved.Reactive..Correction	N = 58, 0 missing, 0 <s, 0 >s	0.174	0.0335	0.096
Longridge Stream at Sandstone	Phosphorus..Total..Correction	N = 58, 0 missing, 0 <s, 0 >s	0.89	0.0595	0.156
Longridge Stream at Sandstone	Organic.Nitrogen.Correction	N = 57, 1 missing, 0 <s, 0 >s	3.595	0.499	1.3949
Longridge Stream at Sandstone	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 0 missing, 0 <s, 0 >s	1.3387	0.0067	0.0674
Makarewa River at Lora Gorge Road	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	3.3	0.8	1.91
Makarewa River at Lora Gorge Road	E.Coli..CFU..Correction	N = 59, 1 missing, 0 <s, 0 >s	11000	390	4280
Makarewa River at Lora Gorge Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.81	0.605	1.265
Makarewa River at Lora Gorge Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	2.2	0.97	1.73
Makarewa River at Lora Gorge Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.069	0.014	0.022
Makarewa River at Lora Gorge Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.138	0.0315	0.113
Makarewa River at Lora Gorge Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.1132	0.2505	0.6787
Makarewa River at Lora Gorge Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0246	0.0046	0.0181
Makarewa River at Wallacetown	Clarity..Black.Disc..Field..m.	N = 52, 8 missing, 0 <s, 0 >s	2.8	0.83	1.466
Makarewa River at Wallacetown	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	30000	345	25500
Makarewa River at Wallacetown	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	3.4	1.11	2.65
Makarewa River at Wallacetown	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.8	1.56	3.8
Makarewa River at Wallacetown	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.05	0.0185	0.039
Makarewa River at Wallacetown	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.44	0.0475	0.22
Makarewa River at Wallacetown	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.974	0.4215	1.5205
Makarewa River at Wallacetown	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0786	0.0296	0.0582
Mararoa River at South Mavora Lake	Clarity..Black.Disc..Field..m.	N = 58, 3 missing, 0 <s, 0 >s	7.92	5.53	7.5
Mararoa River at South Mavora Lake	E.Coli..CFU..Correction	N = 60, 1 missing, 50 <s, 0 >s	90	1.4032	10
Mararoa River at South Mavora Lake	Nitrogen..Nitrate.Nitrite..Correction	N = 61, 0 missing, 18 <s, 0 >s	0.048	0.0015	0.0084
Mararoa River at South Mavora Lake	Nitrogen..Total..Correction	N = 61, 0 missing, 16 <s, 0 >s	0.23	0.0642	0.1245
Mararoa River at South Mavora Lake	Phosphorus..Total..Correction	N = 61, 0 missing, 19 <s, 0 >s	0.33	0.003	0.008
Mararoa River at South Mavora Lake	Organic.Nitrogen.Correction	N = 60, 1 missing, 16 <s, 0 >s	0.223	0.0597	0.1177
Mararoa River at South Mavora Lake	Nitrogen.Total.Amoniacal.Correction.pH	N = 61, 0 missing, 0 <s, 0 >s	0.0077	0.0023	0.0029
Mararoa River at The Key	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	8.2	3.22	7.565
Mararoa River at The Key	E.Coli..CFU..Correction	N = 59, 1 missing, 6 <s, 0 >s	4000	35	1880
Mararoa River at The Key	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.39	0.1205	0.335
Mararoa River at The Key	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.75	0.25	0.545
Mararoa River at The Key	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 30 <s, 0 >s	0.006	0.001	0.0023
Mararoa River at The Key	Phosphorus..Total..Correction	N = 60, 0 missing, 10 <s, 0 >s	0.068	0.0036	0.0185
Mararoa River at The Key	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.515	0.0899	0.4098
Mararoa River at The Key	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0101	0.0026	0.0069
Mararoa River at Weir Road	Clarity..Black.Disc..Field..m.	N = 51, 9 missing, 0 <s, 0 >s	7.6	3.14	6.6315
Mararoa River at Weir Road	E.Coli..CFU..Correction	N = 59, 1 missing, 9 <s, 0 >s	3400	30	453
Mararoa River at Weir Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.72	0.375	0.665
Mararoa River at Weir Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.62	0.515	0.905
Mararoa River at Weir Road	Phosphorus..Total..Correction	N = 60, 0 missing, 7 <s, 0 >s	0.114	0.004	0.036
Mararoa River at Weir Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.305	0.1	0.4
Mararoa River at Weir Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0222	0.0028	0.0067
Mataura River 200m d/s Mataura Bridge	Clarity..Black.Disc..Field..m.	N = 55, 4 missing, 0 <s, 1 >s	3.15	1.2	2.76

State 2012-2016 - ES data - Export TimeTrends					
Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Mataura River 200m d/s Mataura Bridge	E.Coli..CFU..Correction	N = 59, 0 missing, 1 <s, 0 >s	60000	1300	12550
Mataura River 200m d/s Mataura Bridge	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.77	0.81	1.385
Mataura River 200m d/s Mataura Bridge	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	2.4	1.15	1.739
Mataura River 200m d/s Mataura Bridge	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 3 <s, 0 >s	0.03	0.011	0.0246
Mataura River 200m d/s Mataura Bridge	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.19	0.022	0.1132
Mataura River 200m d/s Mataura Bridge	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	0.939	0.208	0.5725
Mataura River 200m d/s Mataura Bridge	Nitrogen.Total.Amoniacal.Correction.pH	N = 57, 2 missing, 0 <s, 0 >s	0.076	0.0187	0.0686
Mataura River at Gore	Clarity..Black.Disc..Field..m.	N = 57, 3 missing, 0 <s, 0 >s	3.82	1.04	3.6585
Mataura River at Gore	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	11000	360	5400
Mataura River at Gore	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.62	0.86	1.31
Mataura River at Gore	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	2.1	1.095	1.6
Mataura River at Gore	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 7 <s, 0 >s	0.026	0.006	0.019
Mataura River at Gore	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.189	0.017	0.1045
Mataura River at Gore	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	0.859	0.1655	0.531
Mataura River at Gore	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 2 missing, 0 <s, 0 >s	0.0155	0.0026	0.0102
Mataura River at Mataura Island Bridge	Clarity..Black.Disc..Field..m.	N = 54, 6 missing, 0 <s, 0 >s	3.29	1.035	2.486
Mataura River at Mataura Island Bridge	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	12000	380	3500
Mataura River at Mataura Island Bridge	Nitrogen..Nitrate.Nitrite..Correction	N = 47, 13 missing, 0 <s, 0 >s	1.61	0.89	1.452
Mataura River at Mataura Island Bridge	Nitrogen..Total..Correction	N = 47, 13 missing, 0 <s, 0 >s	1.93	1.14	1.835
Mataura River at Mataura Island Bridge	Phosphorus..Dissolved.Reactive..Correction	N = 47, 13 missing, 3 <s, 0 >s	0.024	0.009	0.0164
Mataura River at Mataura Island Bridge	Phosphorus..Total..Correction	N = 47, 13 missing, 0 <s, 0 >s	0.21	0.021	0.096
Mataura River at Mataura Island Bridge	Organic.Nitrogen.Correction	N = 47, 13 missing, 0 <s, 0 >s	0.872	0.2286	0.5708
Mataura River at Mataura Island Bridge	Nitrogen.Total.Amoniacal.Correction.pH	N = 47, 13 missing, 0 <s, 0 >s	0.0278	0.0084	0.0197
Mataura River at Parawa	Clarity..Black.Disc..Field..m.	N = 52, 8 missing, 0 <s, 0 >s	6.23	2.34	4.552
Mataura River at Parawa	E.Coli..CFU..Correction	N = 60, 0 missing, 1 <s, 0 >s	4400	150	1250
Mataura River at Parawa	Nitrogen..Nitrate.Nitrite..Correction	N = 48, 12 missing, 0 <s, 0 >s	0.54	0.35	0.521
Mataura River at Parawa	Nitrogen..Total..Correction	N = 47, 13 missing, 0 <s, 0 >s	2.4	0.42	0.891
Mataura River at Parawa	Phosphorus..Dissolved.Reactive..Correction	N = 47, 13 missing, 3 <s, 0 >s	0.016	0.005	0.01
Mataura River at Parawa	Phosphorus..Total..Correction	N = 47, 13 missing, 1 <s, 0 >s	0.21	0.009	0.0665
Mataura River at Parawa	Organic.Nitrogen.Correction	N = 47, 13 missing, 0 <s, 0 >s	2.0839	0.0889	0.4037
Mataura River at Parawa	Nitrogen.Total.Amoniacal.Correction.pH	N = 47, 13 missing, 0 <s, 0 >s	0.0113	0.0024	0.0061
Mimihau Stream Tributary at Venlaw Forest	Clarity..Black.Disc..Field..m.	N = 43, 16 missing, 0 <s, 1 >s	5.57	1.5	3.22
Mimihau Stream Tributary at Venlaw Forest	E.Coli..CFU..Correction	N = 58, 1 missing, 11 <s, 0 >s	1900	10	198
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Nitrate.Nitrite..Correction	N = 58, 1 missing, 0 <s, 0 >s	0.65	0.148	0.246
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Total..Correction	N = 58, 1 missing, 0 <s, 0 >s	0.88	0.27	0.432
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Dissolved.Reactive..Correction	N = 58, 1 missing, 0 <s, 0 >s	0.017	0.011	0.016
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Total..Correction	N = 58, 1 missing, 1 <s, 0 >s	0.094	0.015	0.031
Mimihau Stream Tributary at Venlaw Forest	Organic.Nitrogen.Correction	N = 58, 1 missing, 0 <s, 0 >s	0.818	0.1047	0.2214
Mimihau Stream Tributary at Venlaw Forest	Nitrogen.Total.Amoniacal.Correction.pH	N = 54, 5 missing, 0 <s, 0 >s	0.0222	0.0026	0.0056
Mimihau Stream at Wyndham	Clarity..Black.Disc..Field..m.	N = 57, 3 missing, 0 <s, 0 >s	2	0.75	1.189
Mimihau Stream at Wyndham	E.Coli..CFU..Correction	N = 60, 0 missing, 1 <s, 0 >s	3400	380	1750
Mimihau Stream at Wyndham	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.48	0.81	1.415
Mimihau Stream at Wyndham	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.82	1.08	1.73
Mimihau Stream at Wyndham	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.039	0.012	0.02
Mimihau Stream at Wyndham	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.128	0.0355	0.0815
Mimihau Stream at Wyndham	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	0.7516	0.235	0.4137
Mimihau Stream at Wyndham	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 2 missing, 0 <s, 0 >s	0.0119	0.004	0.0097
Moffat Creek at Moffat Road	Clarity..Black.Disc..Field..m.	N = 57, 2 missing, 0 <s, 0 >s	1.04	0.43	0.759
Moffat Creek at Moffat Road	E.Coli..CFU..Correction	N = 59, 0 missing, 0 <s, 0 >s	19000	300	6505
Moffat Creek at Moffat Road	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	2.5	0.22	1.7375
Moffat Creek at Moffat Road	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	4	1.35	3.675

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Moffat Creek at Moffat Road	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.18	0.07	0.1535
Moffat Creek at Moffat Road	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.04	0.148	0.371
Moffat Creek at Moffat Road	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	2.452	1.034	1.8862
Moffat Creek at Moffat Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 56, 3 missing, 0 <s, 0 >s	0.0852	0.0099	0.0523
Mokoreta River at Wyndham River Road	Clarity..Black.Disc..Field..m.	N = 48, 11 missing, 0 <s, 0 >s	1.95	0.905	1.81
Mokoreta River at Wyndham River Road	E.Coli..CFU..Correction	N = 59, 0 missing, 0 <s, 0 >s	6600	320	3430
Mokoreta River at Wyndham River Road	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.9	1.08	1.72
Mokoreta River at Wyndham River Road	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	2.5	1.38	2.1
Mokoreta River at Wyndham River Road	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.013	0.009	0.0126
Mokoreta River at Wyndham River Road	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.177	0.026	0.1248
Mokoreta River at Wyndham River Road	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	0.92	0.2936	0.6654
Mokoreta River at Wyndham River Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 57, 2 missing, 0 <s, 0 >s	0.0309	0.0033	0.0189
Mokotua Stream at Awarua	Clarity..Black.Disc..Field..m.	N = 51, 8 missing, 0 <s, 0 >s	0.75	0.37	0.689
Mokotua Stream at Awarua	E.Coli..CFU..Correction	N = 58, 1 missing, 20 <s, 0 >s	1600	10	138
Mokotua Stream at Awarua	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 8 <s, 0 >s	0.2	0.01	0.0291
Mokotua Stream at Awarua	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.2	0.7	1.0805
Mokotua Stream at Awarua	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 10 <s, 0 >s	0.006	0.0025	0.0051
Mokotua Stream at Awarua	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.054	0.014	0.0296
Mokotua Stream at Awarua	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	1.1851	0.662	1.0196
North Peak Stream at Waimea Valley Road	Clarity..Black.Disc..Field..m.	N = 48, 10 missing, 0 <s, 0 >s	2.27	0.695	1.535
North Peak Stream at Waimea Valley Road	E.Coli..CFU..Correction	N = 58, 0 missing, 1 <s, 0 >s	12000	180	4060
North Peak Stream at Waimea Valley Road	Nitrogen..Nitrate.Nitrite..Correction	N = 58, 0 missing, 0 <s, 0 >s	1.83	0.265	1.492
North Peak Stream at Waimea Valley Road	Nitrogen..Total..Correction	N = 58, 0 missing, 0 <s, 0 >s	3	0.78	2.22
North Peak Stream at Waimea Valley Road	Phosphorus..Dissolved.Reactive..Correction	N = 58, 0 missing, 2 <s, 0 >s	0.08	0.015	0.0374
North Peak Stream at Waimea Valley Road	Phosphorus..Total..Correction	N = 58, 0 missing, 0 <s, 0 >s	0.28	0.0355	0.1284
North Peak Stream at Waimea Valley Road	Organic.Nitrogen.Correction	N = 58, 0 missing, 0 <s, 0 >s	1.8	0.294	0.8454
North Peak Stream at Waimea Valley Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 0 missing, 0 <s, 0 >s	0.6794	0.0054	0.0303
Opouriki Stream at Tweedie Road	Clarity..Black.Disc..Field..m.	N = 55, 5 missing, 0 <s, 0 >s	2.46	0.94	1.6725
Opouriki Stream at Tweedie Road	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 1 >s	120000	800	41000
Opouriki Stream at Tweedie Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	3.5	1.83	3.25
Opouriki Stream at Tweedie Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.2	2.3	4
Opouriki Stream at Tweedie Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 1 <s, 0 >s	0.063	0.01	0.0385
Opouriki Stream at Tweedie Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.34	0.036	0.245
Opouriki Stream at Tweedie Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	2.03	0.3051	1.332
Opouriki Stream at Tweedie Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.1765	0.0178	0.0741
Orauea River at Orawia Pukemaori Road	Clarity..Black.Disc..Field..m.	N = 55, 5 missing, 0 <s, 0 >s	3.5	0.99	2.115
Orauea River at Orawia Pukemaori Road	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	14000	370	6500
Orauea River at Orawia Pukemaori Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.54	0.515	1.28
Orauea River at Orawia Pukemaori Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.1	0.795	2.05
Orauea River at Orawia Pukemaori Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 1 <s, 0 >s	0.115	0.011	0.023
Orauea River at Orawia Pukemaori Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.49	0.028	0.1405
Orauea River at Orawia Pukemaori Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	2.993	0.2971	0.884
Orauea River at Orawia Pukemaori Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.2177	0.006	0.0374
Oreti River at Lumsden Bridge	Clarity..Black.Disc..Field..m.	N = 52, 8 missing, 0 <s, 0 >s	9.9	2.9	7.271
Oreti River at Lumsden Bridge	E.Coli..CFU..Correction	N = 60, 0 missing, 2 <s, 0 >s	1900	75	850
Oreti River at Lumsden Bridge	Nitrogen..Nitrate.Nitrite..Correction	N = 47, 13 missing, 0 <s, 0 >s	1.24	0.61	1.173
Oreti River at Lumsden Bridge	Nitrogen..Total..Correction	N = 47, 13 missing, 0 <s, 0 >s	3.2	0.72	1.3375
Oreti River at Lumsden Bridge	Phosphorus..Dissolved.Reactive..Correction	N = 47, 13 missing, 4 <s, 0 >s	0.004	0.0025	0.004
Oreti River at Lumsden Bridge	Phosphorus..Total..Correction	N = 47, 13 missing, 2 <s, 0 >s	0.066	0.005	0.0408
Oreti River at Lumsden Bridge	Organic.Nitrogen.Correction	N = 47, 13 missing, 0 <s, 0 >s	2.2354	0.1084	0.3103
Oreti River at Lumsden Bridge	Nitrogen.Total.Amoniacal.Correction.pH	N = 47, 13 missing, 0 <s, 0 >s	0.0063	0.0019	0.0049
Oreti River at Three Kings	Clarity..Black.Disc..Field..m.	N = 55, 5 missing, 0 <s, 0 >s	10.8	4.9	9.2725

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Oreti River at Three Kings	E.Coli..CFU..Correction	N = 60, 0 missing, 20 <s, 0 >s	500	10	100
Oreti River at Three Kings	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.098	0.034	0.084
Oreti River at Three Kings	Nitrogen..Total..Correction	N = 60, 0 missing, 11 <s, 0 >s	0.33	0.0911	0.2
Oreti River at Three Kings	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 19 <s, 0 >s	0.005	0.002	0.0037
Oreti River at Three Kings	Phosphorus..Total..Correction	N = 60, 0 missing, 15 <s, 0 >s	0.032	0.0035	0.0235
Oreti River at Three Kings	Organic.Nitrogen.Correction	N = 60, 0 missing, 11 <s, 0 >s	0.3193	0.0524	0.1648
Oreti River at Three Kings	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0108	0.0022	0.0042
Oreti River at Wallacetown	Clarity..Black.Disc..Field..m.	N = 51, 9 missing, 0 <s, 0 >s	6.2	2.02	3.3955
Oreti River at Wallacetown	E.Coli..CFU..Correction	N = 60, 0 missing, 4 <s, 0 >s	4500	120	1400
Oreti River at Wallacetown	Nitrogen..Nitrate.Nitrite..Correction	N = 47, 13 missing, 0 <s, 0 >s	2.3	0.94	2.115
Oreti River at Wallacetown	Nitrogen..Total..Correction	N = 47, 13 missing, 0 <s, 0 >s	2.7	1.16	2.43
Oreti River at Wallacetown	Phosphorus..Dissolved.Reactive..Correction	N = 47, 13 missing, 3 <s, 0 >s	0.02	0.006	0.0123
Oreti River at Wallacetown	Phosphorus..Total..Correction	N = 47, 13 missing, 1 <s, 0 >s	0.32	0.012	0.1356
Oreti River at Wallacetown	Organic.Nitrogen.Correction	N = 47, 13 missing, 0 <s, 0 >s	1.416	0.1912	0.666
Oreti River at Wallacetown	Nitrogen.Total.Amoniacal.Correction.pH	N = 47, 13 missing, 0 <s, 0 >s	0.0211	0.0046	0.0155
Otamita Stream at Mandeville	Clarity..Black.Disc..Field..m.	N = 57, 2 missing, 0 <s, 0 >s	2.48	1.03	1.9705
Otamita Stream at Mandeville	E.Coli..CFU..Correction	N = 59, 0 missing, 0 <s, 0 >s	57000	290	2500
Otamita Stream at Mandeville	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	2.1	0.72	1.854
Otamita Stream at Mandeville	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	2.7	1	2.21
Otamita Stream at Mandeville	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.028	0.01	0.0171
Otamita Stream at Mandeville	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.146	0.025	0.0593
Otamita Stream at Mandeville	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	0.878	0.297	0.5634
Otamita Stream at Mandeville	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.0129	0.0034	0.0107
Otapiri Stream at Otapiri Gorge	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	2.33	0.8	1.4105
Otapiri Stream at Otapiri Gorge	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	13000	405	9000
Otapiri Stream at Otapiri Gorge	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 1 <s, 0 >s	1.83	0.55	1.505
Otapiri Stream at Otapiri Gorge	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	2.2	0.83	1.89
Otapiri Stream at Otapiri Gorge	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.038	0.0165	0.03
Otapiri Stream at Otapiri Gorge	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.198	0.036	0.091
Otapiri Stream at Otapiri Gorge	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.04	0.27	0.674
Otapiri Stream at Otapiri Gorge	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0238	0.0039	0.0118
Otautau Stream at Otautau-Tuatapere Road	Clarity..Black.Disc..Field..m.	N = 53, 7 missing, 0 <s, 0 >s	1.63	0.77	1.477
Otautau Stream at Otautau-Tuatapere Road	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	53000	1050	12000
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	3.6	0.81	2.75
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.1	1.28	3.6
Otautau Stream at Otautau-Tuatapere Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.057	0.023	0.0455
Otautau Stream at Otautau-Tuatapere Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.36	0.053	0.1355
Otautau Stream at Otautau-Tuatapere Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.552	0.367	0.922
Otautau Stream at Otautau-Tuatapere Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0511	0.0161	0.0425
Otautau Stream at Waikouro	Clarity..Black.Disc..Field..m.	N = 52, 8 missing, 0 <s, 0 >s	1.51	0.7	1.326
Otautau Stream at Waikouro	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	65000	1350	21000
Otautau Stream at Waikouro	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	2.8	0.765	2.25
Otautau Stream at Waikouro	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.7	1.215	3.25
Otautau Stream at Waikouro	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.114	0.0205	0.055
Otautau Stream at Waikouro	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.59	0.0545	0.39
Otautau Stream at Waikouro	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	2.752	0.3405	1.701
Otautau Stream at Waikouro	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.1106	0.0166	0.0731
Otepuni Creek at Nith Street	Clarity..Black.Disc..Field..m.	N = 53, 7 missing, 0 <s, 0 >s	1.9	0.85	1.485
Otepuni Creek at Nith Street	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	16000	1600	8000
Otepuni Creek at Nith Street	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	3.6	1.295	2.55
Otepuni Creek at Nith Street	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.6	1.99	3.6
Otepuni Creek at Nith Street	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.046	0.014	0.0255

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Otepuni Creek at Nith Street	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.109	0.038	0.0935
Otepuni Creek at Nith Street	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.294	0.66	1.0495
Otepuni Creek at Nith Street	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.1244	0.0239	0.0769
Oteramika Stream at Seaward Downs	Clarity..Black.Disc..Field..m.	N = 58, 2 missing, 0 <s, 0 >s	1.17	0.565	1.058
Oteramika Stream at Seaward Downs	E.Coli..CFU..Correction	N = 60, 0 missing, 1 <s, 0 >s	10000	650	3900
Oteramika Stream at Seaward Downs	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 1 <s, 0 >s	4.6	1.6	3.75
Oteramika Stream at Seaward Downs	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	5.5	2.6	5.2
Oteramika Stream at Seaward Downs	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.31	0.032	0.0835
Oteramika Stream at Seaward Downs	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.4	0.085	0.25
Oteramika Stream at Seaward Downs	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	2.81	0.8685	1.2945
Oteramika Stream at Seaward Downs	Nitrogen.Total.Amoniacal.Correction.pH	N = 57, 3 missing, 0 <s, 0 >s	0.567	0.0258	0.2068
Pourakino River at Traill Road	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	26000	360	3800
Pourakino River at Traill Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.44	0.17	0.345
Pourakino River at Traill Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.91	0.375	0.68
Pourakino River at Traill Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 16 <s, 0 >s	0.01	0.003	0.0055
Pourakino River at Traill Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.1	0.013	0.058
Pourakino River at Traill Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	0.78	0.1775	0.4415
Pourakino River at Traill Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0129	0.0046	0.011
Sandstone Stream at Kingston Crossing Rd	Clarity..Black.Disc..Field..m.	N = 54, 4 missing, 0 <s, 0 >s	2.8	0.91	1.756
Sandstone Stream at Kingston Crossing Rd	E.Coli..CFU..Correction	N = 58, 0 missing, 0 <s, 0 >s	130000	400	14160
Sandstone Stream at Kingston Crossing Rd	Nitrogen..Nitrate.Nitrite..Correction	N = 58, 0 missing, 0 <s, 0 >s	5.2	1.38	4.1
Sandstone Stream at Kingston Crossing Rd	Nitrogen..Total..Correction	N = 58, 0 missing, 0 <s, 0 >s	6.8	2.25	5.3
Sandstone Stream at Kingston Crossing Rd	Phosphorus..Dissolved.Reactive..Correction	N = 58, 0 missing, 0 <s, 0 >s	0.107	0.0435	0.0864
Sandstone Stream at Kingston Crossing Rd	Phosphorus..Total..Correction	N = 58, 0 missing, 0 <s, 0 >s	0.28	0.0735	0.1742
Sandstone Stream at Kingston Crossing Rd	Organic.Nitrogen.Correction	N = 58, 0 missing, 0 <s, 0 >s	2.271	0.5745	1.3838
Sandstone Stream at Kingston Crossing Rd	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 0 missing, 0 <s, 0 >s	0.5878	0.0059	0.0513
Tokanui River at Fortrose Otara Road	Clarity..Black.Disc..Field..m.	N = 52, 7 missing, 0 <s, 0 >s	1.57	0.545	1.089
Tokanui River at Fortrose Otara Road	E.Coli..CFU..Correction	N = 59, 0 missing, 0 <s, 0 >s	110000	300	9100
Tokanui River at Fortrose Otara Road	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.79	1.06	1.6055
Tokanui River at Fortrose Otara Road	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	3.7	1.48	2.61
Tokanui River at Fortrose Otara Road	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.03	0.019	0.0276
Tokanui River at Fortrose Otara Road	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.47	0.062	0.1981
Tokanui River at Fortrose Otara Road	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	2.2	0.375	1.0837
Tokanui River at Fortrose Otara Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.0905	0.0106	0.0386
Tussock Creek at Cooper Road	Clarity..Black.Disc..Field..m.	N = 56, 4 missing, 0 <s, 0 >s	2.75	1.035	2.1
Tussock Creek at Cooper Road	E.Coli..CFU..Correction	N = 59, 1 missing, 0 <s, 0 >s	41000	1100	28400
Tussock Creek at Cooper Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	5.4	1.49	3.55
Tussock Creek at Cooper Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	7.3	2.05	4.75
Tussock Creek at Cooper Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.196	0.027	0.0735
Tussock Creek at Cooper Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.05	0.05	0.26
Tussock Creek at Cooper Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	4.56	0.444	1.747
Tussock Creek at Cooper Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.2458	0.0295	0.1415
Upukerora River at Te Anau Milford Road	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	8.36	3.21	7.1375
Upukerora River at Te Anau Milford Road	E.Coli..CFU..Correction	N = 59, 1 missing, 10 <s, 0 >s	2600	30	479.5
Upukerora River at Te Anau Milford Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.3	0.1365	0.235
Upukerora River at Te Anau Milford Road	Nitrogen..Total..Correction	N = 60, 0 missing, 1 <s, 0 >s	1.11	0.24	0.465
Upukerora River at Te Anau Milford Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 16 <s, 0 >s	0.012	0.0022	0.006
Upukerora River at Te Anau Milford Road	Phosphorus..Total..Correction	N = 60, 0 missing, 5 <s, 0 >s	0.107	0.0055	0.061
Upukerora River at Te Anau Milford Road	Organic.Nitrogen.Correction	N = 59, 1 missing, 1 <s, 0 >s	0.913	0.075	0.3476
Upukerora River at Te Anau Milford Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0177	0.0031	0.0098
Waiau River at Sunnyside	Clarity..Black.Disc..Field..m.	N = 49, 11 missing, 0 <s, 0 >s	6.78	2.9	5.0695
Waiau River at Sunnyside	E.Coli..CFU..Correction	N = 60, 0 missing, 11 <s, 0 >s	800	30	500
Waiau River at Sunnyside	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.36	0.1495	0.325
Waiau River at Sunnyside	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.56	0.26	0.425
Waiau River at Sunnyside	Phosphorus..Total..Correction	N = 60, 0 missing, 11 <s, 0 >s	0.03	0.0037	0.0275
Waiau River at Sunnyside	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	0.3599	0.085	0.211

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Waiau River at Sunnyside	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0106	0.0023	0.0039
Waiau River at Tuatapere	Clarity..Black.Disc..Field..m.	N = 53, 7 missing, 0 <s, 0 >s	4.9	1.72	4.3445
Waiau River at Tuatapere	E.Coli..CFU..Correction	N = 60, 0 missing, 1 <s, 0 >s	20000	67.5	1600
Waiau River at Tuatapere	Nitrogen..Nitrate.Nitrite..Correction	N = 47, 13 missing, 0 <s, 0 >s	0.56	0.23	0.533
Waiau River at Tuatapere	Nitrogen..Total..Correction	N = 47, 13 missing, 0 <s, 0 >s	0.77	0.38	0.6715
Waiau River at Tuatapere	Phosphorus..Dissolved.Reactive..Correction	N = 47, 13 missing, 12 <s, 0 >s	0.007	0.0015	0.004
Waiau River at Tuatapere	Phosphorus..Total..Correction	N = 47, 13 missing, 1 <s, 0 >s	0.87	0.006	0.0451
Waiau River at Tuatapere	Organic.Nitrogen.Correction	N = 47, 13 missing, 0 <s, 0 >s	0.596	0.1315	0.3236
Waiau River at Tuatapere	Nitrogen.Total.Amoniacal.Correction.pH	N = 47, 13 missing, 0 <s, 0 >s	0.0081	0.0028	0.0066
Waihopai River u/s Queens Drive	Clarity..Black.Disc..Field..m.	N = 50, 10 missing, 0 <s, 0 >s	2.5	1.22	2.15
Waihopai River u/s Queens Drive	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	14000	360	5300
Waihopai River u/s Queens Drive	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.9	2.2	3.75
Waihopai River u/s Queens Drive	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	5.7	2.9	4.45
Waihopai River u/s Queens Drive	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 2 <s, 0 >s	0.032	0.01	0.017
Waihopai River u/s Queens Drive	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.194	0.0285	0.105
Waihopai River u/s Queens Drive	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.452	0.4725	1.0084
Waihopai River u/s Queens Drive	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.067	0.0076	0.0491
Waikaia River at Waikaia	Clarity..Black.Disc..Field..m.	N = 58, 1 missing, 0 <s, 0 >s	4.5	1.825	3.746
Waikaia River at Waikaia	E.Coli..CFU..Correction	N = 59, 0 missing, 1 <s, 0 >s	4700	210	2765
Waikaia River at Waikaia	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.32	0.142	0.281
Waikaia River at Waikaia	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.39	0.27	0.7805
Waikaia River at Waikaia	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 8 <s, 0 >s	0.021	0.006	0.0126
Waikaia River at Waikaia	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.177	0.013	0.1367
Waikaia River at Waikaia	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	1.264	0.105	0.6025
Waikaia River at Waikaia	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.0058	0.0022	0.004
Waikaia River at Waipounamu Bridge Road	Clarity..Black.Disc..Field..m.	N = 59, 0 missing, 0 <s, 0 >s	5.35	1.9	3.984
Waikaia River at Waipounamu Bridge Road	E.Coli..CFU..Correction	N = 59, 0 missing, 1 <s, 0 >s	5100	140	2785
Waikaia River at Waipounamu Bridge Road	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.13	0.53	0.971
Waikaia River at Waipounamu Bridge Road	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.43	0.66	1.2385
Waikaia River at Waipounamu Bridge Road	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 5 <s, 0 >s	0.016	0.007	0.0126
Waikaia River at Waipounamu Bridge Road	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.3	0.013	0.1474
Waikaia River at Waipounamu Bridge Road	Organic.Nitrogen.Correction	N = 58, 1 missing, 0 <s, 0 >s	1.27	0.135	0.4592
Waikaia River at Waipounamu Bridge Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.0376	0.0021	0.0039
Waikaia River u/s Piano Flat	Clarity..Black.Disc..Field..m.	N = 58, 1 missing, 0 <s, 0 >s	7.6	3.2	6.3
Waikaia River u/s Piano Flat	E.Coli..CFU..Correction	N = 59, 0 missing, 15 <s, 0 >s	240	20	133
Waikaia River u/s Piano Flat	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 1 <s, 0 >s	0.034	0.009	0.0283
Waikaia River u/s Piano Flat	Nitrogen..Total..Correction	N = 59, 0 missing, 12 <s, 0 >s	0.23	0.1	0.2055
Waikaia River u/s Piano Flat	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 7 <s, 0 >s	0.014	0.005	0.0081
Waikaia River u/s Piano Flat	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.086	0.008	0.0236
Waikaia River u/s Piano Flat	Organic.Nitrogen.Correction	N = 59, 0 missing, 12 <s, 0 >s	0.218	0.0873	0.197
Waikaia River u/s Piano Flat	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.0041	0.0021	0.003
Waikaka Stream at Gore	Clarity..Black.Disc..Field..m.	N = 57, 3 missing, 0 <s, 0 >s	3.5	0.9	1.5655
Waikaka Stream at Gore	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	57000	315	17000
Waikaka Stream at Gore	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	2.3	0.83	1.99
Waikaka Stream at Gore	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	3.7	1.35	2.85
Waikaka Stream at Gore	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.061	0.024	0.041
Waikaka Stream at Gore	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.32	0.0545	0.152
Waikaka Stream at Gore	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.968	0.386	1.202
Waikaka Stream at Gore	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 2 missing, 0 <s, 0 >s	0.0633	0.0213	0.0544
Waikawa River at Progress Valley	Clarity..Black.Disc..Field..m.	N = 52, 7 missing, 0 <s, 0 >s	1.48	0.72	1.146
Waikawa River at Progress Valley	E.Coli..CFU..Correction	N = 59, 0 missing, 0 <s, 0 >s	81000	600	11100
Waikawa River at Progress Valley	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	1.19	0.6	1.0665
Waikawa River at Progress Valley	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	5.2	0.96	1.6805

State 2012-2016 - ES data - Export TimeTrends					
Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Waikawa River at Progress Valley	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.02	0.013	0.019
Waikawa River at Progress Valley	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.68	0.038	0.1406
Waikawa River at Progress Valley	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	4.589	0.248	0.7521
Waikawa River at Progress Valley	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.0407	0.0062	0.0229
Waikiwi Stream at North Road	Clarity..Black.Disc..Field..m.	N = 41, 19 missing, 0 <s, 0 >s	1.5	1.03	1.4945
Waikiwi Stream at North Road	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	15000	470	7500
Waikiwi Stream at North Road	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	4.8	2.75	4.25
Waikiwi Stream at North Road	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	5.6	3.35	4.9
Waikiwi Stream at North Road	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 1 <s, 0 >s	0.023	0.011	0.0205
Waikiwi Stream at North Road	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.186	0.0305	0.117
Waikiwi Stream at North Road	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.759	0.4715	1.114
Waikiwi Stream at North Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.051	0.0092	0.0413
Waikopikopiko Stream at Haldane CurioBay	Clarity..Black.Disc..Field..m.	N = 56, 3 missing, 0 <s, 0 >s	1.92	0.955	1.5
Waikopikopiko Stream at Haldane CurioBay	E.Coli..CFU..Correction	N = 59, 0 missing, 1 <s, 0 >s	6000	130	1240
Waikopikopiko Stream at Haldane CurioBay	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.29	0.156	0.25
Waikopikopiko Stream at Haldane CurioBay	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	3.1	0.33	1.253
Waikopikopiko Stream at Haldane CurioBay	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 2 <s, 0 >s	0.02	0.009	0.0115
Waikopikopiko Stream at Haldane CurioBay	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.38	0.018	0.1049
Waikopikopiko Stream at Haldane CurioBay	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	2.9953	0.136	1.1323
Waikopikopiko Stream at Haldane CurioBay	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.0129	0.0027	0.0053
Waimatuku Stream at Lorneville Riverton Hwy	Clarity..Black.Disc..Field..m.	N = 51, 9 missing, 0 <s, 0 >s	2.2	1.12	1.8865
Waimatuku Stream at Lorneville Riverton Hwy	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	18000	500	8250
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	7.4	3.35	5.5
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	8.2	3.8	6.15
Waimatuku Stream at Lorneville Riverton Hwy	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 1 <s, 0 >s	0.097	0.042	0.075
Waimatuku Stream at Lorneville Riverton Hwy	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.19	0.0605	0.1555
Waimatuku Stream at Lorneville Riverton Hwy	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.351	0.395	0.9645
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0581	0.0106	0.0416
Waimea Stream at Mandeville	Clarity..Black.Disc..Field..m.	N = 57, 2 missing, 0 <s, 0 >s	2.73	1.14	2.23
Waimea Stream at Mandeville	E.Coli..CFU..Correction	N = 58, 1 missing, 0 <s, 0 >s	52000	275	6060
Waimea Stream at Mandeville	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	5.4	2.8	4.6
Waimea Stream at Mandeville	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	6.8	3.6	5.555
Waimea Stream at Mandeville	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.06	0.018	0.0386
Waimea Stream at Mandeville	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.25	0.04	0.1392
Waimea Stream at Mandeville	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	2.008	0.595	1.382
Waimea Stream at Mandeville	Nitrogen.Total.Amoniacal.Correction.pH	N = 58, 1 missing, 0 <s, 0 >s	0.0564	0.0066	0.0372
Waituna Creek at Marshall Road	Clarity..Black.Disc..Field..m.	N = 51, 8 missing, 0 <s, 0 >s	1.34	0.85	1.308
Waituna Creek at Marshall Road	E.Coli..CFU..Correction	N = 59, 0 missing, 0 <s, 0 >s	42000	340	7480
Waituna Creek at Marshall Road	Nitrogen..Nitrate.Nitrite..Correction	N = 59, 0 missing, 0 <s, 0 >s	4.6	1.32	2.9
Waituna Creek at Marshall Road	Nitrogen..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	5.7	2.1	4.175
Waituna Creek at Marshall Road	Phosphorus..Dissolved.Reactive..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.028	0.015	0.026
Waituna Creek at Marshall Road	Phosphorus..Total..Correction	N = 59, 0 missing, 0 <s, 0 >s	0.38	0.043	0.153
Waituna Creek at Marshall Road	Organic.Nitrogen.Correction	N = 59, 0 missing, 0 <s, 0 >s	2.61	0.617	1.3535
Waituna Creek at Marshall Road	Nitrogen.Total.Amoniacal.Correction.pH	N = 59, 0 missing, 0 <s, 0 >s	0.1351	0.0103	0.0658
Whitestone River d/s Manapouri-Hillside	Clarity..Black.Disc..Field..m.	N = 59, 1 missing, 0 <s, 0 >s	13	4.1	10.63
Whitestone River d/s Manapouri-Hillside	E.Coli..CFU..Correction	N = 59, 1 missing, 8 <s, 0 >s	7000	30	289.5
Whitestone River d/s Manapouri-Hillside	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	1.62	0.485	1.17
Whitestone River d/s Manapouri-Hillside	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	2.3	0.65	1.445
Whitestone River d/s Manapouri-Hillside	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 24 <s, 0 >s	0.011	0.002	0.0055
Whitestone River d/s Manapouri-Hillside	Phosphorus..Total..Correction	N = 60, 0 missing, 13 <s, 0 >s	0.21	0.004	0.032
Whitestone River d/s Manapouri-Hillside	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.683	0.1255	0.3629
Whitestone River d/s Manapouri-Hillside	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.0368	0.0026	0.0081

State 2012-2016 - ES data - Export TimeTrends					
Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Winton Stream at Lochiel	Clarity..Black.Disc..Field..m.	N = 58, 2 missing, 0 <s, 0 >s	1.5	0.81	1.428
Winton Stream at Lochiel	E.Coli..CFU..Correction	N = 60, 0 missing, 0 <s, 0 >s	29000	1100	8500
Winton Stream at Lochiel	Nitrogen..Nitrate.Nitrite..Correction	N = 60, 0 missing, 0 <s, 0 >s	7.3	1.505	3.75
Winton Stream at Lochiel	Nitrogen..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	7.8	2.35	4.6
Winton Stream at Lochiel	Phosphorus..Dissolved.Reactive..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.26	0.057	0.193
Winton Stream at Lochiel	Phosphorus..Total..Correction	N = 60, 0 missing, 0 <s, 0 >s	0.28	0.1195	0.245
Winton Stream at Lochiel	Organic.Nitrogen.Correction	N = 60, 0 missing, 0 <s, 0 >s	1.404	0.657	1.235
Winton Stream at Lochiel	Nitrogen.Total.Amoniacal.Correction.pH	N = 60, 0 missing, 0 <s, 0 >s	0.3333	0.06	0.1942

State 2012-2016 -NIWA data - Export TimeTrends					
Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
Mataura at Parawa	Visual.clarity..m.	N = 49, 0 missing, 0 <s, 0 >s	5.26	2.26	4.6495
Mataura at Parawa	E..coli..MPN.100.ml.	N = 49, 0 missing, 0 <s, 1 >s	>2419	117	816
Mataura at Parawa	Nitrate.nitrite..g.m3.N.	N = 49, 0 missing, 0 <s, 0 >s	0.525	0.313	0.4902
Mataura at Parawa	Total.nitrogen..g.m3.N.	N = 49, 0 missing, 0 <s, 0 >s	0.621	0.402	0.5707
Mataura at Parawa	Dissolved.reactive.phosphorus..g.m3.P.	N = 49, 0 missing, 0 <s, 0 >s	0.017	0.005	0.011
Mataura at Parawa	Total.phosphorus..g.m3.P.	N = 49, 0 missing, 0 <s, 0 >s	0.336	0.01	0.058
Mataura at Parawa	Organic.Nitrogen..g.m3..Correction	N = 49, 0 missing, 0 <s, 0 >s	0.447	0.058	0.1972
Mataura at Parawa	Nitrogen.Total.Amoniacal..g.m3..Correction.pH	N = 49, 0 missing, 0 <s, 0 >s	0.0072	0.0032	0.0052
Mataura at Seaward Down	Visual.clarity..m.	N = 57, 0 missing, 0 <s, 0 >s	2.96	1.12	2.6045
Mataura at Seaward Down	E..coli..MPN.100.ml.	N = 57, 0 missing, 0 <s, 1 >s	6488	345	2613
Mataura at Seaward Down	Nitrate.nitrite..g.m3.N.	N = 57, 0 missing, 0 <s, 0 >s	2.001	1.214	1.8936
Mataura at Seaward Down	Total.nitrogen..g.m3.N.	N = 57, 0 missing, 0 <s, 0 >s	2.169	1.515	2.0911
Mataura at Seaward Down	Dissolved.reactive.phosphorus..g.m3.P.	N = 57, 0 missing, 0 <s, 0 >s	0.024	0.01	0.0157
Mataura at Seaward Down	Total.phosphorus..g.m3.P.	N = 57, 0 missing, 0 <s, 0 >s	0.302	0.03	0.0947
Mataura at Seaward Down	Organic.Nitrogen..g.m3..Correction	N = 57, 0 missing, 0 <s, 0 >s	0.882	0.201	0.3796
Mataura at Seaward Down	Nitrogen.Total.Amoniacal..g.m3..Correction.pH	N = 57, 0 missing, 0 <s, 0 >s	0.033	0.0121	0.0256
Monowai below Gates	Visual.clarity..m.	N = 50, 7 missing, 0 <s, 0 >s	9.64	6.76	8.83
Monowai below Gates	E..coli..MPN.100.ml.	N = 56, 1 missing, 31 <s, 0 >s	45	0.4111	6.4
Monowai below Gates	Nitrate.nitrite..g.m3.N.	N = 56, 1 missing, 18 <s, 0 >s	0.024	0.006	0.0227
Monowai below Gates	Total.nitrogen..g.m3.N.	N = 56, 1 missing, 0 <s, 0 >s	0.102	0.077	0.092
Monowai below Gates	Dissolved.reactive.phosphorus..g.m3.P.	N = 56, 1 missing, 39 <s, 0 >s	0.002	0.0008	0.001
Monowai below Gates	Total.phosphorus..g.m3.P.	N = 56, 1 missing, 0 <s, 0 >s	0.007	0.003	0.004
Monowai below Gates	Organic.Nitrogen..g.m3..Correction	N = 55, 2 missing, 0 <s, 0 >s	0.099	0.067	0.089
Monowai below Gates	Nitrogen.Total.Amoniacal..g.m3..Correction.pH	N = 54, 3 missing, 0 <s, 0 >s	0.0031	0.0014	0.0023
Oreti at Lumsden	Visual.clarity..m.	N = 49, 0 missing, 0 <s, 0 >s	9.64	3.76	8.002
Oreti at Lumsden	E..coli..MPN.100.ml.	N = 49, 0 missing, 0 <s, 0 >s	1259	52	440.65
Oreti at Lumsden	Nitrate.nitrite..g.m3.N.	N = 49, 0 missing, 0 <s, 0 >s	1.265	0.602	1.2458
Oreti at Lumsden	Total.nitrogen..g.m3.N.	N = 48, 1 missing, 0 <s, 0 >s	1.464	0.7215	1.3384
Oreti at Lumsden	Dissolved.reactive.phosphorus..g.m3.P.	N = 49, 0 missing, 1 <s, 0 >s	0.006	0.003	0.005
Oreti at Lumsden	Total.phosphorus..g.m3.P.	N = 48, 1 missing, 0 <s, 0 >s	0.312	0.005	0.0443
Oreti at Lumsden	Organic.Nitrogen..g.m3..Correction	N = 48, 1 missing, 0 <s, 0 >s	0.591	0.0875	0.2196
Oreti at Lumsden	Nitrogen.Total.Amoniacal..g.m3..Correction.pH	N = 49, 0 missing, 0 <s, 0 >s	0.0039	0.0022	0.0035
Oreti at Riverton HW Br.	Visual.clarity..m.	N = 49, 0 missing, 0 <s, 0 >s	6.43	1.45	4.6505
Oreti at Riverton HW Br.	E..coli..MPN.100.ml.	N = 49, 0 missing, 0 <s, 1 >s	>2419.2	61	1935
Oreti at Riverton HW Br.	Nitrate.nitrite..g.m3.N.	N = 49, 0 missing, 0 <s, 0 >s	3.349	0.932	2.1934
Oreti at Riverton HW Br.	Total.nitrogen..g.m3.N.	N = 49, 0 missing, 0 <s, 0 >s	3.94	1.123	2.427
Oreti at Riverton HW Br.	Dissolved.reactive.phosphorus..g.m3.P.	N = 49, 0 missing, 0 <s, 0 >s	0.021	0.005	0.0122
Oreti at Riverton HW Br.	Total.phosphorus..g.m3.P.	N = 49, 0 missing, 0 <s, 0 >s	0.366	0.015	0.0867
Oreti at Riverton HW Br.	Organic.Nitrogen..g.m3..Correction	N = 49, 0 missing, 0 <s, 0 >s	0.789	0.151	0.5259
Oreti at Riverton HW Br.	Nitrogen.Total.Amoniacal..g.m3..Correction.pH	N = 49, 0 missing, 0 <s, 0 >s	0.0296	0.0053	0.0158
Waiau at Tuatapere	Visual.clarity..m.	N = 57, 0 missing, 0 <s, 0 >s	6.19	1.73	5.6
Waiau at Tuatapere	E..coli..MPN.100.ml.	N = 57, 0 missing, 0 <s, 1 >s	3255	54	3076
Waiau at Tuatapere	Nitrate.nitrite..g.m3.N.	N = 57, 0 missing, 0 <s, 0 >s	0.65	0.246	0.5759
Waiau at Tuatapere	Total.nitrogen..g.m3.N.	N = 57, 0 missing, 0 <s, 0 >s	0.85	0.36	0.7489
Waiau at Tuatapere	Dissolved.reactive.phosphorus..g.m3.P.	N = 57, 0 missing, 3 <s, 0 >s	0.008	0.001	0.0057
Waiau at Tuatapere	Total.phosphorus..g.m3.P.	N = 57, 0 missing, 0 <s, 0 >s	0.122	0.01	0.0704
Waiau at Tuatapere	Organic.Nitrogen..g.m3..Correction	N = 57, 0 missing, 0 <s, 0 >s	0.525	0.113	0.3564
Waiau at Tuatapere	Nitrogen.Total.Amoniacal..g.m3..Correction.pH	N = 57, 0 missing, 0 <s, 0 >s	0.0194	0.0032	0.0147

State 2012-2016 -GNS data - Export TimeTrends				
Site	**Variable**	**Maximum**	**Median**	**95 percentile**
D45/0006	Nitrate.mg.L.as.N...filterable	7.4	6.25	7.36
E46/0104	Nitrate.mg.L.as.N...filterable	0.96	0.21	0.927
F45/0170	Nitrate.mg.L.as.N...filterable	6.9	4.6	6.655
F45/0350	Nitrate.mg.L.as.N...filterable	3.2	1.9	3.2
F46/0194	Nitrate.mg.L.as.N...filterable	9.2	8.2	9.11
F46/0195	Nitrate.mg.L.as.N...filterable	1.8	1.2	1.72

State 2012-2016 -ES Groundwater data - Export TimeTrends					
Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
D43/0004	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	3.1	2.5945	3.05
D43/0004	Phosphorus..Dissolved.Reactive.	N = 20, 0 missing, 1 <s, 0 >s	0.01	0.008	0.0095
D43/0004	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 20, 0 missing, 0 <s, 0 >s	0.0061	0.0048	0.0059
D43/0063	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6	4.8515	6
D45/0004	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	1.88	1.0105	1.67
D45/0004	Phosphorus..Dissolved.Reactive.	N = 20, 0 missing, 1 <s, 0 >s	0.046	0.031	0.0449
D45/0004	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 20, 0 missing, 0 <s, 0 >s	0.0061	0.0037	0.006
D45/0005	Nitrogen..Nitrate.Nitrite..g.m3.	N = 19, 0 missing, 0 <s, 0 >s	3.8	3.335	3.7775
D45/0005	Phosphorus..Dissolved.Reactive.	N = 19, 0 missing, 0 <s, 0 >s	0.019	0.0165	0.0189
D45/0005	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 19, 0 missing, 0 <s, 0 >s	0.0068	0.0041	0.0061
D45/0066	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	3.57	2.3555	3.57
D45/0101	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	1.836	1.7215	1.836
D45/0111	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.7	7.617	13.7
D45/0118	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.3	11.8795	13.3
D45/0125	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.767	8.65	9.767
D45/0143	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	10.749	9.424	10.749
D45/0163	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.94	2.7805	13.94
D45/0203	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	10.647	8.1745	10.647
D45/0210	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 1 <s, 0 >s	0.264	0.009	0.264
D46/0014	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.2	2.554	7.2
D46/0019	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.096	6.512	9.096
D46/0026	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.615	7.396	9.615
D46/0027	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	12.461	4.485	12.461
D46/0031	Nitrogen..Nitrate.Nitrite..g.m3.	N = 15, 2 missing, 0 <s, 0 >s	4.7	1.571	3.9533
D46/0031	Phosphorus..Dissolved.Reactive.	N = 15, 2 missing, 0 <s, 0 >s	0.0235	0.0215	0.0233
D46/0031	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 15, 2 missing, 0 <s, 0 >s	0.0076	0.0041	0.0071
D46/0037	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	5	4.206	5
D46/0099	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	7.39	6.671	7.3889
D46/0131	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.703	6.0145	7.703
D46/0164	Nitrogen..Nitrate.Nitrite..g.m3.	N = 9, 0 missing, 1 <s, 0 >s	0.006	0.003	-
E43/0026	Nitrogen..Nitrate.Nitrite..g.m3.	N = 19, 0 missing, 0 <s, 0 >s	9.2	4.2	8.3482
E43/0026	Phosphorus..Dissolved.Reactive.	N = 19, 0 missing, 0 <s, 0 >s	0.021	0.018	0.021
E43/0026	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 19, 0 missing, 0 <s, 0 >s	0.004	0.0035	0.0039
E44/0008	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	11	8.55	10.8
E44/0008	Phosphorus..Dissolved.Reactive.	N = 20, 0 missing, 0 <s, 0 >s	0.04	0.021	0.0315
E44/0008	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 20, 0 missing, 0 <s, 0 >s	0.0486	0.0036	0.0263
E44/0014	Nitrogen..Nitrate.Nitrite..g.m3.	N = 14, 1 missing, 0 <s, 0 >s	14.5	7.85	13.8
E44/0036	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	14.39	13.3	14.1898
E44/0036	Phosphorus..Dissolved.Reactive.	N = 21, 0 missing, 1 <s, 0 >s	0.016	0.014	0.016
E44/0036	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 21, 0 missing, 0 <s, 0 >s	0.005	0.0037	0.0046
E44/0044	Nitrogen..Nitrate.Nitrite..g.m3.	N = 19, 0 missing, 0 <s, 0 >s	0.024	0.017	0.0231
E44/0044	Phosphorus..Dissolved.Reactive.	N = 19, 0 missing, 0 <s, 0 >s	0.0165	0.014	0.0163
E44/0044	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 19, 0 missing, 0 <s, 0 >s	0.029	0.0068	0.0211
E44/0046	Nitrogen..Nitrate.Nitrite..g.m3.	N = 12, 1 missing, 0 <s, 0 >s	27.732	23.755	27.3658
E44/0087	Nitrogen..Nitrate.Nitrite..g.m3.	N = 18, 0 missing, 0 <s, 0 >s	7.26	1.055	5.956
E44/0113	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	2.737	1.8585	2.737
E44/0173	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	9.869	6.45	9.796
E44/0173	Phosphorus..Dissolved.Reactive.	N = 20, 0 missing, 6 <s, 0 >s	0.023	0.0036	0.014
E44/0173	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 20, 0 missing, 0 <s, 0 >s	0.0041	0.0036	0.0041
E44/0359	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 1 missing, 1 <s, 0 >s	1.66	0.026	1.66
E44/0396	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	8.903	5.55	8.903

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
E44/0435	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	24	0.175	24
E44/0440	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	2.8	0.133	2.7294
E44/0448	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.615	7	9.615
E44/0463	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	24	14.6	24
E44/0464	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.6	6.635	9.6
E44/0467	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	17.8	13.2	17.8
E44/0476	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	18.6	13.575	18.6
E44/0483	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.4	5	7.4
E44/0494	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6	2.72	6
E45/0010	Nitrogen..Nitrate.Nitrite..g.m3.	N = 15, 1 missing, 0 <s, 0 >s	9.015	7.218	8.9337
E45/0011	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	13.9	10.68	13.9
E45/0011	Phosphorus..Dissolved.Reactive.	N = 21, 0 missing, 1 <s, 0 >s	0.038	0.015	0.0275
E45/0011	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 21, 0 missing, 0 <s, 0 >s	0.0068	0.004	0.0064
E45/0012	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	6.3	4.1	5.739
E45/0012	Phosphorus..Dissolved.Reactive.	N = 21, 0 missing, 0 <s, 0 >s	0.05	0.039	0.0484
E45/0012	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 21, 0 missing, 0 <s, 0 >s	0.0072	0.0041	0.0069
E45/0034	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 9 <s, 0 >s	0.005	0.0012	0.0039
E45/0034	Phosphorus..Dissolved.Reactive.	N = 21, 0 missing, 1 <s, 0 >s	0.028	0.024	0.0272
E45/0034	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 21, 0 missing, 0 <s, 0 >s	0.0163	0.0076	0.0158
E45/0042	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.52	6.351	9.52
E45/0055	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	11.695	7.6	10.6346
E45/0055	Phosphorus..Dissolved.Reactive.	N = 21, 0 missing, 0 <s, 0 >s	0.012	0.0085	0.0109
E45/0055	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 21, 0 missing, 0 <s, 0 >s	0.0043	0.0037	0.0042
E45/0060	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	17.7	14.705	17.7
E45/0076	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	5.6	3.145	5.6
E45/0081	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.5	8.5105	13.5
E45/0110	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 3 <s, 0 >s	0.013	0.002	0.013
E45/0162	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.469	8.5575	9.469
E45/0193	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.5	3.053	9.5
E45/0263	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	17.6	14.078	17.6
E45/0329	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	14.3	10.4945	14.3
E45/0330_3m	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	14.3	11.4	14.3
E45/0340	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	3.212	1.8235	3.212
E45/0396	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	2.9	1.509	2.875
E45/0410	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.391	8.133	9.391
E45/0432	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.3	10.959	13.3
E45/0442	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.4	7.885	9.4
E45/0445	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.74	8.6155	9.74
E45/0446	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	0.313	0.274	0.313
E45/0458	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	12.3	10.7	12.2732
E45/0459	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 1 <s, 0 >s	2.8	2.5	2.8
E45/0483	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 1 <s, 0 >s	1.919	0.208	1.919
E45/0495	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.82	5.75	7.82
E45/0498	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 3 <s, 0 >s	1.833	0.0045	1.833
E45/0509	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	0.82	0.5655	0.82
E45/0537	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	16.9	11.905	16.9
E45/0538	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6.8	5.7	6.8
E45/0608	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	20	2.136	20
E46/0023	Nitrogen..Nitrate.Nitrite..g.m3.	N = 9, 0 missing, 5 <s, 0 >s	0.1	0.007	-
E46/0092	Nitrogen..Nitrate.Nitrite..g.m3.	N = 13, 3 missing, 0 <s, 0 >s	10.1	6.75	10.0325
E46/0092	Phosphorus..Dissolved.Reactive.	N = 13, 3 missing, 1 <s, 0 >s	0.039	0.028	0.0389
E46/0092	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 13, 3 missing, 0 <s, 0 >s	0.0137	0.0052	0.013

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
E46/0094	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	1.98	1.59	1.955
E46/0094	Phosphorus..Dissolved.Reactive.	N = 20, 0 missing, 0 <s, 0 >s	0.044	0.0367	0.0435
E46/0094	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 20, 0 missing, 0 <s, 0 >s	0.0134	0.0042	0.0097
E46/0097	Nitrogen..Nitrate.Nitrite..g.m3.	N = 19, 1 missing, 0 <s, 0 >s	6.7	5.743	6.7
E46/0097	Phosphorus..Dissolved.Reactive.	N = 19, 1 missing, 5 <s, 0 >s	0.024	0.004	0.0195
E46/0097	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 19, 1 missing, 0 <s, 0 >s	0.0067	0.0036	0.0058
E46/0099	Nitrogen..Nitrate.Nitrite..g.m3.	N = 18, 2 missing, 0 <s, 0 >s	6.639	5.371	6.6158
E46/0099	Phosphorus..Dissolved.Reactive.	N = 18, 2 missing, 0 <s, 0 >s	0.077	0.073	0.0768
E46/0099	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 18, 2 missing, 0 <s, 0 >s	0.0045	0.0038	0.0043
E46/0165	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	10.3	7.706	10.3
E46/0207	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 2 <s, 0 >s	0.133	0.0045	0.133
E46/0234	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	1.42	1.262	1.42
E46/0311	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	4	3.7	4
E46/0415	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.7	0.019	7.7
E46/0445	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.8	10.66	13.8
E46/0446	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	5.29	3.0235	5.29
E46/0454	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	10.4	8.405	10.4
E46/0491	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	16.3	12.95	16.3
E46/0498	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	11.22	9.01	11.22
E46/0547	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 3 <s, 0 >s	0.015	0.004	0.0146
E46/0650	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	5.28	4.306	5.28
E46/0685	Nitrogen..Nitrate.Nitrite..g.m3.	N = 8, 0 missing, 4 <s, 0 >s	0.132	0.0063	-
E46/0740	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	2.086	1.8	2.0822
E46/0793	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	4.4	4.0005	4.4
E46/0842	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.6	8.185	13.6
E46/0860	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	3.1	1.267	3.1
E46/0878	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	1.27	0.9715	1.27
E46/0895	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	28	24.7825	28
E46/0906	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	27	1.057	27
E46/0941	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6.736	6.15	6.736
E46/0994	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	1.458	1.3345	1.458
E46/1005	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.5	9.55	13.5
E47/0188	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 2 <s, 0 >s	0.006	0.0025	0.006
F44/0018	Nitrogen..Nitrate.Nitrite..g.m3.	N = 15, 1 missing, 0 <s, 0 >s	18.5	14.73	17.9135
F44/0022	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	5.992	5.4045	5.992
F44/0039	Nitrogen..Nitrate.Nitrite..g.m3.	N = 19, 0 missing, 0 <s, 0 >s	4.824	4.5	4.7992
F44/0039	Phosphorus..Dissolved.Reactive.	N = 19, 0 missing, 0 <s, 0 >s	0.02	0.017	0.0198
F44/0039	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 19, 0 missing, 0 <s, 0 >s	0.0061	0.004	0.0061
F44/0058	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	14.1	9.6	14.1
F44/0079	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	13.9	11.95	13.9
F44/0109	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	4.121	3.6165	4.121
F44/0114	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	3.47	2.3	3.47
F44/0123	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 1 missing, 0 <s, 0 >s	2.2	1.6	2.196
F44/0139	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	15.8	13.9	15.635
F44/0139	Phosphorus..Dissolved.Reactive.	N = 21, 0 missing, 1 <s, 0 >s	0.02	0.0128	0.017
F44/0139	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 21, 0 missing, 0 <s, 0 >s	0.0048	0.0037	0.0044
F44/0253	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6.2	5.3795	6.2
F44/0274	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	5.67	4.821	5.67
F44/0321	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6.196	5.043	6.196
F44/0327	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	0.984	0.8245	0.984
F45/0167	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	8.509	7.9	8.449
F45/0167	Phosphorus..Dissolved.Reactive.	N = 21, 0 missing, 0 <s, 0 >s	0.012	0.0095	0.012

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Site	**Variable**	**Sample size**	**Maximum**	**Median**	**95 percentile**
F45/0167	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 21, 0 missing, 0 <s, 0 >s	0.0056	0.0037	0.0055
F45/0168	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	5.83	2.949	5.815
F45/0168	Phosphorus..Dissolved.Reactive.	N = 20, 0 missing, 0 <s, 0 >s	0.034	0.0224	0.0302
F45/0168	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 20, 0 missing, 0 <s, 0 >s	0.0056	0.0036	0.0055
F45/0172	Nitrogen..Nitrate.Nitrite..g.m3.	N = 19, 1 missing, 0 <s, 0 >s	19.2	17	18.9615
F45/0179	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	4.978	4.651	4.978
F45/0182	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	8.968	7.9925	8.968
F45/0247	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6	3.858	6
F45/0289	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.3	6.0355	7.3
F45/0305	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	2.6	2.35	2.6
F45/0343	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	22.32	16.9	22.2
F45/0348	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.316	5.126	7.316
F45/0388	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	10.7	6.7155	10.7
F45/0457	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	8.5	7.385	8.5
F45/0464	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 4 <s, 0 >s	1.18	0.009	1.18
F45/0465	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	30	22	30
F45/0475	Nitrogen..Nitrate.Nitrite..g.m3.	N = 11, 0 missing, 0 <s, 0 >s	12.2	11.1	12.1794
F45/0479	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	11.44	9.9045	11.44
F45/0540	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.596	8.771	9.596
F46/0183	Nitrogen..Nitrate.Nitrite..g.m3.	N = 21, 0 missing, 0 <s, 0 >s	2.712	1.702	2.2627
F46/0183	Phosphorus..Dissolved.Reactive.	N = 9, 0 missing, 12 <s, 0 >s	0.001	0.0005	-
F46/0184	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	7.257	3.8615	6.5385
F46/0184	Phosphorus..Dissolved.Reactive.	N = 20, 0 missing, 1 <s, 0 >s	0.012	0.0084	0.0115
F46/0185	Nitrogen..Nitrate.Nitrite..g.m3.	N = 20, 0 missing, 0 <s, 0 >s	9.5	7.7855	9.5
F46/0192	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.2	7.443	9.2
F46/0221	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	14.994	9.9095	14.994
F46/0261	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	8.6	6.551	8.6
F46/0265	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6.2	5.268	6.2
F46/0419	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	8.3	7.23	8.3
F46/0420	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	3.845	1.2665	3.845
F46/0422	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	11.54	10.85	11.54
F46/0436	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	17.34	10.911	17.34
F46/0453	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	7.118	6.731	7.118
F46/0456	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 1 missing, 0 <s, 0 >s	11.8	10.55	11.8
F46/0463	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 1 missing, 0 <s, 0 >s	12.33	10.85	12.33
F46/0469	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.08	8.528	9.08
F46/0506	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.182	7.99	9.182
F46/0511	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 1 <s, 0 >s	0.093	0.0135	0.093
F46/0520	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.3	7.4705	9.3
F46/0592	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	10.4	4.753	10.4
F46/0593	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	8.6	6.3	8.6
F46/0729	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 7 <s, 0 >s	0.004	0.0011	0.004
F46/0773	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	14.37	11.315	14.37
F46/0844	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	9.9	0.674	9.9
F46/0855	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	8.8	6.969	8.8
F46/0907	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	0.367	0.0265	0.367
F46/0929	Nitrogen..Nitrate.Nitrite..g.m3.	N = 10, 0 missing, 0 <s, 0 >s	6.411	5.457	6.411
F47/0252	Nitrogen..Nitrate.Nitrite..g.m3.	N = 18, 1 missing, 0 <s, 0 >s	6.1	3.6	6.06
F47/0252	Phosphorus..Dissolved.Reactive.	N = 19, 0 missing, 10 <s, 0 >s	0.02	0.0027	0.0155
F47/0252	Nitrogen..Total.Ammoniacal..g.m3..pH.corrected	N = 16, 3 missing, 0 <s, 0 >s	0.5421	0.0049	0.3967

Trend 2012-2016 - ES data - Export TimeTrends

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend?	Trend code
Aparima River at Dunrobin	E.Coli..CFU..Correction	0	2	60	19/1/12-12/12/16	293.2167	8000	10	60	-1	195	0	1	2.084	3.4733	-5.0255 to 16.1047	-5.0255	16.1047	increasing	0.666	No Trend	0
Aparima River at Dunrobin	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	19/1/12-12/12/16	0.0422	0.185	0.002	0.025	-7	199	-0.4253	0.6706	-0.0009	-3.47	-0.0025 to 0.0016	-0.0025	0.0016	decreasing	0.6646	No Trend	0
Aparima River at Dunrobin	Nitrogen..Total..Correction	0	3	60	19/1/12-12/12/16	0.1576	1.24	0.0349	0.11	-9	185	-0.5882	0.5564	-0.0017	-1.5052	-0.0097 to 0.0053	-0.0097	0.0053	decreasing	0.8853	No Trend	0
Aparima River at Dunrobin	Phosphorus..Dissolved.Reactive..Correction	0	8	60	19/1/12-12/12/16	0.0031	0.007	0.0005	0.004	-55	169	-4.1538	0	-0.0008	-18.8532	-0.0010 to -0.0005	-0.0010	-0.0005	decreasing	1	Trend	-1
Aparima River at Dunrobin	Phosphorus..Total..Correction	0	6	60	19/1/12-12/12/16	0.0158	0.43	0.0007	0.004	-18	188	-1.2399	0.215	-0.0003	-6.9051	-0.0009 to 0.0003	-0.0009	0.0003	decreasing	0.8389	No Trend	0
Aparima River at Dunrobin	Organic.Nitrogen.Correction	0	3	60	19/1/12-12/12/16	0.1101	1.2291	0.0103	0.086	-9	189	-0.5819	0.5606	-0.0023	-2.676	-0.0091 to 0.0054	-0.0091	0.0054	decreasing	0.7309	No Trend	0
Aparima River at Thornbury	Clarity..Black.Disc..Field..m.	6	0	54	16/1/12-12/12/16	2.0228	5.72	0.12	2.025	-11	155	-0.8032	0.4218	-0.0836	-4.1294	-0.3972 to 0.0788	-0.3972	0.0788	decreasing	0.8058	No Trend	0
Aparima River at Thornbury	E.Coli..CFU..Correction	0	0	60	16/1/12-12/12/16	1140.4167	23000	40	195	-12	198	-0.7817	0.4344	-14.9798	-7.682	-50.1717 to 5.9628	-50.171	5.9628	decreasing	0.8284	No Trend	0
Aparima River at Thornbury	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	16/1/12-12/12/16	0.7703	1.77	0.18	0.675	-41	197	-2.8499	0.0044	-0.0635	-9.4086	-0.0807 to -0.0300	-0.0807	-0.0300	decreasing	0.9974	Trend	-1
Aparima River at Thornbury	Nitrogen..Total..Correction	1	0	59	16/1/12-12/12/16	1.0595	2.1	0.36	0.92	-25	189	-1.7457	0.0809	-0.0426	-4.6354	-0.0810 to 0.0000	-0.0810	0.0000	decreasing	0.9707	No Trend	0
Aparima River at Thornbury	Phosphorus..Dissolved.Reactive..Correction	0	9	60	16/1/12-12/12/16	0.0075	0.024	0.0017	0.0065	5	180.3333	0.2979	0.7658	-0.0002	-3.8409	-0.0010 to 0.0006	-0.0010	0.0006	decreasing	0.7863	No Trend	0
Aparima River at Thornbury	Phosphorus..Total..Correction	1	2	59	16/1/12-12/12/16	0.0236	0.21	0.004	0.015	7	189	0.4364	0.6625	0.0001	0.8362	-0.0020 to 0.0020	-0.0020	0.0020	increasing	0.5193	No Trend	0
Aparima River at Thornbury	Organic.Nitrogen.Correction	1	0	59	16/1/12-12/12/16	0.2766	1.4789	0.085	0.216	17	191	1.1577	0.247	0.0039	1.8058	-0.0046 to 0.0129	-0.0046	0.0129	increasing	0.8843	No Trend	0
Bog Burn d/s Hundred Line Road	Clarity..Black.Disc..Field..m.	2	1	58	18/1/12-13/12/16	0.9184	2.2	0.17	0.915	-25	179	-1.7938	0.0728	-0.076	-8.3032	-0.1555 to -0.0193	-0.1555	-0.0193	decreasing	0.9673	Trend	-1
Bog Burn d/s Hundred Line Road	E.Coli..CFU..Correction	0	1	60	18/1/12-13/12/16	1893	20000	10	800	17	199	1.1342	0.2567	51.7657	6.4707	-14.0722 to 182.4614	-14.072	82.4614	increasing	0.8812	No Trend	0
Bog Burn d/s Hundred Line Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	18/1/12-13/12/16	1.2704	6.1	0.185	1.05	-42	200	-2.8991	0.0037	-0.0985	-9.3795	-0.1827 to -0.0410	-0.1827	-0.0410	decreasing	0.9983	Trend	-1
Bog Burn d/s Hundred Line Road	Nitrogen..Total..Correction	0	0	60	18/1/12-13/12/16	1.784	6.7	0.48	1.495	-24	200	-1.6263	0.1039	-0.0816	-5.4595	-0.1646 to -0.0025	-0.1646	-0.0025	decreasing	0.9523	Trend	-1
Bog Burn d/s Hundred Line Road	Phosphorus..Dissolved.Reactive..Correction	0	0	60	18/1/12-13/12/16	0.0284	0.072	0.014	0.0275	27	197	1.8524	0.064	0.001	3.6414	0.0002 to 0.0020	0.0002	0.0020	increasing	0.9708	Trend	1
Bog Burn d/s Hundred Line Road	Phosphorus..Total..Correction	0	0	60	18/1/12-13/12/16	0.0656	0.49	0.028	0.0505	0	198	0	1	0	0	-0.0020 to 0.0042	-0.0020	0.0042	increasing	0.5	No Trend	0
Bog Burn d/s Hundred Line Road	Organic.Nitrogen.Correction	0	0	60	18/1/12-13/12/16	0.4918	3.012	0.16	0.416	8	200	0.495	0.6206	0.0126	3.0295	-0.0287 to 0.0411	-0.0287	0.0411	increasing	0.698	No Trend	0
Carran Creek at Waituna Lagoon Road	E.Coli..CFU..Correction	0	3	59	10/1/12-12/12/16	2154.7458	30000	10	220	-8	190	-0.5078	0.6116	-16.3058	-7.4117	-64.3287 to 23.3573	-64.328	23.3573	decreasing	0.7028	No Trend	0
Carran Creek at Waituna Lagoon Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	10/1/12-12/12/16	0.4807	1.82	0.004	0.35	-1	189	0	1	0	0	-0.0306 to 0.0280	-0.0306	0.0280	decreasing	0.5	No Trend	0
Carran Creek at Waituna Lagoon Road	Nitrogen..Total..Ammoniacal..Correction	0	4	59	10/1/12-12/12/16	0.0674	0.45	0.0056	0.043	15	191	1.013	0.3111	0.0013	3.072	-0.0044 to 0.0051	-0.0044	0.0051	increasing	0.6137	No Trend	0
Carran Creek at Waituna Lagoon Road	Nitrogen..Total..Correction	0	0	59	10/1/12-12/12/16	1.3476	3.5	0.56	1.09	6	192	0.3608	0.7182	0.0159	1.4576	-0.0510 to 0.0721	-0.0510	0.0721	increasing	0.6252	No Trend	0
Carran Creek at Waituna Lagoon Road	Phosphorus..Dissolved.Reactive..Correction	0	0	59	10/1/12-12/12/16	0.0477	0.098	0.011	0.044	32	188	2.2609	0.0238	0.0027	6.0814	0.0007 to 0.0052	0.0007	0.0052	increasing	0.9897	Trend	1
Carran Creek at Waituna Lagoon Road	Phosphorus..Total..Correction	0	0	59	10/1/12-12/12/16	0.1416	0.53	0.056	0.118	20	192	1.3712	0.1703	0.0045	3.8185	-0.0012 to 0.0127	-0.0012	0.0127	increasing	0.9127	No Trend	0
Carran Creek at Waituna Lagoon Road	Organic.Nitrogen.Correction	0	0	59	10/1/12-12/12/16	0.7999	2.13	0.365	0.714	8	192	0.5052	0.6134	0.0082	1.1446	-0.0326 to 0.0383	-0.0326	0.0383	increasing	0.6969	No Trend	0
Cascade Stream at Pourakino Valley Road	Clarity..Black.Disc..Field..m.	4	0	56	13/2/12-12/12/16	1.6861	3.47	0.19	1.61	-16	168	-1.1573	0.2472	-0.2296	-14.2635	-0.3846 to 0.0501	-0.3846	0.0501	decreasing	0.886	No Trend	0
Cascade Stream at Pourakino Valley Road	E.Coli..CFU..Correction	1	1	59	16/1/12-12/12/16	242.7119	2200	10	110	14	190	0.9431	0.3456	10.0343	9.1221	-3.8929 to 39.5708	-3.8929	39.5708	increasing	0.8911	No Trend	0
Cascade Stream at Pourakino Valley Road	Nitrogen..Nitrate.Nitrite..Correction	0	2	60	16/1/12-12/12/16	0.025	0.2	0.002	0.0155	29	195	2.0051	0.045	0.0015	9.7107	0.0003 to 0.0025	0.0003	0.0025	increasing	0.9633	Trend	1
Cascade Stream at Pourakino Valley Road	Nitrogen..Total..Correction	0	3	60	16/1/12-12/12/16	0.1921	0.53	0.0889	0.165	23	193	1.5836	0.1133	0.0099	6.0235	-0.0050 to 0.0201	-0.0050	0.0201	increasing	0.8138	No Trend	0
Cascade Stream at Pourakino Valley Road	Phosphorus..Total..Correction	0	4	60	16/1/12-12/12/16	0.0094	0.031	0.0027	0.007	2	192	0.0722	0.9425	-0.0003	-4.7783	-0.0017 to 0.0006	-0.0017	0.0006	decreasing	0.7646	No Trend	0
Cascade Stream at Pourakino Valley Road	Organic.Nitrogen.Correction	0	4	60	16/1/12-12/12/16	0.1705	0.519	0.0752	0.14	21	199	1.4178	0.1563	0.0044	3.1189	-0.0061 to 0.0168	-0.0061	0.0168	increasing	0.7929	No Trend	0
Cromel Stream at Selbie Road	Clarity..Black.Disc..Field..m.	1	0	59	18/1/12-13/12/16	4.6559	14.3	0.43	4.3	-32	190	-2.249	0.0245	-0.3194	-7.4275	-0.6222 to -0.0589	-0.6222	-0.0589	decreasing	0.9915	Trend	-1

Cromel Stream at Selbie Road	E.Coli..CFU..Correction	0	13	60	18/1/12-13/12/16	44.6667	400	5	20	17	170.3333	1.2259	0.2202	0	0	-4.5278 to 5.9215	-4.5278	5.9215	decreasing	0.5	No Trend	0
Cromel Stream at Selbie Road	Nitrogen..Nitrate.Nitrite..Correction	0	2	60	18/1/12-13/12/16	0.0154	0.2	0.0009	0.007	28	192	1.9486	0.0513	0.0005	7.1234	0.0000 to 0.0010	0.0000	0.0010	increasing	0.9148	No Trend	0
Cromel Stream at Selbie Road	Phosphorus..Total..Correction	0	8	60	18/1/12-13/12/16	0.0056	0.029	0.0003	0.004	-5	180.3333	-0.2979	0.7658	-0.0008	-19.2501	-0.0016 to 0.0000	-0.0016	0.0000	decreasing	0.973	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Clarity..Black.Disc..Field..m.	1	0	59	17/1/12-15/11/16	1.6031	4.7	0.1	1.43	-30	192	-2.0929	0.0364	-0.2242	-15.6799	-0.3713 to -0.0542	-0.3713	-0.0542	decreasing	0.982	Trend	-1
Dunsdale Stream at Dunsdale Reserve	E.Coli..CFU..Correction	1	2	59	17/1/12-13/12/16	174.9661	1100	10	110	49	191	3.4732	0.0005	38.8831	35.3482	15.0251 to 70.2404	15.0251	70.2404	increasing	0.9986	Trend	1
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	0.1689	0.43	0.005	0.1775	22	200	1.4849	0.1376	0.0127	7.1728	-0.0019 to 0.0231	-0.0019	0.0231	increasing	0.9293	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Total..Correction	0	3	60	17/1/12-13/12/16	0.3371	1.56	0.0361	0.295	28	196	1.9286	0.0538	0.0248	8.4227	-0.0034 to 0.0492	-0.0034	0.0492	increasing	0.9367	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Dissolved.Reactive..Correction	0	1	60	17/1/12-13/12/16	0.0104	0.018	0.004	0.01	25	183.6667	1.7709	0.0766	0.0003	3.3341	0.0000 to 0.0010	0.0000	0.0010	increasing	0.9296	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.0235	0.14	0.006	0.019	0	196	0	1	0	0	-0.0010 to 0.0020	-0.0010	0.0020	increasing	0.5	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Organic.Nitrogen.Correction	1	3	59	17/1/12-13/12/16	0.1676	1.3493	0.0213	0.1258	24	190	1.6686	0.0952	0.0104	8.2558	-0.0040 to 0.0238	-0.0040	0.0238	increasing	0.8677	No Trend	0
Irthing Stream at Ellis Road	Clarity..Black.Disc..Field..m.	1	0	59	18/1/12-13/12/16	3.0686	7.2	0.16	3.22	-17	191	-1.1577	0.247	-0.2688	-8.3481	-0.6070 to 0.1078	-0.6070	0.1078	decreasing	0.8651	No Trend	0
Irthing Stream at Ellis Road	E.Coli..CFU..Correction	0	1	60	18/1/12-13/12/16	425	7000	10	100	15	199	0.9924	0.321	9.966	9.966	-4.3541 to 30.1030	-4.3541	30.1030	increasing	0.8674	No Trend	0
Irthing Stream at Ellis Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	18/1/12-13/12/16	1.543	3.3	0.23	1.46	-15	199	-0.9924	0.321	-0.0422	-2.8932	-0.1418 to 0.0231	-0.1418	0.0231	decreasing	0.8233	No Trend	0
Irthing Stream at Ellis Road	Nitrogen..Total..Correction	0	0	60	18/1/12-13/12/16	1.7525	3.5	0.57	1.635	-12	198	-0.7817	0.4344	-0.0217	-1.3257	-0.1003 to 0.0742	-0.1003	0.0742	decreasing	0.7699	No Trend	0
Irthing Stream at Ellis Road	Phosphorus..Total..Correction	0	3	60	18/1/12-13/12/16	0.0132	0.106	0.0025	0.008	11	190.3333	0.7248	0.4685	0	0	-0.0010 to 0.0008	-0.0010	0.0008	decreasing	0.5	No Trend	0
Irthing Stream at Ellis Road	Organic.Nitrogen.Correction	0	0	60	18/1/12-13/12/16	0.2006	0.7022	0.05	0.1766	20	200	1.3435	0.1791	0.0103	5.8139	-0.0021 to 0.0218	-0.0021	0.0218	increasing	0.9022	No Trend	0
Longridge Stream at Sandstone	Clarity..Black.Disc..Field..m.	3	0	55	19/1/12-14/12/16	1.0496	2.1	0.08	1.05	-17	157	-1.2769	0.2016	-0.0684	-6.5175	-0.1573 to 0.0131	-0.1573	0.0131	decreasing	0.8876	No Trend	0
Longridge Stream at Sandstone	E.Coli..CFU..Correction	0	0	58	19/1/12-14/12/16	5303.7069	130000	15	300	14	177.3333	0.9762	0.3292	17.3704	5.7901	-15.9675 to 50.5976	-15.967	50.5976	increasing	0.8537	No Trend	0
Longridge Stream at Sandstone	Nitrogen..Nitrate.Nitrite..Correction	0	0	58	19/1/12-14/12/16	3.6326	7.8	1.81	3.45	5	179	0.299	0.765	0.0125	0.3621	-0.1340 to 0.1003	-0.1340	0.1003	increasing	0.5924	No Trend	0
Longridge Stream at Sandstone	Nitrogen..Total..Correction	0	0	58	19/1/12-14/12/16	4.3621	9.3	2.7	4.1	6	178	0.3748	0.7078	0.0248	0.606	-0.0987 to 0.1014	-0.0987	0.1014	increasing	0.7083	No Trend	0
Longridge Stream at Sandstone	Phosphorus..Dissolved.Reactive..Correction	0	0	58	19/1/12-14/12/16	0.0416	0.174	0.012	0.0335	19	183	1.3306	0.1833	0.002	5.9621	-0.0004 to 0.0045	-0.0004	0.0045	increasing	0.9219	No Trend	0
Longridge Stream at Sandstone	Phosphorus..Total..Correction	0	0	58	19/1/12-14/12/16	0.0826	0.89	0.02	0.0595	11	183	0.7392	0.4598	0.0025	4.2161	-0.0021 to 0.0086	-0.0021	0.0086	increasing	0.7548	No Trend	0
Longridge Stream at Sandstone	Organic.Nitrogen.Correction	1	0	57	19/1/12-14/12/16	0.6959	3.595	0.274	0.499	11	175	0.7559	0.4497	0.0036	0.7252	-0.0026 to 0.0874	-0.0026	0.0874	increasing	0.7801	No Trend	0
Makarewa River at Lora Gorge Road	Clarity..Black.Disc..Field..m.	1	0	59	17/1/12-13/12/16	0.8995	3.3	0.15	0.8	-14	192	-0.9382	0.3481	-0.0684	-8.55	-0.2027 to 0.0509	-0.2027	0.0509	decreasing	0.8208	No Trend	0
Makarewa River at Lora Gorge Road	E.Coli..CFU..Correction	1	0	59	17/1/12-13/12/16	1060.5085	11000	40	390	10	188	0.6564	0.5116	22.4578	5.7584	-15.6348 to 120.5013	-15.634	20.5013	increasing	0.7991	No Trend	0
Makarewa River at Lora Gorge Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	0.6635	1.81	0.039	0.605	1	199	0	1	0.0025	0.4146	-0.0635 to 0.0580	-0.0635	0.0580	increasing	0.5001	No Trend	0
Makarewa River at Lora Gorge Road	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	0.9822	2.2	0.18	0.97	12	200	0.7778	0.4367	0.0382	3.9337	-0.0393 to 0.0829	-0.0393	0.0829	increasing	0.7896	No Trend	0
Makarewa River at Lora Gorge Road	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-13/12/16	0.0146	0.069	0.005	0.014	16	187.3333	1.0959	0.2731	0.0004	2.9693	0.0000 to 0.0015	0.0000	0.0015	increasing	0.8641	No Trend	0
Makarewa River at Lora Gorge Road	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.0401	0.138	0.014	0.0315	8	198	0.4975	0.6189	0.001	3.1779	-0.0010 to 0.0050	-0.0010	0.0050	increasing	0.715	No Trend	0
Makarewa River at Lora Gorge Road	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.3092	1.1132	0.136	0.2505	19	199	1.276	0.202	0.014	5.5743	-0.0048 to 0.0319	-0.0048	0.0319	increasing	0.903	No Trend	0
Makarewa River at Wallaceton	E.Coli..CFU..Correction	0	0	60	17/1/12-13/12/16	2854.25	30000	40	345	-5	199	-0.2836	0.7768	-7.4897	-2.1709	-60.9176 to 49.6031	-60.917	49.6031	decreasing	0.5933	No Trend	0
Makarewa River at Wallaceton	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	1.0823	3.4	0.21	1.11	-11	199	-0.7089	0.4784	-0.0166	-1.4971	-0.0988 to 0.0229	-0.0988	0.0229	decreasing	0.7802	No Trend	0
Makarewa River at Wallaceton	Nitrogen..Total..Ammoniacal..Correction	0	5	60	17/1/12-13/12/16	0.0535	0.126	0.01	0.048	1	199	0	1	-0.0039	-8.2042	-0.0118 to 0.0025	-0.0118	0.0025	decreasing	0.842	No Trend	0
Makarewa River at Wallaceton	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	1.697	4.8	0.51	1.56	-3	192.3333	-0.1442	0.8853	0	0	-0.1287 to 0.0397	-0.1287	0.0397	decreasing	0.5	No Trend	0
Makarewa River at Wallaceton	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-13/12/16	0.0207	0.05	0.009	0.0185	5	190.3333	0.2899	0.7719	0	0	-0.0007 to 0.0018	-0.0007	0.0018	decreasing	0.5	No Trend	0
Makarewa River at Wallaceton	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.0727	0.44	0.017	0.0475	-2	200	-0.0707	0.9436	-0.0007	-1.3862	-0.0040 to 0.0052	-0.0040	0.0052	decreasing	0.5113	No Trend	0
Makarewa River at Wallaceton	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.5616	1.974	0.231	0.4215	4	200	0.2121	0.832	0.002	0.485	-0.0219 to 0.0278	-0.0219	0.0278	increasing	0.5726	No Trend	0
Mararoa River at South Mavora Lake	Clarity..Black.Disc..Field..m.	3	0	57	19/1/12-15/12/16	5.39	7.92	1.7	5.5	-14	174	-0.9855	0.3244	-0.1505	-2.7366	-0.3853 to 0.1003	-0.3853	0.1003	decreasing	0.7897	No Trend	0
Mararoa River at South Mavora Lake	E.Coli..CFU..Correction	1	50	59	19/1/12-15/12/16	11.5254	90	10	10	0	15.6667	0	1	-9.6627	-96.627	- to -	- to -	- to -	decreasing	0.7758	#VALUE!	#VALUE!
Mararoa River at The Key	Clarity..Black.Disc..Field..m.	1	0	58	19/1/12-15/12/16	3.345	7.93	0.22	3.31	-18	184	-1.2533	0.2101	-0.1534	-4.6355	-0.5791 to 0.0756	-0.5791	0.0756	decreasing	0.8954	No Trend	0
Mararoa River at The Key	E.Coli..CFU..Correction	1	6	58	19/1/12-15/12/16	258.4483	4000	10	35	2	175.3333	0.0755	0.9398	0	0	-5.0253 to 24.9404	-5.0253	24.9404	decreasing	0.5	No Trend	0

Mararoa River at The Key	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	19/1/12-15/12/16	0.1486	0.39	0.009	0.122	-42	190	-2.9745	0.0029	-0.0095	-7.7784	-0.0177 to -0.0039	-0.0177	-0.0039	decreasing	0.9988	Trend	-1
Mararoa River at The Key	Nitrogen..Total..Correction	0	0	59	19/1/12-15/12/16	0.2849	1.75	0.1	0.25	-6	190	-0.3627	0.7168	-0.0033	1.3294	-0.0170 to 0.0139	-0.0170	0.0139	decreasing	0.6863	No Trend	0
Mararoa River at The Key	Organic.Nitrogen.Correction	0	0	59	19/1/12-15/12/16	0.1315	1.515	0.013	0.09	27	191	1.8813	0.0599	0.0103	11.4559	0.0008 to 0.0201	0.0008	0.0201	increasing	0.9764	Trend	1
Mararoa River at Weir Road	E.Coli..CFU..Correction	1	9	59	19/1/12-15/12/16	178.3898	3400	10	30	19	183	1.3306	0.1833	3.735	12.4498	-5.0233 to 20.0687	-5.0233	20.0687	increasing	0.671	No Trend	0
Mararoa River at Weir Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	19/1/12-15/12/16	0.3887	0.72	0.134	0.375	-18	196	-1.2143	0.2246	-0.0129	-3.4369	-0.0301 to 0.0050	-0.0301	0.0050	decreasing	0.8631	No Trend	0
Mararoa River at Weir Road	Nitrogen..Total..Correction	0	0	60	19/1/12-15/12/16	0.5478	1.62	0.19	0.515	-3	199	-0.1418	0.8873	-0.0063	-1.219	-0.0318 to 0.0301	-0.0318	0.0301	decreasing	0.5569	No Trend	0
Mararoa River at Weir Road	Phosphorus..Total..Correction	0	7	60	19/1/12-15/12/16	0.0105	0.114	0.0007	0.004	-3	187	-0.1463	0.8837	-0.0006	-13.8581	-0.0015 to 0.0005	-0.0015	0.0005	decreasing	0.8667	No Trend	0
Mararoa River at Weir Road	Organic.Nitrogen.Correction	0	0	60	19/1/12-15/12/16	0.1537	1.305	0.031	0.1	33	199	2.2684	0.0233	0.0127	12.7341	0.0042 to 0.0283	0.0042	0.0283	increasing	0.986	Trend	1
Mataura River 200m d/s Mataura Bridge	Clarity..Black.Disc..Field..m.	4	1	55	17/1/12-14/12/16	1.2929	3.15	0.07	1.2	-9	157	-0.6385	0.5232	-0.0602	-5.0156	-0.1753 to 0.1155	-0.1753	0.1155	decreasing	0.7453	No Trend	0
Mataura River 200m d/s Mataura Bridge	E.Coli..CFU..Correction	0	1	59	17/1/12-14/12/16	3695.7627	60000	10	1300	5	191	0.2894	0.7723	48.2946	3.715	-201.0260 to 342.5150	-201.02	42.5150	increasing	0.6297	No Trend	0
Mataura River 200m d/s Mataura Bridge	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	17/1/12-14/12/16	0.8524	1.77	0.28	0.81	4	190	0.2176	0.8277	0.0099	1.2221	-0.0277 to 0.0410	-0.0277	0.0410	increasing	0.6138	No Trend	0
Mataura River 200m d/s Mataura Bridge	Nitrogen..Total.Ammoniacal..Correction	0	3	59	17/1/12-14/12/16	0.0467	0.136	0.0043	0.038	-2	190	-0.0725	0.9422	-0.0034	-8.8922	-0.0083 to 0.0037	-0.0083	0.0037	decreasing	0.8253	No Trend	0
Mataura River 200m d/s Mataura Bridge	Nitrogen..Total..Correction	0	0	59	17/1/12-14/12/16	1.1561	2.4	0.57	1.15	16	190	1.0882	0.2765	0.0346	3.0113	-0.0212 to 0.0691	-0.0212	0.0691	increasing	0.8619	No Trend	0
Mataura River 200m d/s Mataura Bridge	Phosphorus..Dissolved.Reactive..Correction	0	3	59	17/1/12-14/12/16	0.0116	0.03	0.001	0.011	-7	185	-0.4411	0.6591	-0.0005	-4.5269	-0.0015 to 0.0006	-0.0015	0.0006	decreasing	0.8051	No Trend	0
Mataura River 200m d/s Mataura Bridge	Phosphorus..Total..Correction	0	0	59	17/1/12-14/12/16	0.0361	0.19	0.008	0.022	-2	188	-0.0729	0.9419	0	0	-0.0025 to 0.0023	-0.0025	0.0023	decreasing	0.5	No Trend	0
Mataura River 200m d/s Mataura Bridge	Organic.Nitrogen.Correction	0	0	59	17/1/12-14/12/16	0.2573	0.939	0.101	0.208	29	191	2.026	0.0428	0.0127	6.1125	0.0040 to 0.0264	0.0040	0.0264	increasing	0.9841	Trend	1
Mataura River at Gore	Clarity..Black.Disc..Field..m.	3	0	57	17/1/12-14/12/16	1.4793	3.82	0.08	1.04	-7	175	-0.4536	0.6501	-0.0235	-2.2563	-0.1900 to 0.0503	-0.1900	0.0503	decreasing	0.675	No Trend	0
Mataura River at Gore	E.Coli..CFU..Correction	0	0	60	17/1/12-14/12/16	1087.3333	11000	30	360	8	198	0.4975	0.6189	18.3084	5.0857	-35.7886 to 74.9095	-35.788	74.9095	increasing	0.6903	No Trend	0
Mataura River at Gore	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-14/12/16	0.8453	1.62	0.3	0.86	4	198	0.2132	0.8312	0.0101	1.1733	-0.0473 to 0.0402	-0.0473	0.0402	increasing	0.5846	No Trend	0
Mataura River at Gore	Nitrogen..Total..Correction	0	0	60	17/1/12-14/12/16	1.0602	2.1	0.53	1.095	14	200	0.9192	0.358	0.03	2.7366	-0.0204 to 0.0601	-0.0204	0.0601	increasing	0.8148	No Trend	0
Mataura River at Gore	Phosphorus..Dissolved.Reactive..Correction	0	7	60	17/1/12-14/12/16	0.0078	0.026	0.001	0.006	6	182	0.3706	0.7109	-0.0002	-4.1412	-0.0010 to 0.0003	-0.0010	0.0003	decreasing	0.8393	No Trend	0
Mataura River at Gore	Phosphorus..Total..Correction	0	0	60	17/1/12-14/12/16	0.0304	0.189	0.003	0.017	9	199	0.5671	0.5706	0.001	5.873	-0.0010 to 0.0030	-0.0010	0.0030	increasing	0.7147	No Trend	0
Mataura River at Gore	Organic.Nitrogen.Correction	0	0	60	17/1/12-14/12/16	0.2074	0.859	0.0547	0.1655	24	198	1.6345	0.1021	0.011	6.6483	0.0000 to 0.0230	0.0000	0.0230	increasing	0.9593	No Trend	0
Mataura River at Mataura Island Bridge	Clarity..Black.Disc..Field..m.	6	0	54	17/1/12-14/12/16	1.1585	3.29	0.1	1.035	-9	155	-0.6426	0.5205	-0.0401	-3.8745	-0.1458 to 0.0826	-0.1458	0.0826	decreasing	0.7398	No Trend	0
Mataura River at Mataura Island Bridge	E.Coli..CFU..Correction	0	0	60	17/1/12-14/12/16	935.25	12000	20	380	-11	199	-0.7089	0.4784	-20.0687	-5.2812	-131.7620 to 18.0321	-131.76	18.0321	decreasing	0.7753	No Trend	0
Mataura River at Parawa	E.Coli..CFU..Correction	0	1	60	18/1/12-14/12/16	335.4167	4400	10	150	22	200	1.4849	0.1376	18.207	12.138	-9.0373 to 46.2946	-9.0373	46.2946	increasing	0.8898	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	E.Coli..CFU..Correction	1	11	58	17/1/12-14/12/16	69.8793	1900	5	10	22	167.6667	1.6218	0.1048	0	0	-5.0172 to 10.0226	-5.0172	10.0226	increasing	0.5	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Nitrate.Nitrite..Correction	1	0	58	17/1/12-14/12/16	0.1636	0.65	0.057	0.148	-21	183	-1.4784	0.1393	-0.0076	-5.1415	-0.0116 to 0.0008	-0.0116	0.0008	decreasing	0.9263	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Total..Correction	1	0	58	17/1/12-14/12/16	0.294	0.88	0.18	0.27	17	181	1.1893	0.2343	0.01	3.7147	-0.0050 to 0.0198	-0.0050	0.0198	increasing	0.8826	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Dissolved.Reactive..Correction	1	0	58	17/1/12-14/12/16	0.011	0.017	0.005	0.011	19	175	1.3607	0.1736	0.0006	5.3078	0.0000 to 0.0015	0.0000	0.0015	increasing	0.8953	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Total..Correction	1	1	58	17/1/12-14/12/16	0.0184	0.094	0.004	0.015	27	174.3333	1.9692	0.0489	0.001	6.6682	0.0000 to 0.0017	0.0000	0.0017	increasing	0.9524	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Organic.Nitrogen.Correction	1	0	58	17/1/12-14/12/16	0.1242	0.818	0.01	0.1047	22	184	1.5481	0.1216	0.0091	8.6493	-0.0002 to 0.0178	-0.0002	0.0178	increasing	0.9449	No Trend	0
Mimihau Stream at Wyndham	Clarity..Black.Disc..Field..m.	3	0	57	17/1/12-14/12/16	0.7491	2	0.15	0.75	-15	179	-1.0464	0.2954	-0.0334	-4.4556	-0.0744 to 0.0075	-0.0744	0.0075	decreasing	0.8608	No Trend	0
Mimihau Stream at Wyndham	E.Coli..CFU..Correction	0	1	60	17/1/12-14/12/16	596.5	3400	10	380	7	199	0.4253	0.6706	4.9974	1.3151	-28.0247 to 47.3511	-28.024	47.3511	increasing	0.5788	No Trend	0
Mimihau Stream at Wyndham	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-14/12/16	0.8782	1.48	0.21	0.81	8	198	0.4975	0.6189	0.01	1.2321	-0.0233 to 0.0399	-0.0233	0.0399	increasing	0.7341	No Trend	0
Mimihau Stream at Wyndham	Nitrogen..Total..Correction	0	0	60	17/1/12-14/12/16	1.1422	1.82	0.28	1.08	20	196	1.3571	0.1747	0.0167	1.5505	-0.0013 to 0.0512	-0.0013	0.0512	increasing	0.9205	No Trend	0
Mimihau Stream at Wyndham	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-14/12/16	0.0128	0.039	0.005	0.012	-1	181	0	1	0	0	-0.0003 to 0.0005	-0.0003	0.0005	increasing	0.5	No Trend	0
Mimihau Stream at Wyndham	Phosphorus..Total..Correction	0	0	60	17/1/12-14/12/16	0.0389	0.128	0.015	0.0355	4	200	0.2121	0.8322	0.001	2.8111	-0.0020 to 0.0022	-0.0020	0.0022	increasing	0.6004	No Trend	0
Mimihau Stream at Wyndham	Organic.Nitrogen.Correction	0	0	60	17/1/12-14/12/16	0.2549	0.7516	0.065	0.235	15	199	0.9924	0.321	0.0065	2.7855	-0.0048 to 0.0237	-0.0048	0.0237	increasing	0.8112	No Trend	0
Moffat Creek at Moffat	Clarity..Black.Disc..Field..m.	2	0	57	10/1/12-12/12/16	0.4502	1.04	0.02	0.43	-17	175	-1.2095	0.2265	-0.0187	-4.3545	-0.0401 to 0.0223	-0.0401	0.0223	decreasing	0.8716	No Trend	0

Road																					
Moffat Creek at Moffat Road	E.Coli..CFU..Correction	0	0	59	10/1/12-12/12/16	1519.4915	19000	10	300	12	190	0.798	0.4249	37.6529	12.551	-13.3495 to 102.2863	-13.349	02.2863	increasing	0.8233	No Trend	0
Moffat Creek at Moffat Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	10/1/12-12/12/16	0.4502	2.5	0.004	0.22	2	192	0.0722	0.9425	0.0007	0.3019	-0.0222 to 0.0287	-0.0222	0.0287	increasing	0.5044	No Trend	0
Moffat Creek at Moffat Road	Nitrogen..Total.Ammoniacal..Correction	0	7	59	10/1/12-12/12/16	0.0426	0.23	0.0018	0.027	18	186	1.2465	0.2126	-0.0002	-0.6155	-0.0055 to 0.0049	-0.0055	0.0049	decreasing	0.4803	No Trend	0
Moffat Creek at Moffat Road	Nitrogen..Total..Correction	0	0	59	10/1/12-12/12/16	1.5859	4	0.69	1.35	8	192	0.5052	0.6134	0.0275	2.0352	-0.0920 to 0.1120	-0.0920	0.1120	increasing	0.7059	No Trend	0
Moffat Creek at Moffat Road	Phosphorus..Dissolved.Reactive..Correction	0	0	59	10/1/12-12/12/16	0.08	0.18	0.032	0.07	4	190	0.2176	0.8277	0.0005	0.7152	-0.0036 to 0.0047	-0.0036	0.0047	increasing	0.5859	No Trend	0
Moffat Creek at Moffat Road	Phosphorus..Total..Correction	0	0	59	10/1/12-12/12/16	0.186	1.04	0.093	0.148	10	192	0.6495	0.516	0.0034	2.2725	-0.0108 to 0.0090	-0.0108	0.0090	increasing	0.7302	No Trend	0
Moffat Creek at Moffat Road	Organic.Nitrogen.Correction	0	0	59	10/1/12-12/12/16	1.0938	2.452	0.585	1.034	24	192	1.6599	0.0969	0.0338	3.2675	-0.0165 to 0.0644	-0.0165	0.0644	increasing	0.9442	No Trend	0
Mokoreta River at Wyndham River Road	E.Coli..CFU..Correction	0	0	59	17/1/12-14/12/16	769.4915	6600	10	320	4	188	0.2188	0.8268	1.2474	0.3898	-40.4276 to 39.7707	-40.427	39.7707	increasing	0.5145	No Trend	0
Mokoreta River at Wyndham River Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	17/1/12-14/12/16	1.0939	1.9	0.38	1.08	-5	191	-0.2894	0.7723	-0.015	-1.3911	-0.0452 to 0.0337	-0.0452	0.0337	decreasing	0.5923	No Trend	0
Mokoreta River at Wyndham River Road	Nitrogen..Total..Correction	0	0	59	17/1/12-14/12/16	1.4236	2.5	0.69	1.38	-17	191	-1.1577	0.247	-0.0328	-2.3782	-0.0602 to 0.0320	-0.0602	0.0320	decreasing	0.8564	No Trend	0
Mokoreta River at Wyndham River Road	Phosphorus..Dissolved.Reactive..Correction	0	0	59	17/1/12-14/12/16	0.0086	0.013	0.0025	0.009	-18	176.6667	-1.279	0.2009	-0.0003	-3.6961	-0.0007 to 0.0000	-0.0007	0.0000	decreasing	0.9	No Trend	0
Mokoreta River at Wyndham River Road	Phosphorus..Total..Correction	0	0	59	17/1/12-14/12/16	0.0363	0.177	0.01	0.026	5	191	0.2894	0.7723	0.0005	1.9153	-0.0020 to 0.0018	-0.0020	0.0018	increasing	0.5953	No Trend	0
Mokoreta River at Wyndham River Road	Organic.Nitrogen.Correction	0	0	59	17/1/12-14/12/16	0.318	0.92	0.143	0.2936	4	192	0.2165	0.8286	0.0013	0.4458	-0.0112 to 0.0163	-0.0112	0.0163	increasing	0.5842	No Trend	0
Mokotua Stream at Awarua	E.Coli..CFU..Correction	1	20	58	16/1/12-12/12/16	53.8793	1600	5	10	-7	152	-0.4867	0.6265	3.3235	33.2348	-3.4036 to 10.3425	-3.4036	10.3425	increasing	0.8107	No Trend	0
Mokotua Stream at Awarua	Nitrogen..Nitrate.Nitrite..Correction	0	8	59	16/1/12-12/12/16	0.0413	0.2	0.0024	0.01	-9	163	-0.6266	0.5309	-0.0002	-2.202	-0.0023 to 0.0005	-0.0023	0.0005	decreasing	0.6814	No Trend	0
Mokotua Stream at Awarua	Nitrogen..Total.Ammoniacal..Correction	0	6	59	16/1/12-12/12/16	0.0202	0.183	0.0003	0.0098	-54	178	-3.9725	0.0001	-0.0049	-50.4277	-0.0094 to -0.0031	-0.0094	-0.0031	decreasing	1	Trend	-1
Mokotua Stream at Awarua	Nitrogen..Total..Correction	0	0	59	16/1/12-12/12/16	0.7366	1.2	0.44	0.7	-12	188	-0.8023	0.4224	-0.01	-1.4221	-0.0266 to 0.0100	-0.0266	0.0100	decreasing	0.7735	No Trend	0
Mokotua Stream at Awarua	Phosphorus..Total..Correction	0	0	59	16/1/12-12/12/16	0.0156	0.054	0.005	0.014	-8	183.3333	-0.517	0.6052	-0.0001	-0.8959	-0.0010 to 0.0003	-0.0010	0.0003	decreasing	0.6643	No Trend	0
Mokotua Stream at Awarua	Organic.Nitrogen.Correction	0	0	59	16/1/12-12/12/16	0.6968	1.1851	0.4275	0.662	0	192	0	1	0.0021	0.3231	-0.0137 to 0.0133	-0.0137	0.0133	increasing	0.4891	No Trend	0
North Peak Stream at Waimea Valley Road	E.Coli..CFU..Correction	0	1	58	19/1/12-14/12/16	869.1379	12000	10	180	0	182	0	1	-3.3265	-1.8481	-37.6988 to 55.2037	-37.698	55.2037	decreasing	0.5423	No Trend	0
North Peak Stream at Waimea Valley Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	58	19/1/12-14/12/16	0.4475	1.83	0.005	0.265	-16	184	-1.1058	0.2688	-0.0147	-5.5419	-0.0823 to 0.0071	-0.0823	0.0071	decreasing	0.8519	No Trend	0
North Peak Stream at Waimea Valley Road	Nitrogen..Total..Correction	0	0	58	19/1/12-14/12/16	0.8626	3	0.11	0.78	-20	184	-1.4007	0.1613	-0.0551	-7.061	-0.1577 to 0.0068	-0.1577	0.0068	decreasing	0.9235	No Trend	0
North Peak Stream at Waimea Valley Road	Phosphorus..Dissolved.Reactive..Correction	0	2	58	19/1/12-14/12/16	0.0169	0.08	0.004	0.015	11	179	0.7474	0.4548	0	0	-0.0010 to 0.0010	-0.0010	0.0010	decreasing	0.5	No Trend	0
North Peak Stream at Waimea Valley Road	Phosphorus..Total..Correction	0	0	58	19/1/12-14/12/16	0.0489	0.28	0.013	0.0355	-16	182	-1.1119	0.2662	-0.0024	-6.7954	-0.0040 to 0.0010	-0.0040	0.0010	decreasing	0.8823	No Trend	0
North Peak Stream at Waimea Valley Road	Organic.Nitrogen.Correction	0	0	58	19/1/12-14/12/16	0.3877	1.8	0.1	0.294	-22	184	-1.5481	0.1216	-0.0194	-6.6059	-0.0512 to 0.0021	-0.0512	0.0021	decreasing	0.9414	No Trend	0
Opouriki Stream at Tweedie Road	Clarity..Black.Disc..Field..m.	5	0	55	16/1/12-12/12/16	0.9527	2.46	0.14	0.94	2	160	0.0791	0.937	0	0	-0.0638 to 0.1118	-0.0638	0.1118	decreasing	0.5	No Trend	0
Opouriki Stream at Tweedie Road	E.Coli..CFU..Correction	0	1	60	16/1/12-12/12/16	5352.4167	120000	75	800	-7	193	-0.4319	0.6658	-15.0275	-1.8784	-210.2907 to 67.5944	-210.29	67.5944	decreasing	0.6401	No Trend	0
Opouriki Stream at Tweedie Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	16/1/12-12/12/16	1.9793	3.5	1.04	1.83	14	196	0.9286	0.3531	0.0414	2.2393	-0.0201 to 0.0936	-0.0201	0.0936	increasing	0.7742	No Trend	0
Opouriki Stream at Tweedie Road	Nitrogen..Total.Ammoniacal..Correction	0	6	60	16/1/12-12/12/16	0.0487	0.39	0.0008	0.0325	3	189	0.1455	0.8843	-0.0014	-4.2623	-0.0048 to 0.0037	-0.0048	0.0037	decreasing	0.5876	No Trend	0
Opouriki Stream at Tweedie Road	Nitrogen..Total..Correction	0	0	60	16/1/12-12/12/16	2.4585	4.2	1.25	2.3	4	198	0.2132	0.8312	0.0225	0.9762	-0.0995 to 0.1001	-0.0995	0.1001	increasing	0.6425	No Trend	0
Opouriki Stream at Tweedie Road	Phosphorus..Dissolved.Reactive..Correction	0	1	60	16/1/12-12/12/16	0.0135	0.063	0.004	0.01	-7	190.3333	-0.4349	0.6636	-0.0001	-1.2483	-0.0010 to 0.0004	-0.0010	0.0004	decreasing	0.7196	No Trend	0
Opouriki Stream at Tweedie Road	Phosphorus..Total..Correction	0	0	60	16/1/12-12/12/16	0.0547	0.34	0.012	0.036	-17	199	-1.1342	0.2567	-0.0015	-4.0565	-0.0044 to 0.0010	-0.0044	0.0010	decreasing	0.8615	No Trend	0
Opouriki Stream at Tweedie Road	Organic.Nitrogen.Correction	0	0	60	16/1/12-12/12/16	0.431	2.03	0.028	0.3051	-8	200	-0.495	0.6206	-0.0084	-2.7395	-0.0461 to 0.0185	-0.0461	0.0185	decreasing	0.6697	No Trend	0
Orauea River at Orawia Pukemaori Road	Clarity..Black.Disc..Field..m.	5	0	55	16/1/12-15/12/16	1.0678	3.5	0.07	0.99	7	163	0.47	0.6384	0.0301	3.0407	-0.0702 to 0.1293	-0.0702	0.1293	increasing	0.6808	No Trend	0
Orauea River at Orawia Pukemaori Road	E.Coli..CFU..Correction	0	0	60	16/1/12-15/12/16	1212.6667	14000	20	370	3	199	0.1418	0.8873	10.7776	2.9129	-62.7765 to 57.2645	-62.776	57.2645	increasing	0.5452	No Trend	0
Orauea River at Orawia Pukemaori Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	16/1/12-15/12/16	0.5521	1.54	0	0.515	-2	200	-0.0707	0.9436	-0.0058	-1.1203	-0.0282 to 0.0162	-0.0282	0.0162	decreasing	0.5283	No Trend	0
Orauea River at Orawia Pukemaori Road	Nitrogen..Total..Correction	0	0	60	16/1/12-15/12/16	0.9587	4.1	0.16	0.795	11	199	0.7089	0.4784	0.01	1.2544	-0.0528 to 0.0279	-0.0528	0.0279	increasing	0.7463	No Trend	0

Orauea River at Orawia Pukemaori Road	Phosphorus..Dissolved.Reactive..Correction	0	1	60	16/1/12-15/12/16	0.0139	0.115	0.004	0.011	6	182	0.3706	0.7109	0	0	-0.0003 to 0.0005	-0.0003	0.0005	increasing	0.5	No Trend	0
Orauea River at Orawia Pukemaori Road	Phosphorus..Total..Correction	0	0	60	16/1/12-15/12/16	0.0496	0.49	0.01	0.028	-4	198	-0.2132	0.8312	-0.0007	-2.6622	-0.0030 to 0.0019	-0.0030	0.0019	decreasing	0.6008	No Trend	0
Orauea River at Orawia Pukemaori Road	Organic.Nitrogen.Correction	0	0	60	16/1/12-15/12/16	0.3862	2.993	0.143	0.2971	-2	200	-0.0707	0.9436	-0.0006	-0.2044	-0.0142 to 0.0190	-0.0142	0.0190	decreasing	0.5102	No Trend	0
Oreti River at Lumsden Bridge	E.Coli..CFU..Correction	0	2	60	18/1/12-13/12/16	183.5833	1900	5	75	34	193.3333	2.3733	0.0176	20.0275	26.7033	5.0172 to 50.1717	5.0172	50.1717	increasing	0.9961	Trend	1
Oreti River at Three Kings	Clarity..Black.Disc..Field..m.	5	0	55	19/1/12-13/12/16	4.8647	10.8	0.27	4.9	-36	160	-2.767	0.0057	-0.6137	-12.5244	-0.9907 to -0.1508	-0.9907	-0.1508	decreasing	0.9969	Trend	-1
Oreti River at Three Kings	E.Coli..CFU..Correction	0	20	60	19/1/12-13/12/16	34.1667	500	5	10	14	169	1	0.3173	1.6617	16.6174	-4.9922 to 15.4406	-4.9922	15.4406	increasing	0.6581	No Trend	0
Oreti River at Three Kings	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	19/1/12-13/12/16	0.0384	0.098	0.003	0.034	-46	198	-3.198	0.0014	-0.0051	-15.1359	-0.0076 to -0.0037	-0.0076	-0.0037	decreasing	0.9992	Trend	-1
Oreti River at Wallaceton	E.Coli..CFU..Correction	0	4	60	18/1/12-13/12/16	319.4167	4500	10	120	17	193	1.1517	0.2494	7.4949	6.2457	-4.8930 to 25.1204	-4.8930	25.1204	increasing	0.7861	No Trend	0
Otamita Stream at Mandeville	Clarity..Black.Disc..Field..m.	2	0	57	18/1/12-14/12/16	1.0482	2.48	0.19	1.03	-8	176	-0.5276	0.5977	-0.0389	-3.7751	-0.1321 to 0.0941	-0.1321	0.0941	decreasing	0.7033	No Trend	0
Otamita Stream at Mandeville	E.Coli..CFU..Correction	0	0	59	18/1/12-14/12/16	1564.2373	57000	20	290	20	192	1.3712	0.1703	34.7415	11.9798	-9.9258 to 79.3613	-9.9258	79.3613	increasing	0.9096	No Trend	0
Otamita Stream at Mandeville	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	18/1/12-14/12/16	0.7949	2.1	0.019	0.72	-12	192	-0.7939	0.4273	-0.0562	-7.8018	-0.1654 to 0.0151	-0.1654	0.0151	decreasing	0.7928	No Trend	0
Otamita Stream at Mandeville	Nitrogen..Total..Correction	0	0	59	18/1/12-14/12/16	1.1342	2.7	0.31	1	-5	191	-0.2894	0.7723	-0.0525	-5.2548	-0.1590 to 0.0484	-0.1590	0.0484	decreasing	0.6442	No Trend	0
Otamita Stream at Mandeville	Phosphorus..Dissolved.Reactive..Correction	0	0	59	18/1/12-14/12/16	0.0105	0.028	0.004	0.01	2	185.3333	0.0735	0.9414	0	0	-0.0005 to 0.0010	-0.0005	0.0010	decreasing	0.5	No Trend	0
Otamita Stream at Mandeville	Phosphorus..Total..Correction	0	0	59	18/1/12-14/12/16	0.0316	0.146	0.008	0.025	23	189	1.6003	0.1095	0.0022	7.9517	0.0000 to 0.0036	0.0000	0.0036	increasing	0.9498	No Trend	0
Otamita Stream at Mandeville	Organic.Nitrogen.Correction	0	0	59	18/1/12-14/12/16	0.3314	0.878	0.165	0.297	22	192	1.5155	0.1296	0.0156	5.2557	-0.0017 to 0.0285	-0.0017	0.0285	increasing	0.9267	No Trend	0
Otapiri Stream at Otapiri Gorge	Clarity..Black.Disc..Field..m.	1	0	59	17/1/12-13/12/16	0.81	2.33	0.1	0.8	-20	192	-1.3712	0.1703	-0.0608	-7.5995	-0.1575 to 0.0070	-0.1575	0.0070	decreasing	0.9132	No Trend	0
Otapiri Stream at Otapiri Gorge	E.Coli..CFU..Correction	0	0	60	17/1/12-13/12/16	1456.6667	13000	10	405	9	199	0.5671	0.5706	10.0343	2.4776	-53.036 to 62.4544	-53.036	62.4544	increasing	0.685	No Trend	0
Otapiri Stream at Otapiri Gorge	Nitrogen..Nitrate.Nitrite..Correction	0	1	60	17/1/12-13/12/16	0.607	1.83	0.049	0.55	-7	199	-0.4253	0.6706	-0.0415	-7.5517	-0.1165 to 0.0259	-0.1165	0.0259	decreasing	0.7199	No Trend	0
Otapiri Stream at Otapiri Gorge	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	0.9352	2.2	0.21	0.83	4	200	0.2121	0.8322	0.0163	1.958	-0.1097 to 0.0745	-0.1097	0.0745	increasing	0.5673	No Trend	0
Otapiri Stream at Otapiri Gorge	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-13/12/16	0.0169	0.038	0.006	0.0165	28	198	1.9188	0.0555	0.0015	9.1221	0.0005 to 0.0026	0.0005	0.0026	increasing	0.9751	Trend	1
Otapiri Stream at Otapiri Gorge	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.0442	0.198	0.02	0.036	20	196	1.3571	0.1747	0.0018	5.0835	-0.0001 to 0.0054	-0.0001	0.0054	increasing	0.9128	No Trend	0
Otapiri Stream at Otapiri Gorge	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.3229	1.04	0.115	0.27	12	200	0.7778	0.4367	0.0086	3.2	-0.0210 to 0.0375	-0.0210	0.0375	increasing	0.7939	No Trend	0
Otautau Stream at Otautau-Tuatapere Road	E.Coli..CFU..Correction	0	0	60	16/1/12-12/12/16	3056	53000	110	1050	-8	200	-0.495	0.6206	-77.7661	-7.4063	-249.2206 to 115.4405	-249.22	15.4405	decreasing	0.6979	No Trend	0
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	16/1/12-12/12/16	1.0063	3.6	0.118	0.81	-6	198	-0.3553	0.7223	-0.0191	-2.3563	-0.0784 to 0.0301	-0.0784	0.0301	decreasing	0.654	No Trend	0
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Total.Ammoniacal..Correction	0	6	60	16/1/12-12/12/16	0.0319	0.118	0.0026	0.026	10	196	0.6429	0.5203	0.0014	5.4353	-0.0030 to 0.0060	-0.0030	0.0060	increasing	0.6395	No Trend	0
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Total..Correction	0	0	60	16/1/12-12/12/16	1.4777	4.1	0.32	1.28	0	200	0	1	-0.0025	-0.1944	-0.1064 to 0.0601	-0.1064	0.0601	decreasing	0.4812	No Trend	0
Otautau Stream at Otautau-Tuatapere Road	Phosphorus..Dissolved.Reactive..Correction	0	0	60	16/1/12-12/12/16	0.0268	0.057	0.012	0.023	3	197	0.1425	0.8867	0.0001	0.5427	-0.0010 to 0.0010	-0.0010	0.0010	increasing	0.5567	No Trend	0
Otautau Stream at Otautau-Tuatapere Road	Phosphorus..Total..Correction	0	0	60	16/1/12-12/12/16	0.0688	0.36	0.028	0.053	8	198	0.4975	0.6189	0.0009	1.6354	-0.0028 to 0.0048	-0.0028	0.0048	increasing	0.7054	No Trend	0
Otautau Stream at Otautau-Tuatapere Road	Organic.Nitrogen.Correction	0	0	60	16/1/12-12/12/16	0.44	1.552	0.1753	0.367	6	200	0.3536	0.7237	0.0064	1.7393	-0.0256 to 0.0269	-0.0256	0.0269	increasing	0.6329	No Trend	0
Otautau Stream at Waikouro	E.Coli..CFU..Correction	0	0	60	16/1/12-12/12/16	4826.1667	65000	180	1350	-5	199	-0.2836	0.7768	-29.1769	-2.1613	-232.8060 to 166.3202	-232.80	66.3202	decreasing	0.6406	No Trend	0
Otautau Stream at Waikouro	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	16/1/12-12/12/16	0.9019	2.8	0.11	0.765	1	199	0	1	0.0052	0.6821	-0.0547 to 0.0502	-0.0547	0.0502	increasing	0.5124	No Trend	0
Otautau Stream at Waikouro	Nitrogen..Total.Ammoniacal..Correction	0	6	60	16/1/12-12/12/16	0.0375	0.2	0.0041	0.0225	29	190.3333	2.0296	0.0424	0.0003	1.2933	-0.0012 to 0.0023	-0.0012	0.0023	increasing	0.65	No Trend	0
Otautau Stream at Waikouro	Nitrogen..Total..Correction	0	0	60	16/1/12-12/12/16	1.4652	4.7	0.32	1.215	6	200	0.3536	0.7237	0.0226	1.8582	-0.0959 to 0.0783	-0.0959	0.0783	increasing	0.6358	No Trend	0
Otautau Stream at Waikouro	Phosphorus..Dissolved.Reactive..Correction	0	0	60	16/1/12-12/12/16	0.0252	0.114	0.01	0.0205	9	195	0.5729	0.5667	0.0004	2.0336	-0.0009 to 0.0013	-0.0009	0.0013	increasing	0.717	No Trend	0
Otautau Stream at Waikouro	Phosphorus..Total..Correction	0	0	60	16/1/12-12/12/16	0.087	0.59	0.03	0.0545	1	199	0	1	0.0002	0.3049	-0.0043 to 0.0035	-0.0043	0.0035	increasing	0.4998	No Trend	0
Otautau Stream at Waikouro	Organic.Nitrogen.Correction	0	0	60	16/1/12-12/12/16	0.5263	2.752	0.124	0.3405	-6	200	-0.3536	0.7237	-0.003	-0.8928	-0.0448 to 0.0171	-0.0448	0.0171	decreasing	0.6222	No Trend	0
Otepuni Creek at Nith Street	E.Coli..CFU..Correction	0	0	60	17/1/12-13/12/16	2382.1667	16000	110	1600	23	197	1.5674	0.1177	165.1945	10.3247	0.0000 to 404.1047	0.0000	04.1047	increasing	0.9605	No Trend	0
Otepuni Creek at Nith Street	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	1.4253	3.6	0.62	1.295	-61	199	-4.2533	0	-0.1093	-8.4422	-0.1987 to -0.0542	-0.1987	-0.0542	decreasing	1	Trend	-1
Otepuni Creek at Nith Street	Nitrogen..Total.Ammoniacal..Correction	0	5	60	17/1/12-13/12/16	0.0583	0.26	0.006	0.0525	34	194	2.3693	0.0178	0.0045	8.6009	-0.0010 to 0.0110	-0.0010	0.0110	increasing	0.9153	No Trend	0
Otepuni Creek at Nith Street	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	2.1563	4.6	1.02	1.99	-39	197	-2.7074	0.0068	-0.1273	-6.399	-0.2144 to -0.0605	-0.2144	-0.0605	decreasing	0.9975	Trend	-1

Otepuni Creek at Nith Street	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-13/12/16	0.0147	0.046	0.005	0.014	9	190.3333	0.5799	0.562	0.0001	0.8916	-0.0003 to 0.0015	-0.0003	0.0015	increasing	0.719	No Trend	0
Otepuni Creek at Nith Street	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.045	0.109	0.014	0.038	17	195	1.1458	0.2519	0.0009	2.2932	-0.0006 to 0.0028	-0.0006	0.0028	increasing	0.8551	No Trend	0
Otepuni Creek at Nith Street	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.6731	1.294	0.28	0.66	-15	199	-0.9924	0.321	-0.0323	-4.8913	-0.0606 to 0.0205	-0.0606	0.0205	decreasing	0.8474	No Trend	0
Oteramika Stream at Seaward Downs	Clarity..Black.Disc..Field..m.	2	0	58	17/1/12-14/12/16	0.5903	1.17	0.12	0.565	-20	182	-1.4084	0.159	-0.03	-5.3061	-0.0735 to 0.0070	-0.0735	0.0070	decreasing	0.909	No Trend	0
Oteramika Stream at Seaward Downs	E.Coli..CFU..Correction	0	1	60	17/1/12-14/12/16	1080.1667	10000	10	650	29	197	1.9949	0.0461	73.132	11.2511	0.0000 to 163.9675	0.0000	63.9675	increasing	0.9613	No Trend	0
Oteramika Stream at Seaward Downs	Nitrogen..Nitrate.Nitrite..Correction	0	1	60	17/1/12-14/12/16	1.8625	4.6	0.012	1.6	9	199	0.5671	0.5706	0.0544	3.3976	-0.1043 to 0.1787	-0.1043	0.1787	increasing	0.6366	No Trend	0
Oteramika Stream at Seaward Downs	Nitrogen..Total..Correction	0	0	60	17/1/12-14/12/16	2.8442	5.5	0.61	2.6	1	195	0	1	0	0	-0.1199 to 0.2039	-0.1199	0.2039	increasing	0.5	No Trend	0
Oteramika Stream at Seaward Downs	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-14/12/16	0.0438	0.31	0.008	0.032	-3	195	-0.1432	0.8861	0	0	-0.0031 to 0.0012	-0.0031	0.0012	increasing	0.5	No Trend	0
Oteramika Stream at Seaward Downs	Phosphorus..Total..Correction	0	0	60	17/1/12-14/12/16	0.1053	0.4	0.034	0.085	1	199	0	1	0.0002	0.2935	-0.0065 to 0.0056	-0.0065	0.0056	increasing	0.5114	No Trend	0
Oteramika Stream at Seaward Downs	Organic.Nitrogen.Correction	0	0	60	17/1/12-14/12/16	0.9008	2.81	0.51	0.8685	14	200	0.9192	0.358	0.0249	2.8726	-0.0193 to 0.0701	-0.0193	0.0701	increasing	0.8173	No Trend	0
Pourakino River at Traill Road	E.Coli..CFU..Correction	0	0	60	16/1/12-12/12/16	1189.8333	26000	20	360	4	194	0.2154	0.8295	0	0	-23.1198 to 53.1149	-23.119	53.1149	increasing	0.5	No Trend	0
Pourakino River at Traill Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	16/1/12-12/12/16	0.1772	0.44	0.009	0.17	29	199	1.9849	0.0472	0.0066	3.8733	0.0019 to 0.0147	0.0019	0.0147	increasing	0.978	Trend	1
Pourakino River at Traill Road	Nitrogen..Total..Correction	0	0	60	16/1/12-12/12/16	0.4052	0.91	0.14	0.375	5	197	0.285	0.7757	0.0084	2.2299	-0.0127 to 0.0386	-0.0127	0.0386	increasing	0.6483	No Trend	0
Pourakino River at Traill Road	Phosphorus..Total..Correction	0	0	60	16/1/12-12/12/16	0.0191	0.1	0.004	0.013	1	197	0	1	0	0	-0.0016 to 0.0018	-0.0016	0.0018	increasing	0.5	No Trend	0
Pourakino River at Traill Road	Organic.Nitrogen.Correction	0	0	60	16/1/12-12/12/16	0.2167	0.78	0.065	0.1775	0	200	0	1	0	-0.0198	-0.0203 to 0.0168	-0.0203	0.0168	decreasing	0.4727	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Clarity..Black.Disc..Field..m.	4	0	54	19/1/12-14/12/16	0.947	2.8	0.14	0.91	-9	153	-0.6468	0.5178	-0.0368	-4.0431	-0.0922 to 0.0892	-0.0922	0.0892	decreasing	0.7659	No Trend	0
Sandstone Stream at Kingston Crossing Rd	E.Coli..CFU..Correction	0	0	58	19/1/12-14/12/16	3991.6379	130000	40	400	-13	183	-0.8871	0.375	-20	-5	-91.2135 to 22.1914	-91.213	22.1914	decreasing	0.818	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Nitrogen..Nitrate.Nitrite..Correction	0	0	58	19/1/12-14/12/16	1.554	5.2	0.015	1.38	-28	182	-2.0014	0.0454	-0.0731	-5.2959	-0.2344 to -0.0153	-0.2344	-0.0153	decreasing	0.9812	Trend	-1
Sandstone Stream at Kingston Crossing Rd	Nitrogen..Total..Correction	0	0	58	19/1/12-14/12/16	2.2886	6.8	0.33	2.25	-26	184	-1.843	0.0653	-0.1198	-5.3262	-0.2546 to -0.0303	-0.2546	-0.0303	decreasing	0.9704	Trend	-1
Sandstone Stream at Kingston Crossing Rd	Phosphorus..Dissolved.Reactive..Correction	0	0	58	19/1/12-14/12/16	0.0471	0.107	0.018	0.0435	8	182	0.5189	0.6038	0.0006	1.3432	-0.0020 to 0.0040	-0.0020	0.0040	increasing	0.6719	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Phosphorus..Total..Correction	0	0	58	19/1/12-14/12/16	0.0882	0.28	0.033	0.0735	4	184	0.2212	0.8255	0.001	1.3652	-0.0059 to 0.0048	-0.0059	0.0048	increasing	0.6047	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Organic.Nitrogen.Correction	0	0	58	19/1/12-14/12/16	0.7019	2.271	0.201	0.5745	-1	183	0	1	-0.0012	-0.2162	-0.0589 to 0.0296	-0.0589	0.0296	decreasing	0.4688	No Trend	0
Tokanui River at Fortrose Otara Road	E.Coli..CFU..Correction	0	0	59	16/1/12-12/12/16	3025.5932	110000	80	300	12	192	0.7939	0.4273	32.4317	10.8106	-22.5383 to 91.6109	-22.538	91.6109	increasing	0.7934	No Trend	0
Tokanui River at Fortrose Otara Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	16/1/12-12/12/16	1.112	1.79	0.56	1.06	-20	190	-1.3784	0.1681	-0.0201	-1.892	-0.0318 to 0.0067	-0.0318	0.0067	decreasing	0.9043	No Trend	0
Tokanui River at Fortrose Otara Road	Nitrogen..Total.Ammoniacal..Correction	0	6	59	16/1/12-12/12/16	0.031	0.2	0.0019	0.022	-19	183	-1.3306	0.1833	-0.0019	-8.8181	-0.0041 to -0.0005	-0.0041	-0.0005	decreasing	0.9747	Trend	-1
Tokanui River at Fortrose Otara Road	Nitrogen..Total..Correction	0	0	59	16/1/12-12/12/16	1.6273	3.7	0.81	1.48	-12	190	-0.7988	0.4249	-0.0347	-2.3461	-0.0825 to 0.0223	-0.0825	0.0223	decreasing	0.8273	No Trend	0
Tokanui River at Fortrose Otara Road	Phosphorus..Dissolved.Reactive..Correction	0	0	59	16/1/12-12/12/16	0.019	0.03	0.011	0.019	20	172.6667	1.4459	0.1482	0.0005	2.6155	0.0000 to 0.0010	0.0000	0.0010	increasing	0.8978	No Trend	0
Tokanui River at Fortrose Otara Road	Phosphorus..Total..Correction	0	0	59	16/1/12-12/12/16	0.0808	0.47	0.036	0.062	-4	192	-0.2165	0.8286	-0.0015	-2.3949	-0.0070 to 0.0026	-0.0070	0.0026	decreasing	0.5951	No Trend	0
Tokanui River at Fortrose Otara Road	Organic.Nitrogen.Correction	0	0	59	16/1/12-12/12/16	0.4847	2.2	0.195	0.375	4	192	0.2165	0.8286	0.0045	1.2079	-0.0386 to 0.0301	-0.0386	0.0301	increasing	0.5619	No Trend	0
Tussock Creek at Cooper Road	Clarity..Black.Disc..Field..m.	4	0	56	17/1/12-15/11/16	1.0555	2.75	0.05	1.035	-14	167.3333	-1.0055	0.3149	-0.0736	-7.1097	-0.1756 to 0.0272	-0.1756	0.0272	decreasing	0.8164	No Trend	0
Tussock Creek at Cooper Road	E.Coli..CFU..Correction	1	0	59	17/1/12-13/12/16	4513.3898	41000	70	1100	12	190	0.798	0.4249	41.3591	3.7599	-99.7579 to 418.3006	-99.757	18.3006	increasing	0.8001	No Trend	0
Tussock Creek at Cooper Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	1.5405	5.4	0.067	1.49	-18	200	-1.2021	0.2293	-0.0622	-4.1753	-0.1986 to 0.0202	-0.1986	0.0202	decreasing	0.8887	No Trend	0
Tussock Creek at Cooper Road	Nitrogen..Total.Ammoniacal..Correction	0	7	60	17/1/12-13/12/16	0.0459	0.44	0.0017	0.0235	9	195	0.5729	0.5667	-0.0011	-4.7935	-0.0073 to 0.0044	-0.0073	0.0044	decreasing	0.6237	No Trend	0
Tussock Creek at Cooper Road	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	2.252	7.3	0.36	2.05	-14	196	-0.9286	0.3531	-0.0537	-2.6193	-0.2853 to 0.0434	-0.2853	0.0434	decreasing	0.7909	No Trend	0
Tussock Creek at Cooper Road	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-13/12/16	0.0319	0.196	0.004	0.027	18	195.3333	1.2164	0.2238	0.0014	5.2384	-0.0004 to 0.0040	-0.0004	0.0040	increasing	0.8977	No Trend	0
Tussock Creek at Cooper Road	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.0843	1.05	0.008	0.05	29	197	1.9949	0.0461	0.0032	6.3551	0.0008 to 0.0078	0.0008	0.0078	increasing	0.9737	Trend	1
Tussock Creek at Cooper Road	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.6662	4.56	0.205	0.444	16	200	1.0607	0.2888	0.0247	5.5671	-0.0213 to 0.0530	-0.0213	0.0530	increasing	0.8548	No Trend	0

Upukerora River at Te Anau Milford Road	Clarity..Black.Disc..Field..m.	1	0	59	19/1/12-15/12/16	3.3095	8.36	0.15	3.21	-16	192	-1.0825	0.279	-0.2796	-8.7088	-0.5940 to 0.1210	-0.5940	0.1210	decreasing	0.8694	No Trend	0
Upukerora River at Te Anau Milford Road	E.Coli..CFU..Correction	1	10	59	19/1/12-15/12/16	126.2712	2600	10	30	28	177.3333	2.0275	0.0426	5.0172	16.7239	0.0000 to 13.2263	0.0000	13.2263	increasing	0.9145	No Trend	0
Upukerora River at Te Anau Milford Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	19/1/12-15/12/16	0.1416	0.3	0.051	0.1365	-14	198	-0.9239	0.3556	-0.0052	-3.8247	-0.0110 to 0.0081	-0.0110	0.0081	decreasing	0.814	No Trend	0
Upukerora River at Te Anau Milford Road	Nitrogen..Total..Correction	0	1	60	19/1/12-15/12/16	0.2523	1.11	0.11	0.24	24	196	1.6429	0.1004	0.01	4.171	-0.0017 to 0.0201	-0.0017	0.0201	increasing	0.9044	No Trend	0
Upukerora River at Te Anau Milford Road	Phosphorus..Total..Correction	0	5	60	19/1/12-15/12/16	0.012	0.107	0.0003	0.0055	8	188	0.5105	0.6097	0	0	-0.0010 to 0.0010	-0.0010	0.0010	increasing	0.5	No Trend	0
Upukerora River at Te Anau Milford Road	Organic.Nitrogen.Correction	1	1	59	19/1/12-15/12/16	0.1088	0.913	0.015	0.0786	31	187	2.1938	0.0282	0.0146	18.5608	0.0054 to 0.0225	0.0054	0.0225	increasing	0.9824	Trend	1
Waiau River at Sunnyside	E.Coli..CFU..Correction	0	11	60	19/1/12-15/12/16	85.4167	800	5	30	35	189	2.4731	0.0134	8.1761	27.2538	0.0000 to 20.0687	0.0000	20.0687	increasing	0.9327	No Trend	0
Waiau River at Sunnyside	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	19/1/12-15/12/16	0.1641	0.36	0.047	0.1495	-14	200	-0.9192	0.3588	-0.008	-5.3267	-0.0181 to 0.0064	-0.0181	0.0064	decreasing	0.818	No Trend	0
Waiau River at Sunnyside	Nitrogen..Total..Correction	0	0	60	19/1/12-15/12/16	0.2667	0.56	0.0944	0.26	12	194	0.7898	0.4297	0.0087	3.3336	-0.0058 to 0.0201	-0.0058	0.0201	increasing	0.7641	No Trend	0
Waiau River at Sunnyside	Organic.Nitrogen.Correction	0	0	60	19/1/12-15/12/16	0.0986	0.3599	0.025	0.085	36	200	2.4749	0.0133	0.0121	14.2772	0.0040 to 0.0196	0.0040	0.0196	increasing	0.9944	Trend	1
Waiau River at Tuatapere	E.Coli..CFU..Correction	0	1	60	19/1/12-15/12/16	567.9167	20000	10	67.5	-2	198	-0.0711	0.9433	-1.2483	-1.8493	-20.0687 to 19.9139	-20.068	19.9139	decreasing	0.5163	No Trend	0
Waihopai River u/s Queens Drive	E.Coli..CFU..Correction	0	0	60	17/1/12-13/12/16	992.5	14000	20	360	14	193.3333	0.935	0.3498	31.202	8.6672	-31.6543 to 99.2764	-31.654	99.2764	increasing	0.8495	No Trend	0
Waihopai River u/s Queens Drive	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	2.2752	4.9	0.82	2.2	-10	196	-0.6429	0.5203	-0.0694	-3.154	-0.1667 to 0.0440	-0.1667	0.0440	decreasing	0.7398	No Trend	0
Waihopai River u/s Queens Drive	Nitrogen..Total.Ammoniacal..Correction	0	8	60	17/1/12-13/12/16	0.0313	0.148	0.0003	0.0155	4	182	0.2224	0.8244	-0.0004	-2.7874	-0.0035 to 0.0015	-0.0035	0.0015	decreasing	0.6445	No Trend	0
Waihopai River u/s Queens Drive	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	2.8532	5.7	1.32	2.9	-3	199	-0.1418	0.8873	-0.0301	-1.038	-0.1338 to 0.0940	-0.1338	0.0940	decreasing	0.5408	No Trend	0
Waihopai River u/s Queens Drive	Phosphorus..Dissolved.Reactive..Correction	0	2	60	17/1/12-13/12/16	0.0104	0.032	0.004	0.01	7	195	0.4297	0.6674	0	0	-0.0007 to 0.0010	-0.0007	0.0010	decreasing	0.5	No Trend	0
Waihopai River u/s Queens Drive	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.0379	0.194	0.013	0.0285	17	197	1.1443	0.2543	0.0008	2.9173	-0.0010 to 0.0039	-0.0010	0.0039	increasing	0.852	No Trend	0
Waihopai River u/s Queens Drive	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.5474	1.452	0.179	0.4725	14	200	0.9192	0.3588	0.0193	4.0755	-0.0051 to 0.0521	-0.0051	0.0521	increasing	0.813	No Trend	0
Waikaia River at Waikaia	Clarity..Black.Disc..Field..m.	1	0	58	18/1/12-14/12/16	1.8859	4.5	0.08	1.825	-16	184	-1.1058	0.2688	-0.1024	-5.6082	-0.2617 to 0.0300	-0.2617	0.0300	decreasing	0.8634	No Trend	0
Waikaia River at Waikaia	E.Coli..CFU..Correction	0	1	59	18/1/12-14/12/16	481.5254	4700	10	210	18	183.3333	1.2555	0.2093	20.0687	9.5565	0.0000 to 45.0060	0.0000	45.0060	increasing	0.9539	No Trend	0
Waikaia River at Waikaia	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	18/1/12-14/12/16	0.1548	0.32	0.06	0.142	-11	191	-0.7236	0.4693	-0.0026	-1.8503	-0.0105 to 0.0060	-0.0105	0.0060	decreasing	0.7653	No Trend	0
Waikaia River at Waikaia	Nitrogen..Total..Correction	0	0	59	18/1/12-14/12/16	0.3219	1.39	0.14	0.27	27	187	1.9013	0.0573	0.0201	7.4328	0.0000 to 0.0302	0.0000	0.0302	increasing	0.9605	No Trend	0
Waikaia River at Waikaia	Phosphorus..Dissolved.Reactive..Correction	0	8	59	18/1/12-14/12/16	0.0063	0.021	0.001	0.006	12	178	0.8245	0.4097	0	0	-0.0005 to 0.0005	-0.0005	0.0005	increasing	0.5	No Trend	0
Waikaia River at Waikaia	Phosphorus..Total..Correction	0	0	59	18/1/12-14/12/16	0.0235	0.177	0.002	0.013	-8	188	-0.5105	0.6097	-0.0004	-3.2069	-0.0011 to 0.0013	-0.0011	0.0013	decreasing	0.6688	No Trend	0
Waikaia River at Waikaia	Organic.Nitrogen.Correction	0	0	59	18/1/12-14/12/16	0.1622	1.264	0.035	0.105	47	191	3.3284	0.0009	0.0155	14.796	0.0060 to 0.0286	0.0060	0.0286	increasing	0.9994	Trend	1
Waikaia River at Waipounamu Bridge Road	Clarity..Black.Disc..Field..m.	0	0	59	18/1/12-14/12/16	1.8768	5.35	0.07	1.9	-18	192	-1.2269	0.2199	-0.1245	-6.5546	-0.3412 to 0.0457	-0.3412	0.0457	decreasing	0.8817	No Trend	0
Waikaia River at Waipounamu Bridge Road	E.Coli..CFU..Correction	0	1	59	18/1/12-14/12/16	506.8644	5100	10	140	16	190	1.0882	0.2765	8.6987	6.2133	-6.9595 to 41.4317	-6.9595	41.4317	increasing	0.8712	No Trend	0
Waikaia River at Waipounamu Bridge Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	18/1/12-14/12/16	0.5286	1.13	0.08	0.53	-2	190	-0.0725	0.9422	-0.0049	-0.9288	-0.0503 to 0.0209	-0.0503	0.0209	decreasing	0.5801	No Trend	0
Waikaia River at Waipounamu Bridge Road	Nitrogen..Total..Correction	0	0	59	18/1/12-14/12/16	0.7164	1.43	0.27	0.66	12	190	0.798	0.4249	0.0208	3.1502	-0.0376 to 0.0684	-0.0376	0.0684	increasing	0.7876	No Trend	0
Waikaia River at Waipounamu Bridge Road	Phosphorus..Dissolved.Reactive..Correction	0	5	59	18/1/12-14/12/16	0.0068	0.016	0.001	0.007	2	177.3333	0.0751	0.9401	-0.0003	-4.7478	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.8355	No Trend	0
Waikaia River at Waipounamu Bridge Road	Phosphorus..Total..Correction	0	0	59	18/1/12-14/12/16	0.0279	0.3	0.006	0.013	-6	186	-0.3666	0.7139	-0.0001	-0.9602	-0.0015 to 0.0010	-0.0015	0.0010	decreasing	0.6155	No Trend	0
Waikaia River at Waipounamu Bridge Road	Organic.Nitrogen.Correction	1	0	58	18/1/12-14/12/16	0.1854	1.27	0.065	0.135	38	184	2.7277	0.0064	0.0102	7.5418	0.0049 to 0.0203	0.0049	0.0203	increasing	0.9972	Trend	1
Waikaia River u/s Piano Flat	Clarity..Black.Disc..Field..m.	1	0	58	18/1/12-14/12/16	3.3807	7.6	0.16	3.2	-30	184	-2.1379	0.0325	-0.3161	-9.8776	-0.5386 to -0.1004	-0.5386	-0.1004	decreasing	0.9823	Trend	-1
Waikaia River u/s Piano Flat	E.Coli..CFU..Correction	0	15	59	18/1/12-14/12/16	33.4746	240	5	20	10	168.6667	0.6933	0.4883	0	0	-9.9562 to 4.9694	-9.9562	4.9694	decreasing	0.5	No Trend	0
Waikaia River u/s Piano Flat	Nitrogen..Nitrate.Nitrite..Correction	0	1	59	18/1/12-14/12/16	0.0154	0.2	0.0006	0.01	20	181.3333	1.4111	0.1583	0.0005	4.9694	0.0000 to 0.0014	0.0000	0.0014	increasing	0.8826	No Trend	0
Waikaia River u/s Piano Flat	Phosphorus..Dissolved.Reactive..Correction	0	7	59	18/1/12-14/12/16	0.0049	0.014	0.0017	0.005	6	152.6667	0.4047	0.6857	0	0	-0.0004 to 0.0000	-0.0004	0.0000	increasing	0.5	No Trend	0
Waikaia River u/s Piano Flat	Phosphorus..Total..Correction	0	0	59	18/1/12-14/12/16	0.0107	0.086	0.0027	0.008	-1	184.3333	0	1	0	0	-0.0007 to 0.0005	-0.0007	0.0005	increasing	0.5	No Trend	0
Waikaka Stream at Gore	Clarity..Black.Disc..Field..m.	3	0	57	17/1/12-14/12/16	0.9068	3.5	0.11	0.9	-25	175	-1.8142	0.0696	-0.0937	-10.4109	-0.1432 to -0.0102	-0.1432	-0.0102	decreasing	0.9617	Trend	-1
Waikaka Stream at Gore	E.Coli..CFU..Correction	0	0	60	17/1/12-14/12/16	2804.3333	57000	60	315	13	197	0.855	0.3926	11.6428	3.6961	-10.0343 to 84.0460	-10.034	84.0460	increasing	0.7764	No Trend	0

Waikaka Stream at Gore	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-14/12/16	0.867	2.3	0.032	0.83	1	199	0	1	0.002	0.2418	-0.0694 to 0.0523	-0.0694	0.0523	increasing	0.4758	No Trend	0
Waikaka Stream at Gore	Nitrogen..Total.Ammoniacal..Correction	0	5	60	17/1/12-14/12/16	0.0458	0.121	0.0003	0.0415	-10	196	-0.6429	0.5203	-0.0022	-5.4106	-0.0064 to 0.0030	-0.0064	0.0030	decreasing	0.7211	No Trend	0
Waikaka Stream at Gore	Nitrogen..Total..Correction	0	0	60	17/1/12-14/12/16	1.4242	3.7	0.4	1.35	13	199	0.8507	0.395	0.0526	3.8949	-0.0480 to 0.0987	-0.0480	0.0987	increasing	0.8081	No Trend	0
Waikaka Stream at Gore	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-14/12/16	0.0257	0.061	0.01	0.024	4	192	0.2165	0.8286	0	0	-0.0006 to 0.0016	-0.0006	0.0016	increasing	0.5	No Trend	0
Waikaka Stream at Gore	Phosphorus..Total..Correction	0	0	60	17/1/12-14/12/16	0.0691	0.32	0.031	0.0545	10	196	0.6429	0.5203	0.001	1.8286	-0.0029 to 0.0024	-0.0029	0.0024	increasing	0.6661	No Trend	0
Waikaka Stream at Gore	Organic.Nitrogen.Correction	0	0	60	17/1/12-14/12/16	0.5118	1.968	0.212	0.386	26	200	1.7678	0.0771	0.0247	6.392	0.0009 to 0.0455	0.0009	0.0455	increasing	0.9563	Trend	1
Waikawa River at Progress Valley	E.Coli..CFU..Correction	0	0	59	16/1/12-12/12/16	3189.1525	81000	40	600	6	190	0.3627	0.7168	14.101	2.3502	-40.1374 to 118.9625	-40.137	18.9625	increasing	0.6508	No Trend	0
Waikawa River at Progress Valley	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	16/1/12-12/12/16	0.6627	1.19	0.1	0.6	-25	186.3333	-1.7582	0.0787	-0.02	-3.3341	-0.0335 to 0.0000	-0.0335	0.0000	decreasing	0.9675	No Trend	0
Waikawa River at Progress Valley	Nitrogen..Total.Ammoniacal..Correction	0	7	59	16/1/12-12/12/16	0.017	0.085	0.0011	0.012	4	180	0.2236	0.8231	-0.0003	-2.6986	-0.0017 to 0.0008	-0.0017	0.0008	decreasing	0.6131	No Trend	0
Waikawa River at Progress Valley	Nitrogen..Total..Correction	0	0	59	16/1/12-12/12/16	1.0566	5.2	0.22	0.96	-26	190	-1.8137	0.0697	-0.0201	-2.0905	-0.0528 to -0.0022	-0.0528	-0.0022	decreasing	0.956	Trend	-1
Waikawa River at Progress Valley	Phosphorus..Dissolved.Reactive..Correction	0	0	59	16/1/12-12/12/16	0.013	0.02	0.006	0.013	1	182.3333	0	1	0	0	-0.0005 to 0.0005	-0.0005	0.0005	decreasing	0.5	No Trend	0
Waikawa River at Progress Valley	Phosphorus..Total..Correction	0	0	59	16/1/12-12/12/16	0.0603	0.68	0.016	0.038	0	192	0	1	-0.0004	-0.9669	-0.0030 to 0.0020	-0.0030	0.0020	decreasing	0.4884	No Trend	0
Waikawa River at Progress Valley	Organic.Nitrogen.Correction	0	0	59	16/1/12-12/12/16	0.3775	4.589	0.035	0.248	6	192	0.3608	0.7182	0.0024	0.9757	-0.0203 to 0.0256	-0.0203	0.0256	increasing	0.6438	No Trend	0
Waikiwi Stream at North Road	E.Coli..CFU..Correction	0	0	60	17/1/12-13/12/16	1502	15000	60	470	30	200	2.0506	0.0403	98.671	20.9938	13.7279 to 199.9833	13.7279	99.9833	increasing	0.9798	Trend	1
Waikiwi Stream at North Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	2.8545	4.8	1.59	2.75	-14	192	-0.9382	0.3481	-0.0333	-1.2124	-0.1003 to 0.0223	-0.1003	0.0223	decreasing	0.8816	No Trend	0
Waikiwi Stream at North Road	Nitrogen..Total.Ammoniacal..Correction	0	8	60	17/1/12-13/12/16	0.0312	0.128	0.0025	0.0205	20	184	1.4007	0.1613	0.0008	3.8133	-0.0022 to 0.0056	-0.0022	0.0056	increasing	0.6477	No Trend	0
Waikiwi Stream at North Road	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	3.441	5.6	1.96	3.35	-5	190.3333	-0.2899	0.7719	0	0	-0.1003 to 0.0500	-0.1003	0.0500	increasing	0.5	No Trend	0
Waikiwi Stream at North Road	Phosphorus..Dissolved.Reactive..Correction	0	1	60	17/1/12-13/12/16	0.0113	0.023	0.004	0.011	13	193	0.8638	0.3877	0.0002	2.2642	-0.0005 to 0.0010	-0.0005	0.0010	increasing	0.6882	No Trend	0
Waikiwi Stream at North Road	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.0428	0.186	0.005	0.0305	2	198	0.0711	0.9433	0.0002	0.8186	-0.0030 to 0.0027	-0.0030	0.0027	increasing	0.516	No Trend	0
Waikiwi Stream at North Road	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.556	1.759	0.275	0.4715	4	200	0.2121	0.832	0.0092	1.9579	-0.0080 to 0.0488	-0.0080	0.0488	increasing	0.6062	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Clarity..Black.Disc..Field..m.	3	0	56	16/1/12-12/12/16	0.9279	1.92	0.1	0.955	-14	168	-1.003	0.3159	-0.0733	-7.6763	-0.1421 to 0.0183	-0.1421	0.0183	decreasing	0.8482	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	E.Coli..CFU..Correction	0	1	59	16/1/12-12/12/16	341.1017	6000	10	130	14	188	0.9481	0.3431	5.0172	3.8594	-4.6404 to 24.3458	-4.6404	24.3458	increasing	0.8191	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	16/1/12-12/12/16	0.1561	0.29	0.05	0.156	-18	190	-1.2333	0.2175	-0.0037	-2.372	-0.0100 to 0.0029	-0.0100	0.0029	decreasing	0.8769	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Nitrogen..Total..Correction	0	0	59	16/1/12-12/12/16	0.4363	3.1	0.18	0.33	-7	185	-0.4411	0.6591	-0.0012	-0.3783	-0.0161 to 0.0106	-0.0161	0.0106	decreasing	0.558	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Phosphorus..Dissolved.Reactive..Correction	0	2	59	16/1/12-12/12/16	0.0088	0.02	0.004	0.009	32	170	2.3776	0.0174	0.0003	2.7873	0.0000 to 0.0007	0.0000	0.0007	increasing	0.9611	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Phosphorus..Total..Correction	0	0	59	16/1/12-12/12/16	0.0307	0.38	0.007	0.018	14	186	0.9532	0.3405	0.0006	3.2536	-0.0005 to 0.0015	-0.0005	0.0015	increasing	0.8298	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Organic.Nitrogen.Correction	0	0	59	16/1/12-12/12/16	0.2735	2.9953	0.044	0.136	-2	192	-0.0722	0.9425	-0.0033	-2.409	-0.0193 to 0.0162	-0.0193	0.0162	decreasing	0.5299	No Trend	0
Waimatuku Stream at Lorneville Riverton Hwy	E.Coli..CFU..Correction	0	0	60	16/1/12-12/12/16	1479.1667	18000	80	500	-12	198	-0.7817	0.4344	-30.103	-6.0206	-100.3434 to 31.6631	-100.34	31.6631	decreasing	0.8187	No Trend	0
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	16/1/12-12/12/16	3.5395	7.4	1.79	3.35	-49	195	-3.4374	0.0006	-0.1639	-4.8924	-0.2302 to -0.1001	-0.2302	-0.1001	decreasing	0.9996	Trend	-1
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen..Total.Ammoniacal..Correction	0	9	60	16/1/12-12/12/16	0.0191	0.104	0.0005	0.011	-26	182	-1.8531	0.0639	-0.0025	-22.5639	-0.0054 to -0.0014	-0.0054	-0.0014	decreasing	0.9966	Trend	-1
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen..Total..Correction	0	0	60	16/1/12-12/12/16	4.0483	8.2	2.3	3.8	-52	196	-3.6429	0.0003	-0.1978	-5.2063	-0.2853 to -0.1003	-0.2853	-0.1003	decreasing	0.9998	Trend	-1
Waimatuku Stream at Lorneville Riverton Hwy	Phosphorus..Dissolved.Reactive..Correction	0	1	60	16/1/12-12/12/16	0.043	0.097	0.004	0.042	21	197	1.4249	0.1542	0.001	2.3891	-0.0002 to 0.0022	-0.0002	0.0022	increasing	0.9157	No Trend	0
Waimatuku Stream at Lorneville Riverton Hwy	Phosphorus..Total..Correction	0	0	60	16/1/12-12/12/16	0.0711	0.19	0.026	0.0605	3	199	0.1418	0.8873	0.0004	0.6871	-0.0032 to 0.0042	-0.0032	0.0042	increasing	0.538	No Trend	0
Waimatuku Stream at Lorneville Riverton Hwy	Organic.Nitrogen.Correction	0	0	60	16/1/12-12/12/16	0.4905	1.351	0.183	0.395	4	198	0.2132	0.8312	0.0003	0.0735	-0.0323 to 0.0185	-0.0323	0.0185	increasing	0.5232	No Trend	0
Waimea Stream at Mandeville	Clarity..Black.Disc..Field..m.	2	0	57	18/1/12-14/12/16	1.157	2.73	0.13	1.14	-20	176	-1.4322	0.1521	-0.0756	-6.633	-0.1703 to 0.0096	-0.1703	0.0096	decreasing	0.9275	No Trend	0
Waimea Stream at Mandeville	E.Coli..CFU..Correction	1	0	58	18/1/12-14/12/16	1680.6897	52000	20	275	18	182	1.2601	0.2076	30.103	10.9466	-9.9480 to 55.2464	-9.9480	55.2464	increasing	0.8878	No Trend	0
Waimea Stream at Mandeville	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	18/1/12-14/12/16	3.0592	5.4	1.4	2.8	6	188	0.3647	0.7154	0.0334	1.1946	-0.0997 to 0.1323	-0.0997	0.1323	increasing	0.6622	No Trend	0
Waimea Stream at Mandeville	Nitrogen..Total..Correction	0	0	59	18/1/12-14/12/16	3.7453	6.8	1.97	3.6	16	188	1.094	0.274	0.0831	2.3095	-0.0638 to 0.1983	-0.0638	0.1983	increasing	0.8633	No Trend	0

Waimea Stream at Mandeville	Phosphorus..Dissolved.Reactive..Correction	0	0	59	18/1/12-14/12/16	0.0195	0.06	0.0024	0.018	9	184.3333	0.5892	0.5557	0.0003	1.8456	-0.0010 to 0.0020	-0.0010	0.0020	increasing	0.6515	No Trend	0
Waimea Stream at Mandeville	Phosphorus..Total..Correction	0	0	59	18/1/12-14/12/16	0.0514	0.25	0.01	0.04	12	190	0.798	0.4249	0.0014	3.5237	-0.0011 to 0.0062	-0.0011	0.0062	increasing	0.8	No Trend	0
Waimea Stream at Mandeville	Organic.Nitrogen.Correction	0	0	59	18/1/12-14/12/16	0.6706	2.008	0.2903	0.595	11	191	0.7236	0.4693	0.0266	4.4737	-0.0105 to 0.0517	-0.0105	0.0517	increasing	0.7869	No Trend	0
Waituna Creek at Marshall Road	E.Coli..CFU..Correction	0	0	59	10/1/12-12/12/16	1727.1186	42000	40	340	-3	189	-0.1455	0.8843	-2.4847	-0.7308	-40.0802 to 42.6672	-40.080	42.6672	decreasing	0.5958	No Trend	0
Waituna Creek at Marshall Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	59	10/1/12-12/12/16	1.4729	4.6	0.173	1.32	-31	191	-2.1707	0.03	-0.0786	-5.9574	-0.1732 to -0.0122	-0.1732	-0.0122	decreasing	0.982	Trend	-1
Waituna Creek at Marshall Road	Nitrogen..Total.Ammoniacal..Correction	0	5	59	10/1/12-12/12/16	0.0495	0.35	0.0012	0.025	-19	181	-1.3379	0.1809	-0.004	-15.9781	-0.0092 to 0.0003	-0.0092	0.0003	decreasing	0.9331	No Trend	0
Waituna Creek at Marshall Road	Nitrogen..Total..Correction	0	0	59	10/1/12-12/12/16	2.2461	5.7	0.76	2.1	-25	191	-1.7366	0.0825	-0.0962	-4.582	-0.1839 to -0.0132	-0.1839	-0.0132	decreasing	0.9608	Trend	-1
Waituna Creek at Marshall Road	Phosphorus..Dissolved.Reactive..Correction	0	0	59	10/1/12-12/12/16	0.0149	0.028	0.006	0.015	-9	182.3333	-0.5925	0.5535	-0.0001	-0.8282	-0.0010 to 0.0005	-0.0010	0.0005	decreasing	0.6847	No Trend	0
Waituna Creek at Marshall Road	Phosphorus..Total..Correction	0	0	59	10/1/12-12/12/16	0.0599	0.38	0.022	0.043	-18	192	-1.2269	0.2199	-0.0036	-8.4016	-0.0054 to 0.0006	-0.0054	0.0006	decreasing	0.8928	No Trend	0
Waituna Creek at Marshall Road	Organic.Nitrogen.Correction	0	0	59	10/1/12-12/12/16	0.7241	2.61	0.375	0.617	-6	192	-0.3608	0.7182	-0.0141	-2.2793	-0.0428 to 0.0186	-0.0428	0.0186	decreasing	0.6632	No Trend	0
Whitestone River d/s Manapouri-Hillside	Clarity..Black.Disc..Field..m.	1	0	59	19/1/12-15/12/16	4.2556	13	0.12	4.1	-16	192	-1.0825	0.279	-0.3467	-8.4573	-0.7606 to 0.0841	-0.7606	0.0841	decreasing	0.8722	No Trend	0
Whitestone River d/s Manapouri-Hillside	E.Coli..CFU..Correction	1	8	59	19/1/12-15/12/16	269.0678	7000	10	30	16	182	1.1119	0.2662	0	0	-4.9836 to 25.0859	-4.9836	25.0859	decreasing	0.5	No Trend	0
Whitestone River d/s Manapouri-Hillside	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	19/1/12-15/12/16	0.5611	1.62	0.184	0.485	-17	199	-1.1342	0.2567	-0.0201	-4.1379	-0.0587 to 0.0050	-0.0587	0.0050	decreasing	0.8716	No Trend	0
Whitestone River d/s Manapouri-Hillside	Nitrogen..Total..Correction	0	0	60	19/1/12-15/12/16	0.7278	2.3	0.29	0.65	-7	197	-0.4275	0.669	-0.005	-0.7645	-0.0318 to 0.0201	-0.0318	0.0201	decreasing	0.6442	No Trend	0
Whitestone River d/s Manapouri-Hillside	Organic.Nitrogen.Correction	0	0	60	19/1/12-15/12/16	0.1608	1.683	0.026	0.1255	35	199	2.4102	0.0159	0.0148	11.82	0.0045 to 0.0216	0.0045	0.0216	increasing	0.9898	Trend	1
Winton Stream at Lochiel	Clarity..Black.Disc..Field..m.	2	0	58	17/1/12-13/12/16	0.7986	1.5	0.06	0.81	-28	182	-2.0014	0.0454	-0.0828	-10.2202	-0.1555 to -0.0191	-0.1555	-0.0191	decreasing	0.981	Trend	-1
Winton Stream at Lochiel	E.Coli..CFU..Correction	0	0	60	17/1/12-13/12/16	2288.8333	29000	180	1100	-14	196	-0.9286	0.3531	-70.8965	-6.4451	-265.241 1 to 55.9232	-265.24	55.9232	decreasing	0.8364	No Trend	0
Winton Stream at Lochiel	Nitrogen..Nitrate.Nitrite..Correction	0	0	60	17/1/12-13/12/16	1.7477	7.3	0.44	1.505	-41	199	-2.8355	0.0046	-0.1511	-10.0391	-0.2335 to -0.0580	-0.2335	-0.0580	decreasing	0.9973	Trend	-1
Winton Stream at Lochiel	Nitrogen..Total.Ammoniacal..Correction	0	3	60	17/1/12-13/12/16	0.1051	0.49	0.0016	0.098	-16	198	-1.066	0.2864	-0.0077	-7.8457	-0.0149 to 0.0023	-0.0149	0.0023	decreasing	0.8996	No Trend	0
Winton Stream at Lochiel	Nitrogen..Total..Correction	0	0	60	17/1/12-13/12/16	2.5657	7.8	1.21	2.35	-26	200	-1.7678	0.0771	-0.1344	-5.7014	-0.2435 to -0.0364	-0.2435	-0.0364	decreasing	0.9657	Trend	-1
Winton Stream at Lochiel	Phosphorus..Dissolved.Reactive..Correction	0	0	60	17/1/12-13/12/16	0.0792	0.26	0.018	0.057	-22	200	-1.4849	0.1376	-0.0033	-5.868	-0.0061 to 0.0010	-0.0061	0.0010	decreasing	0.9255	No Trend	0
Winton Stream at Lochiel	Phosphorus..Total..Correction	0	0	60	17/1/12-13/12/16	0.1306	0.28	0.036	0.1195	-4	200	-0.2121	0.832	-0.0021	-1.7349	-0.0121 to 0.0088	-0.0121	0.0088	decreasing	0.5894	No Trend	0
Winton Stream at Lochiel	Organic.Nitrogen.Correction	0	0	60	17/1/12-13/12/16	0.7131	1.404	0.374	0.657	20	200	1.3435	0.1791	0.0287	4.3639	-0.0080 to 0.0474	-0.0080	0.0474	increasing	0.9121	No Trend	0

Trend 2007-2016 - ES data - Export TimeTrends

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
Aparima River at Dunrobin	E.Coli..CFU..Correction	1	2	119	18/1/07-12/12/16	224.0252	8000	8	63	8	1443.3333	0.1843	0.8538	0.25 05	0.39 76	-1.0008 to 3.0992	-1.0008	3.0992	increasing	0.785	No Trend	0
Aparima River at Dunrobin	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	18/1/07-12/12/16	0.0418	0.343	0.002	0.021	8	1453.3333	0.1836	0.8543	0	0	-0.0005 to 0.0007	-0.0005	0.0007	increasing	0.5	No Trend	0
Aparima River at Dunrobin	Nitrogen..Total.Ammoniacal..Correction	1	15	119	18/1/07-12/12/16	0.0088	0.015	0.0003	0.01	-261	1085	-7.8933	0	0	0	-0.0006 to 0.0000	-0.0006	0.0000	increasing	0.5	No Trend	0
Aparima River at Dunrobin	Nitrogen..Total..Correction	1	3	119	18/1/07-12/12/16	0.1464	1.24	0.0349	0.11	14	1370	0.3512	0.7254	0	0	0.0000 to 0.0027	0.0000	0.0027	increasing	0.5	No Trend	0
Aparima River at Dunrobin	Phosphorus..Dissolved.Reactive..Correction	2	8	118	18/1/07-12/12/16	0.0074	0.057	0.0005	0.004	-328	1235.3333	-9.3037	0	-0.0004	-9.3766	-0.0004 to -0.0003	-0.0004	-0.0003	decreasing	1	Trend	-1
Aparima River at Dunrobin	Phosphorus..Total..Correction	1	6	119	18/1/07-12/12/16	0.0126	0.43	0.0007	0.006	-203	1397	-5.4045	0	-0.0005	-8.2823	-0.0007 to -0.0003	-0.0007	-0.0003	decreasing	1	Trend	-1
Aparima River at Dunrobin	Organic.Nitrogen.Correction	1	3	119	18/1/07-12/12/16	0.0969	1.2291	0.002	0.086	27	1441	0.6849	0.4934	0.0014	1.5923	-0.0007 to 0.0037	-0.0007	0.0037	increasing	0.7745	No Trend	0
Aparima River at Thornbury	Clarity..Black.Disc..Field..m.	7	0	113	15/1/07-12/12/16	2.0327	5.72	0.1	2.1	-3	1272.3333	-0.0561	0.9553	-0.0039	-0.1855	-0.0649 to 0.0367	-0.0649	0.0367	decreasing	0.5487	No Trend	0
Aparima River at Thornbury	E.Coli..CFU..Correction	0	0	120	15/1/07-12/12/16	1856.425	68000	40	210	-87	1492.3333	-2.2262	0.026	-12.4829	-5.9442	-24.9658 to -2.8950	-24.965	-2.8950	decreasing	0.9865	Trend	-1
Aparima River at Thornbury	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	15/1/07-12/12/16	0.8157	2.4	0.18	0.68	-107	1495	-2.7415	0.0061	-0.0201	-2.9603	-0.0301 to -0.0078	-0.0301	-0.0078	decreasing	0.9976	Trend	-1
Aparima River at Thornbury	Nitrogen..Total..Correction	1	0	119	15/1/07-12/12/16	1.1053	3.4	0.34	0.96	-34	1454	-0.8654	0.3868	-0.0083	-0.8683	-0.0249 to 0.0050	-0.0249	0.0050	decreasing	0.8142	No Trend	0
Aparima River at Thornbury	Phosphorus..Total..Correction	1	4	119	15/1/07-12/12/16	0.0281	0.28	0.004	0.016	-59	1451	-1.5226	0.1279	-0.0005	-3.127	-0.0011 to 0.0000	-0.0011	0.0000	decreasing	0.9509	No Trend	0
Aparima River at Thornbury	Organic.Nitrogen.Correction	3	0	117	15/1/07-12/12/16	0.2823	1.505	0.039	0.215	43	1395	1.1245	0.2608	0.0033	1.5458	-0.0011 to 0.0085	-0.0011	0.0085	increasing	0.8757	No Trend	0
Bog Burn d/s Hundred Line Road	Clarity..Black.Disc..Field..m.	5	2	114	17/1/07-13/12/16	1.0223	2.5	0.17	1.065	-79	1288.3333	-2.1731	0.0298	-0.0341	-3.2052	-0.0536 to -0.0100	-0.0536	-0.0100	decreasing	0.9892	Trend	-1
Bog Burn d/s Hundred Line Road	E.Coli..CFU..Correction	1	1	118	17/1/07-13/12/16	1927.3136	21000	40	800	42	1424	1.0865	0.2773	33.2348	4.1543	-8.4677 to 66.7899	-8.4677	66.7899	increasing	0.9018	No Trend	0
Bog Burn d/s Hundred Line Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	17/1/07-13/12/16	1.2804	6.6	0.081	1.01	33	1429	0.8465	0.3973	0.0091	0.9011	-0.0100 to 0.0267	-0.0100	0.0267	increasing	0.822	No Trend	0
Bog Burn d/s Hundred Line Road	Nitrogen..Total..Correction	1	0	118	17/1/07-13/12/16	1.8428	7.8	0.26	1.43	15	1427	0.3706	0.7109	0.0041	0.2901	-0.0150 to 0.0302	-0.0150	0.0302	increasing	0.6506	No Trend	0
Bog Burn d/s Hundred Line Road	Phosphorus..Dissolved.Reactive..Correction	2	0	117	14/2/07-13/12/16	0.0276	0.21	0.005	0.025	170	1379.3333	4.5504	0	0.0011	4.5764	0.0007 to 0.0016	0.0007	0.0016	increasing	1	Trend	1
Bog Burn d/s Hundred Line Road	Phosphorus..Total..Correction	2	1	117	14/2/07-13/12/16	0.0631	0.49	0.01	0.048	110	1392	2.9215	0.0035	0.0013	2.7255	0.0005 to 0.0022	0.0005	0.0022	increasing	0.9958	Trend	1
Bog Burn d/s Hundred Line Road	Organic.Nitrogen.Correction	2	0	117	17/1/07-13/12/16	0.5468	5.461	0.093	0.405	25	1399	0.6417	0.5211	0.005	1.227	-0.0039 to 0.0129	-0.0039	0.0129	increasing	0.7446	No Trend	0
Carran Creek at Waituna Lagoon Road	E.Coli..CFU..Correction	0	4	119	15/1/07-12/12/16	1718.1176	30000	10	230	-40	1460	-1.0207	0.3074	-9.9863	-4.3419	-21.0611 to 9.9931	-21.061	9.9931	decreasing	0.7941	No Trend	0
Carran Creek at Waituna Lagoon Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	119	15/1/07-12/12/16	0.5096	2	0.004	0.35	-34	1459.3333	-0.8638	0.3877	-0.004	-1.1359	-0.0143 to 0.0030	-0.0143	0.0030	decreasing	0.8284	No Trend	0
Carran Creek at Waituna Lagoon Road	Nitrogen..Total.Ammoniacal..Correction	0	7	119	15/1/07-12/12/16	0.0794	0.5	0.0056	0.062	-131	1459	-3.4034	0.007	-0.0043	-6.8813	-0.0067 to -0.0024	-0.0067	-0.0024	decreasing	0.9996	Trend	-1
Carran Creek at Waituna Lagoon Road	Nitrogen..Total..Correction	0	0	119	15/1/07-12/12/16	1.3902	4.2	0.53	1.15	-18	1460	-0.4449	0.564	-0.0043	-0.3719	-0.0257 to 0.0183	-0.0257	0.0183	decreasing	0.654	No Trend	0
Carran Creek at Waituna Lagoon Road	Phosphorus..Dissolved.Reactive..Correction	0	1	119	15/1/07-12/12/16	0.0453	0.17	0.008	0.043	161	1453	4.1975	0	0.002	4.6572	0.0010 to 0.0029	0.0010	0.0029	increasing	1	Trend	1
Carran Creek at Waituna Lagoon Road	Phosphorus..Total..Correction	0	0	119	15/1/07-12/12/16	0.148	0.7	0.056	0.118	27	1456.3333	0.6813	0.4957	0.0005	0.4231	-0.0014 to 0.0026	-0.0014	0.0026	increasing	0.7522	No Trend	0
Carran Creek at Waituna Lagoon Road	Organic.Nitrogen.Correction	1	0	118	15/1/07-12/12/16	0.8091	2.68	0.3	0.714	14	1439.3333	0.3427	0.7319	0.0045	0.6324	-0.0085 to 0.0154	-0.0085	0.0154	increasing	0.6394	No Trend	0
Cascade Stream at Pourakino Valley Road	Clarity..Black.Disc..Field..m.	6	1	114	15/1/07-12/12/16	1.7647	3.6	0.19	1.72	-66	1305.6667	-1.7989	0.072	-0.0438	-2.5473	-0.1003 to 0.0000	-0.1003	0.0000	decreasing	0.9583	No Trend	0
Cascade Stream at Pourakino Valley Road	E.Coli..CFU..Correction	1	2	119	15/1/07-12/12/16	207.5042	2900	10	90	99	1450.3333	2.5733	0.0101	5.0172	5.5746	1.9992 to 9.9542	1.9992	9.9542	increasing	0.9981	Trend	1
Cascade Stream at Pourakino Valley Road	Nitrogen..Nitrate.Nitrite..Correction	0	4	120	15/1/07-12/12/16	0.0246	0.2	0.001	0.016	-28	1458	-0.7071	0.4795	-0.0001	-0.7821	-0.0008 to 0.0001	-0.0008	0.0001	decreasing	0.799	No Trend	0
Cascade Stream at Pourakino Valley Road	Nitrogen..Total..Correction	0	5	120	15/1/07-12/12/16	0.1868	0.56	0.08	0.16	81	1471	2.0859	0.037	0.0033	2.0827	0.0000 to 0.0071	0.0000	0.0071	increasing	0.9808	No Trend	0
Cascade Stream at Pourakino Valley Road	Organic.Nitrogen.Correction	0	6	120	15/1/07-12/12/16	0.1639	0.554	0.058	0.1398	91	1483	2.3371	0.0194	0.0004	2.851	0.0013 to 0.0076	0.0013	0.0076	increasing	0.9916	Trend	1
Cromel Stream at Selbie Road	Clarity..Black.Disc..Field..m.	3	1	116	17/1/07-13/12/16	4.8997	14.3	0.43	4.71	-106	1364	-2.843	0.045	-0.2058	-4.3694	-0.3271 to -0.0680	-0.3271	-0.0680	decreasing	0.9979	Trend	-1
Cromel Stream at Selbie Road	E.Coli..CFU..Correction	1	24	118	17/1/07-13/12/16	62.5763	800	4	30	40	1309.6667	1.0777	0.2812	1.0007	3.3356	0.0000 to 2.5927	0.0000	2.5927	increasing	0.9592	No Trend	0
Cromel Stream at Selbie Road	Nitrogen..Nitrate.Nitrite..Correction	1	16	118	17/1/07-13/12/16	0.0357	0.2	0.0009	0.009	10	1353.3333	0.2446	0.8067	-0.0003	-2.7816	-0.0007 to 0.0001	-0.0007	0.0001	decreasing	0.8152	No Trend	0

Dunsdale Stream at Dunsdale Reserve	Clarity..Black.Disc..Field..m.	3	1	117	16/1/07-15/11/16	1.7185	4.95	0.1	1.5	-78	1390.3333	-2.0651	0.0389	-0.0648	-4.3217	-0.1161 to -0.0236	-0.1161	-0.0236	decreasing	0.9809	Trend	-1
Dunsdale Stream at Dunsdale Reserve	E.Coli..CFU..Correction	3	3	117	16/1/07-13/12/16	192.547	2600	3	100	63	1387	1.6648	0.096	3.5914	3.5914	0.0000 to 9.8508	0.0000	9.8508	increasing	0.9211	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Nitrate.Nitrite..Correction	1	1	119	16/1/07-13/12/16	0.1835	0.497	0.004	0.188	-41	1461	-1.0465	0.2953	-0.0029	-1.5272	-0.0084 to 0.0010	-0.0084	0.0010	decreasing	0.8752	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Total..Correction	1	5	119	16/1/07-13/12/16	0.3373	1.56	0.0361	0.32	27	1455	0.6816	0.4955	0.004	1.2543	-0.0050 to 0.0120	-0.0050	0.0120	increasing	0.7685	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Dissolved.Reactive..Correction	1	6	119	16/1/07-13/12/16	0.0136	0.05	0.005	0.012	-66	1423.6667	-1.7227	0.0849	-0.0002	-2.0805	-0.0004 to 0.0000	-0.0004	0.0000	decreasing	0.9879	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Total..Correction	1	1	119	16/1/07-13/12/16	0.0246	0.14	0.005	0.019	-46	1449.3333	-1.182	0.2372	-0.0005	-2.6364	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9391	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Organic.Nitrogen.Correction	5	5	115	16/1/07-13/12/16	0.1567	1.3493	0.021	0.112	63	1313	1.711	0.0871	0.004	3.5837	-0.0007 to 0.0077	-0.0007	0.0077	increasing	0.9211	No Trend	0
Irthing Stream at Ellis Road	Clarity..Black.Disc..Field..m.	2	0	118	17/1/07-13/12/16	3.0931	7.2	0.12	2.975	7	1429	0.1587	0.8739	0.0084	0.2809	-0.0903 to 0.1089	-0.0903	0.1089	increasing	0.6002	No Trend	0
Irthing Stream at Ellis Road	E.Coli..CFU..Correction	1	3	119	17/1/07-13/12/16	449.521	14000	10	100	26	1451.3333	0.6562	0.5117	1.0128	1.0128	-2.4966 to 5.0080	-2.4966	5.0080	increasing	0.7982	No Trend	0
Irthing Stream at Ellis Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	17/1/07-13/12/16	1.4465	3.3	0.056	1.4	68	1464	1.7511	0.0799	0.0376	2.6822	0.0014 to 0.0749	0.0014	0.0749	increasing	0.96	Trend	1
Irthing Stream at Ellis Road	Nitrogen..Total..Correction	1	0	119	17/1/07-13/12/16	1.6399	3.5	0.32	1.56	83	1459	2.1468	0.0318	0.0467	2.9935	0.0071 to 0.0831	0.0071	0.0831	increasing	0.9841	Trend	1
Irthing Stream at Ellis Road	Organic.Nitrogen.Correction	5	0	115	17/1/07-13/12/16	0.1971	1.539	0.046	0.17	75	1329	2.0299	0.0424	0.005	2.9526	0.0003 to 0.0100	0.0003	0.0100	increasing	0.977	Trend	1
Longridge Stream at Sandstone	Clarity..Black.Disc..Field..m.	8	0	110	18/1/07-14/12/16	1.1433	2.1	0.08	1.16	-80	1194	-2.2863	0.0222	-0.0459	-3.9556	-0.0787 to -0.0100	-0.0787	-0.0100	decreasing	0.9893	Trend	-1
Longridge Stream at Sandstone	E.Coli..CFU..Correction	0	0	118	18/1/07-14/12/16	3972.9322	130000	15	295	30	1416.6667	0.7705	0.441	3.3372	1.1312	-4.9870 to 14.2627	-4.9870	14.2627	increasing	0.7255	No Trend	0
Longridge Stream at Sandstone	Nitrogen..Nitrate.Nitrite..Correction	0	0	118	18/1/07-14/12/16	3.5023	9.34	1.3	3.2	104	1417.3333	2.7359	0.0062	0.0668	2.0873	0.0331 to 0.1005	0.0331	0.1005	increasing	0.9957	Trend	1
Longridge Stream at Sandstone	Nitrogen..Total..Correction	0	0	118	18/1/07-14/12/16	4.2466	11	1.8	3.9	124	1415.3333	3.2695	0.0011	0.0995	2.5501	0.0497 to 0.1246	0.0497	0.1246	increasing	0.9996	Trend	1
Longridge Stream at Sandstone	Phosphorus..Dissolved.Reactive..Correction	2	1	116	18/1/07-14/12/16	0.0449	0.24	0.008	0.0375	10	1360.6667	0.244	0.8072	0	0	-0.0007 to 0.0007	-0.0007	0.0007	increasing	0.5	No Trend	0
Longridge Stream at Sandstone	Phosphorus..Total..Correction	2	0	116	18/1/07-14/12/16	0.0853	0.89	0.02	0.0615	-54	1362.6667	-1.4358	0.1511	-0.001	-1.6316	-0.0026 to 0.0000	-0.0026	0.0000	decreasing	0.9272	No Trend	0
Longridge Stream at Sandstone	Organic.Nitrogen.Correction	2	0	116	18/1/07-14/12/16	0.717	3.595	0.081	0.5865	-15	1368.3333	-0.3785	0.7051	-0.0004	-0.0685	-0.0126 to 0.0060	-0.0126	0.0060	decreasing	0.6214	No Trend	0
Makarewa River at Lora Gorge Road	Clarity..Black.Disc..Field..m.	6	0	114	16/1/07-13/12/16	0.9096	3.3	0.09	0.86	-45	1308.3333	-1.2164	0.2238	-0.0213	-2.4735	-0.0461 to 0.0100	-0.0461	0.0100	decreasing	0.8884	No Trend	0
Makarewa River at Lora Gorge Road	E.Coli..CFU..Correction	3	0	117	16/1/07-13/12/16	1157.094	13000	40	380	-8	1382.6667	-0.1883	0.8507	0	0	-13.5116 to 16.0503	-13.511	16.0503	decreasing	0.5	No Trend	0
Makarewa River at Lora Gorge Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-13/12/16	0.6386	1.81	0.028	0.58	46	1460	1.1777	0.2389	0.009	1.5511	-0.0049 to 0.0225	-0.0049	0.0225	increasing	0.8744	No Trend	0
Makarewa River at Lora Gorge Road	Nitrogen..Total..Correction	1	0	119	16/1/07-13/12/16	0.9708	2.8	0.13	0.96	46	1460	1.1777	0.2389	0.0113	1.1731	-0.0033 to 0.0330	-0.0033	0.0330	increasing	0.8806	No Trend	0
Makarewa River at Lora Gorge Road	Phosphorus..Dissolved.Reactive..Correction	2	2	118	16/1/07-13/12/16	0.0153	0.069	0.004	0.014	19	1385.6667	0.4836	0.6287	0	0	-0.0002 to 0.0002	-0.0002	0.0002	increasing	0.5	No Trend	0
Makarewa River at Lora Gorge Road	Phosphorus..Total..Correction	2	2	118	16/1/07-13/12/16	0.0418	0.199	0.01	0.032	-22	1425.3333	-0.5562	0.578	-0.0005	-1.5604	-0.0012 to 0.0003	-0.0012	0.0003	decreasing	0.833	No Trend	0
Makarewa River at Lora Gorge Road	Organic.Nitrogen.Correction	4	0	116	16/1/07-13/12/16	0.3301	1.464	0.07	0.266	13	1365	0.3248	0.7453	0.0012	0.4373	-0.0057 to 0.0069	-0.0057	0.0069	increasing	0.6024	No Trend	0
Makarewa River at Wallacetown	E.Coli..CFU..Correction	2	0	118	16/1/07-13/12/16	2642.6695	49000	30	355	1	1428.3333	0	1	0	0	-17.6212 to 15.0034	-17.621	15.0034	increasing	0.5	No Trend	0
Makarewa River at Wallacetown	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-13/12/16	1.1606	4.18	0.16	1.1	-92	1464	-2.3783	0.0174	-0.0224	-2.0329	-0.0458 to -0.0099	-0.0458	-0.0099	decreasing	0.9928	Trend	-1
Makarewa River at Wallacetown	Nitrogen..Total.Ammoniacal..Correction	1	7	119	16/1/07-13/12/16	0.0863	1.7	0.01	0.058	-108	1462	-2.7984	0.0051	-0.0032	-5.4417	-0.0058 to -0.0017	-0.0058	-0.0017	decreasing	0.9971	Trend	-1
Makarewa River at Wallacetown	Nitrogen..Total..Correction	1	0	119	16/1/07-13/12/16	1.815	6.7	0.51	1.63	-58	1453.3333	-1.4952	0.1349	-0.0251	-1.539	-0.0515 to 0.0000	-0.0515	0.0000	decreasing	0.9542	No Trend	0
Makarewa River at Wallacetown	Phosphorus..Dissolved.Reactive..Correction	1	0	119	16/1/07-13/12/16	0.0221	0.23	0.005	0.018	44	1437.3333	1.1342	0.2567	0.0003	1.3937	0.0000 to 0.0007	0.0000	0.0007	increasing	0.8514	No Trend	0
Makarewa River at Wallacetown	Phosphorus..Total..Correction	1	0	119	16/1/07-13/12/16	0.0771	0.44	0.017	0.049	-31	1463	-0.7843	0.4328	-0.0007	-1.4547	-0.0020 to 0.0010	-0.0020	0.0010	decreasing	0.7813	No Trend	0
Makarewa River at Wallacetown	Organic.Nitrogen.Correction	3	0	117	16/1/07-13/12/16	0.5831	2.33	0.159	0.448	4	1400	0.0802	0.9361	0.001	0.224	-0.0103 to 0.0112	-0.0103	0.0112	increasing	0.5461	No Trend	0
Mararoa River at South Mavora Lake	Clarity..Black.Disc..Field..m.	5	0	114	18/1/07-15/12/16	5.835	9.9	1.5	5.83	-111	1304.3333	-3.0458	0.023	-0.2107	-3.6144	-0.2929 to -0.0992	-0.2929	-0.0992	decreasing	0.999	Trend	-1
Mararoa River at South Mavora Lake	E.Coli..CFU..Correction	2	104	117	18/1/07-15/12/16	90.9829	120	1	100	34	555.6667	1.3999	0.1615	0	0	- to -	- to -	- to -	decreasing	0.5	#VALUE!	#VALUE!
Mararoa River at The Key	Clarity..Black.Disc..Field..m.	2	0	117	18/1/07-15/12/16	3.355	8.5	0.22	3.4	-17	1401	-0.4275	0.669	-0.0426	-1.2543	-0.1395 to 0.0769	-0.1395	0.0769	decreasing	0.6687	No Trend	0

Mararoa River at The Key	E.Coli..CFU..Correction	2	11	117	18/1/07-15/12/16	232.547	4000	10	44	15	1366.3333	0.3787	0.7049	0.8366	1.9013	0.0000 to 3.6958	0.0000	3.6958	increasing	0.8973	No Trend	0
Mararoa River at The Key	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	18/1/07-15/12/16	0.1447	0.563	0.009	0.1175	0	1428	0	1	0	0	-0.0020 to 0.0029	-0.0020	0.0029	increasing	0.5	No Trend	0
Mararoa River at The Key	Nitrogen..Total..Correction	1	4	118	18/1/07-15/12/16	0.2645	1.75	0.1	0.22	58	1410.6667	1.5176	0.1291	0.0025	1.1403	-0.0013 to 0.0086	-0.0013	0.0086	increasing	0.7982	No Trend	0
Mararoa River at The Key	Organic.Nitrogen.Correction	3	4	116	18/1/07-15/12/16	0.1184	1.515	0.013	0.075	114	1342	3.0846	0.002	0.003	4.0137	0.0017 to 0.0056	0.0017	0.0056	increasing	0.9977	Trend	1
Mararoa River at Weir Road	E.Coli..CFU..Correction	2	12	118	18/1/07-15/12/16	203.9915	3600	3	46.5	-14	1396.3333	-0.3479	0.7279	0	0	-2.4563 to 3.1592	-2.4563	3.1592	increasing	0.5	No Trend	0
Mararoa River at Weir Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	18/1/07-15/12/16	0.3768	0.72	0.129	0.36	38	1455.3333	0.9699	0.3321	0.0038	1.0427	-0.0025 to 0.0100	-0.0025	0.0100	increasing	0.8838	No Trend	0
Mararoa River at Weir Road	Nitrogen..Total..Correction	1	0	119	18/1/07-15/12/16	0.5272	1.9	0.19	0.48	89	1452.3333	2.3091	0.0209	0.01	2.0805	0.0029 to 0.0167	0.0029	0.0167	increasing	0.9888	Trend	1
Mararoa River at Weir Road	Organic.Nitrogen.Correction	4	0	116	18/1/07-15/12/16	0.1491	1.583	0.005	0.0927	93	1357.6667	2.4968	0.0125	0.004	4.3132	0.0009 to 0.0077	0.0009	0.0077	increasing	0.9941	Trend	1
Mataura River 200m d/s Mataura Bridge	Clarity..Black.Disc..Field..m.	6	1	113	16/1/07-14/12/16	1.2595	3.5	0.07	1.2	-4	1279.3333	-0.0839	0.9332	-0.002	-0.1664	-0.0527 to 0.0474	-0.0527	0.0474	decreasing	0.5354	No Trend	0
Mataura River 200m d/s Mataura Bridge	E.Coli..CFU..Correction	2	1	117	16/1/07-14/12/16	3074.4444	60000	90	1300	-1	1395	0	1	1.8763	0.1443	-34.5985 to 60.1415	-34.598	60.1415	increasing	0.5389	No Trend	0
Mataura River 200m d/s Mataura Bridge	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	16/1/07-14/12/16	0.9039	2.4	0.28	0.815	-29	1423	-0.7423	0.4579	-0.005	-0.611	-0.0200 to 0.0037	-0.0200	0.0037	decreasing	0.7457	No Trend	0
Mataura River 200m d/s Mataura Bridge	Nitrogen..Total.Ammoniacal..Correction	2	12	117	16/1/07-14/12/16	0.06	0.3	0.0043	0.039	-91	1368.3333	-2.433	0.015	-0.004	-10.2634	-0.0069 to -0.0023	-0.0069	-0.0023	decreasing	0.9994	Trend	-1
Mataura River 200m d/s Mataura Bridge	Nitrogen..Total..Correction	1	0	118	16/1/07-14/12/16	1.2458	3.5	0.069	1.19	-13	1427	-0.3177	0.7507	-0.0018	-0.154	-0.0225 to 0.0143	-0.0225	0.0143	decreasing	0.6111	No Trend	0
Mataura River 200m d/s Mataura Bridge	Phosphorus..Dissolved.Reactive..Correction	3	6	116	16/1/07-14/12/16	0.0169	0.06	0.001	0.013	-126	1336.6667	-3.419	0.006	-0.0008	-6.148	-0.0011 to -0.0004	-0.0011	-0.0004	decreasing	1	Trend	-1
Mataura River 200m d/s Mataura Bridge	Phosphorus..Total..Correction	3	0	116	16/1/07-14/12/16	0.0519	1.2	0.008	0.0285	-131	1358.3333	-3.5273	0.004	-0.002	-7.0288	-0.0030 to -0.0014	-0.0030	-0.0014	decreasing	0.9997	Trend	-1
Mataura River 200m d/s Mataura Bridge	Organic.Nitrogen.Correction	6	0	113	16/1/07-14/12/16	0.2989	2.522	0.021	0.231	14	1271.3333	0.3646	0.7154	0.0007	0.3244	-0.0033 to 0.0071	-0.0033	0.0071	increasing	0.628	No Trend	0
Mataura River at Gore	Clarity..Black.Disc..Field..m.	6	3	114	16/1/07-14/12/16	1.4993	4.5	0.06	1.26	-20	1297.3333	-0.5275	0.5978	-0.025	-1.9837	-0.0637 to 0.0335	-0.0637	0.0335	decreasing	0.7562	No Trend	0
Mataura River at Gore	E.Coli..CFU..Correction	3	0	117	16/1/07-14/12/16	1139.2051	17000	30	360	41	1397	1.0702	0.2845	9.9614	2.767	-4.9945 to 30.1030	-4.9945	30.1030	increasing	0.8577	No Trend	0
Mataura River at Gore	Nitrogen..Nitrate.Nitrite..Correction	2	0	118	16/1/07-14/12/16	0.8734	2.29	0.3	0.86	-19	1424.3333	-0.4769	0.6334	-0.0033	-0.3877	-0.0189 to 0.0083	-0.0189	0.0083	decreasing	0.6905	No Trend	0
Mataura River at Gore	Nitrogen..Total..Correction	2	0	118	16/1/07-14/12/16	1.0958	3.4	0.44	1.005	54	1426	1.4035	0.1605	0.0094	0.9362	-0.0013 to 0.0263	-0.0013	0.0263	increasing	0.922	No Trend	0
Mataura River at Gore	Phosphorus..Dissolved.Reactive..Correction	3	17	117	16/1/07-14/12/16	0.0149	0.05	0.001	0.009	-33	1332	-0.8768	0.3806	-0.0002	-2.2189	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.8716	No Trend	0
Mataura River at Gore	Phosphorus..Total..Correction	3	1	117	16/1/07-14/12/16	0.0402	1.2	0.003	0.018	3	1400.3333	0.0534	0.9574	0	0	-0.0005 to 0.0006	-0.0005	0.0006	decreasing	0.5	No Trend	0
Mataura River at Gore	Organic.Nitrogen.Correction	9	0	111	16/1/07-14/12/16	0.2276	2.229	0.025	0.175	50	1212.6667	1.4071	0.1594	0.005	2.8461	-0.0003 to 0.0113	-0.0003	0.0113	increasing	0.9321	No Trend	0
Mataura River at Mataura Island Bridge	E.Coli..CFU..Correction	2	1	118	16/1/07-14/12/16	1062.9576	15000	17	305	17	1424.3333	0.4239	0.6716	3.2995	1.0818	-13.1151 to 19.9335	-13.115	19.9335	increasing	0.6307	No Trend	0
Mataura River at Parawa	E.Coli..CFU..Correction	1	2	117	17/1/07-14/12/16	359.5214	7000	10	120	88	1390	2.3335	0.0196	7.0048	5.8373	2.9139 to 12.4989	2.9139	12.4989	increasing	0.986	Trend	1
Mimihau Stream Tributary at Venlaw Forest	E.Coli..CFU..Correction	3	28	114	16/1/07-14/12/16	74.8246	1900	2	40	88	1157.6667	2.557	0.0106	0.536	1.3399	0.0000 to 2.0052	0.0000	2.0052	increasing	0.8313	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Nitrate.Nitrite..Correction	2	0	115	16/1/07-14/12/16	0.2549	0.88	0.057	0.21	-322	1339.3333	-8.712	0	-0.0329	-15.6601	-0.0387 to -0.0272	-0.0387	-0.0272	decreasing	1	Trend	-1
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Total..Correction	2	0	115	16/1/07-14/12/16	0.3947	1.7	0.18	0.36	-261	1330.3333	-7.1284	0	-0.0326	-9.0464	-0.0383 to -0.0267	-0.0383	-0.0267	decreasing	1	Trend	-1
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Dissolved.Reactive..Correction	4	2	113	16/1/07-14/12/16	0.0118	0.05	0.005	0.011	23	1249.6667	0.6223	0.5337	0	0	-0.0002 to 0.0003	-0.0002	0.0003	decreasing	0.5	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Total..Correction	4	1	113	16/1/07-14/12/16	0.0217	0.23	0.01	0.016	-59	1241.6667	-1.646	0.0998	-0.0002	-1.4065	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.9592	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Organic.Nitrogen.Correction	4	0	113	16/1/07-14/12/16	0.1344	1.498	0.008	0.1029	80	1283.3333	2.2052	0.0274	0.003	2.8811	0.0004 to 0.0067	0.0004	0.0067	increasing	0.9872	Trend	1
Mimihau Stream at Wyndham	Clarity..Black.Disc..Field..m.	7	0	113	16/1/07-14/12/16	0.7468	2	0.15	0.7	-33	1275.6667	-0.8959	0.3703	-0.008	-1.1411	-0.0231 to 0.0050	-0.0231	0.0050	decreasing	0.8149	No Trend	0
Mimihau Stream at Wyndham	E.Coli..CFU..Correction	2	1	118	16/1/07-14/12/16	1189.4068	16000	10	385	-35	1426.3333	-0.9003	0.368	-9.9253	-2.578	-20.8381 to 4.4379	-20.838	4.4379	decreasing	0.8026	No Trend	0
Mimihau Stream at Wyndham	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-14/12/16	0.881	1.8	0.21	0.85	-2	1458	-0.0262	0.9791	0	0	-0.0114 to 0.0128	-0.0114	0.0128	decreasing	0.5	No Trend	0
Mimihau Stream at Wyndham	Nitrogen..Total..Correction	1	0	119	16/1/07-14/12/16	1.1785	2.3	0.28	1.17	1	1459	0	1	0	0	-0.0145 to 0.0133	-0.0145	0.0133	decreasing	0.5	No Trend	0
Mimihau Stream at Wyndham	Phosphorus..Dissolved.Reactive..Correction	1	3	119	16/1/07-14/12/16	0.0142	0.05	0.0042	0.013	-45	1406.3333	-1.1733	0.2407	-0.002	-1.2818	-0.0004 to 0.0000	-0.0004	0.0000	decreasing	0.9838	No Trend	0

Mimihau Stream at Wyndham	Phosphorus..Total..Correction	1	1	119	16/1/07-14/12/16	0.0484	0.21	0.01	0.037	-89	1461	-2.3023	0.0213	-0.001	-2.712	-0.0020 to -0.0003	-0.0020	-0.0003	decreasing	0.9931	Trend	-1
Mimihau Stream at Wyndham	Organic.Nitrogen.Correction	2	0	118	16/1/07-14/12/16	0.2876	1.046	0.001	0.2429	28	1432	0.7135	0.4755	0.0026	1.0722	-0.0032 to 0.0080	-0.0032	0.0080	increasing	0.7519	No Trend	0
Moffat Creek at Moffat Road	Clarity..Black.Disc..Field..m.	10	0	109	15/1/07-12/12/16	0.4935	1.04	0.02	0.5	-105	1163	-3.0496	0.0023	-0.0207	-4.1341	-0.0301 to -0.0100	-0.0301	-0.0100	decreasing	0.9989	Trend	-1
Moffat Creek at Moffat Road	E.Coli..CFU..Correction	1	1	118	15/1/07-12/12/16	1250.178	19000	10	220	91	1424.3333	2.3847	0.0171	16.6174	7.5534	3.1539 to 35.4772	3.1539	35.4772	increasing	0.9853	Trend	1
Moffat Creek at Moffat Road	Nitrogen..Nitrate.Nitrite..Correction	1	2	118	15/1/07-12/12/16	0.4512	2.9	0.004	0.2115	-16	1429.3333	-0.3968	0.6915	-0.0028	-1.3047	-0.0100 to 0.0032	-0.0100	0.0032	decreasing	0.759	No Trend	0
Moffat Creek at Moffat Road	Nitrogen..Total.Ammoniacal..Correction	1	17	118	15/1/07-12/12/16	0.0462	0.28	0.0018	0.0325	-56	1411	-1.4642	0.1431	-0.0021	-6.5452	-0.0045 to -0.0004	-0.0045	-0.0004	decreasing	0.98	Trend	-1
Moffat Creek at Moffat Road	Nitrogen..Total..Correction	1	0	118	15/1/07-12/12/16	1.5652	4.3	0.55	1.33	17	1427	0.4236	0.6719	0.0069	0.5193	-0.0200 to 0.0300	-0.0200	0.0300	increasing	0.67	No Trend	0
Moffat Creek at Moffat Road	Phosphorus..Dissolved.Reactive..Correction	1	0	118	15/1/07-12/12/16	0.0704	0.22	0.014	0.063	199	1426.3333	5.2427	0	0.004	6.2987	0.0025 to 0.0055	0.0025	0.0055	increasing	1	Trend	1
Moffat Creek at Moffat Road	Phosphorus..Total..Correction	1	0	118	15/1/07-12/12/16	0.1742	1.04	0.054	0.135	96	1428	2.514	0.0119	0.0035	2.589	0.0013 to 0.0058	0.0013	0.0058	increasing	0.9944	Trend	1
Moffat Creek at Moffat Road	Organic.Nitrogen.Correction	1	0	118	15/1/07-12/12/16	1.0718	2.452	0.412	1.0235	78	1432	2.0348	0.0419	0.0167	1.6317	0.0042 to 0.0333	0.0042	0.0333	increasing	0.9784	Trend	1
Mokoreta River at Wyndham River Road	E.Coli..CFU..Correction	2	0	117	16/1/07-14/12/16	1389.5983	21000	10	320	-25	1393	-0.643	0.5202	-4.2853	-1.3392	-20.0191 to 8.3629	-20.019	8.3629	decreasing	0.7458	No Trend	0
Mokoreta River at Wyndham River Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	16/1/07-14/12/16	1.0945	1.9	0.26	1.14	33	1429	0.8465	0.3973	0.0066	0.5793	-0.0067 to 0.0200	-0.0067	0.0200	increasing	0.7818	No Trend	0
Mokoreta River at Wyndham River Road	Nitrogen..Total..Correction	1	0	118	16/1/07-14/12/16	1.4647	2.7	0.57	1.42	4	1428	0.0794	0.9367	0	0	-0.0125 to 0.0175	-0.0125	0.0175	increasing	0.5	No Trend	0
Mokoreta River at Wyndham River Road	Phosphorus..Dissolved.Reactive..Correction	1	5	118	16/1/07-14/12/16	0.0113	0.05	0.0025	0.01	-84	1396.6667	-2.2209	0.0264	-0.0003	-3.3341	-0.0005 to -0.0001	-0.0005	-0.0001	decreasing	0.9993	Trend	-1
Mokoreta River at Wyndham River Road	Phosphorus..Total..Correction	1	0	118	16/1/07-14/12/16	0.0498	0.35	0.01	0.03	-82	1424	-2.1465	0.0318	-0.001	-3.3379	-0.0016 to -0.0002	-0.0016	-0.0002	decreasing	0.9841	Trend	-1
Mokoreta River at Wyndham River Road	Organic.Nitrogen.Correction	1	0	118	16/1/07-14/12/16	0.3525	1.412	0.077	0.2893	62	1432	1.612	0.107	0.0057	1.9812	0.0000 to 0.0118	0.0000	0.0118	increasing	0.9471	No Trend	0
Mokotua Stream at Awarua	E.Coli..CFU..Correction	2	35	117	15/1/07-12/12/16	69.8547	1600	1	35	19	1271.6667	0.5048	0.6137	0.7526	2.1502	0.0000 to 2.8151	0.0000	2.8151	increasing	0.8743	No Trend	0
Mokotua Stream at Awarua	Nitrogen..Nitrate.Nitrite..Correction	0	12	119	15/1/07-12/12/16	0.0478	1.3	0.002	0.012	-87	1383	-2.3125	0.0207	-0.0007	-5.545	-0.0010 to -0.0003	-0.0010	-0.0003	decreasing	0.9967	Trend	-1
Mokotua Stream at Awarua	Nitrogen..Total.Ammoniacal..Correction	0	14	119	15/1/07-12/12/16	0.0337	0.31	0.0003	0.019	-208	1426.3333	-5.481	0	-0.0042	-21.991	-0.0050 to -0.0032	-0.0050	-0.0032	decreasing	1	Trend	-1
Mokotua Stream at Awarua	Nitrogen..Total..Correction	0	0	119	15/1/07-12/12/16	0.7949	2.5	0.44	0.73	-69	1455	-1.7827	0.0746	-0.01	-1.3658	-0.0200 to 0.0000	-0.0200	0.0000	decreasing	0.9687	No Trend	0
Mokotua Stream at Awarua	Phosphorus..Total..Correction	1	0	118	15/1/07-12/12/16	0.0203	0.098	0.005	0.017	-201	1409.6667	-5.3269	0	-0.0012	-7.2632	0.0017 to -0.0010	-0.0017	-0.0010	decreasing	1	Trend	-1
Mokotua Stream at Awarua	Organic.Nitrogen.Correction	0	0	119	15/1/07-12/12/16	0.7311	1.282	0.4275	0.69	-58	1466	-1.4887	0.1366	-0.007	-1.0141	-0.0146 to 0.0010	-0.0146	0.0010	decreasing	0.9374	No Trend	0
North Peak Stream at Waimea Valley Road	E.Coli..CFU..Correction	0	1	118	18/1/07-14/12/16	1420.8983	27000	10	205	-98	1428	-2.5669	0.0103	-12.0478	-5.877	-23.0306 to -3.7589	-23.030	-3.7589	decreasing	0.9933	Trend	-1
North Peak Stream at Waimea Valley Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	118	18/1/07-14/12/16	0.6139	3.3	0.005	0.46	-182	1432	-4.7831	0	-0.028	-6.0962	-0.0462 to -0.0146	-0.0462	-0.0146	decreasing	1	Trend	-1
North Peak Stream at Waimea Valley Road	Nitrogen..Total..Correction	0	0	118	18/1/07-14/12/16	1.0708	3.7	0.11	0.905	-154	1428	-4.0488	0.001	-0.0497	-5.491	-0.0701 to -0.0301	-0.0701	-0.0301	decreasing	1	Trend	-1
North Peak Stream at Waimea Valley Road	Phosphorus..Dissolved.Reactive..Correction	0	6	118	18/1/07-14/12/16	0.02	0.125	0.004	0.016	9	1410.3333	0.213	0.8313	0	0	-0.0004 to 0.0003	-0.0004	0.0003	decreasing	0.5	No Trend	0
North Peak Stream at Waimea Valley Road	Phosphorus..Total..Correction	0	0	118	18/1/07-14/12/16	0.059	0.3	0.013	0.0405	-126	1424	-3.3125	0.009	-0.002	-4.956	-0.0030 to -0.0010	-0.0030	-0.0010	decreasing	0.9995	Trend	-1
North Peak Stream at Waimea Valley Road	Organic.Nitrogen.Correction	1	0	117	18/1/07-14/12/16	0.4244	1.922	0.049	0.348	-32	1407.3333	-0.8263	0.4086	-0.0065	-1.8675	-0.0135 to 0.0054	-0.0135	0.0054	decreasing	0.797	No Trend	0
Opouriki Stream at Tweedie Road	Clarity..Black.Disc..Field..m.	7	2	113	15/1/07-12/12/16	1.0059	3	0.07	0.93	-4	1255.6667	-0.0847	0.9325	0	0	-0.0200 to 0.0242	-0.0200	0.0242	decreasing	0.5	No Trend	0
Opouriki Stream at Tweedie Road	E.Coli..CFU..Correction	0	1	120	15/1/07-12/12/16	5030.7917	120000	50	800	15	1485	0.3633	0.7164	7.4897	0.9362	-29.9300 to 40.3746	-29.930	40.3746	increasing	0.6624	No Trend	0
Opouriki Stream at Tweedie Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	15/1/07-12/12/16	1.8337	3.5	0.94	1.79	173	1489	4.4574	0	0.0444	2.4783	0.0300 to 0.0562	0.0300	0.0562	increasing	1	Trend	1
Opouriki Stream at Tweedie Road	Nitrogen..Total..Correction	0	0	120	15/1/07-12/12/16	2.2782	4.2	1	2.2	157	1475	4.0619	0	0.0579	2.6324	0.0300 to 0.0832	0.0300	0.0832	increasing	1	Trend	1
Opouriki Stream at Tweedie Road	Phosphorus..Dissolved.Reactive..Correction	0	11	120	15/1/07-12/12/16	0.0167	0.063	0.004	0.011	22	1467.6667	0.5482	0.5836	0	0	-0.0003 to 0.0001	-0.0003	0.0001	increasing	0.5	No Trend	0
Opouriki Stream at Tweedie Road	Phosphorus..Total..Correction	0	0	120	15/1/07-12/12/16	0.0556	0.39	0.004	0.037	-40	1490	-1.0103	0.3123	-0.0005	-1.3517	-0.0014 to 0.0004	-0.0014	0.0004	decreasing	0.8352	No Trend	0

Opouriki Stream at Tweedie Road	Organic.Nitrogen.Correction	3	0	117	15/1/07-12/12/16	0.4117	2.03	0.028	0.298	24	1400	0.6147	0.5388	0.0027	0.9216	-0.0054 to 0.0129	-0.0054	0.0129	increasing	0.725	No Trend		0
Orauea River at Orawia Pukemaori Road	Clarity..Black.Disc..Field..m.	8	4	112	15/1/07-15/12/16	1.1335	3.5	0.05	1.075	12	1221.6667	0.3147	0.753	0.0013	0.1163	-0.0250 to 0.0360	-0.0250	0.0360	increasing	0.5162	No Trend		0
Orauea River at Orawia Pukemaori Road	E.Coli..CFU..Correction	0	0	120	15/1/07-15/12/16	2069.1917	54000	20	320	0	1494	0	1	0	0	-13.3425 to 15.0372	-13.342	15.0372	increasing	0.5	No Trend		0
Orauea River at Orawia Pukemaori Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	15/1/07-15/12/16	0.5523	1.9	0	0.505	11	1494.3333	0.2587	0.7959	0.0006	0.1187	-0.0071 to 0.0053	-0.0071	0.0053	increasing	0.5973	No Trend		0
Orauea River at Orawia Pukemaori Road	Nitrogen..Total..Correction	0	0	120	15/1/07-15/12/16	0.9823	4.1	0.14	0.785	49	1490.3333	1.2434	0.2137	0.0069	0.8797	-0.0033 to 0.0175	-0.0033	0.0175	increasing	0.8833	No Trend		0
Orauea River at Orawia Pukemaori Road	Phosphorus..Dissolved.Reactive..Correction	0	9	120	15/1/07-15/12/16	0.0159	0.115	0.004	0.012	38	1448	0.9723	0.3309	0	0	-0.0002 to 0.0002	-0.0002	0.0002	increasing	0.5	No Trend		0
Orauea River at Orawia Pukemaori Road	Phosphorus..Total..Correction	0	0	120	15/1/07-15/12/16	0.0556	0.49	0.01	0.029	-28	1487.3333	-0.7001	0.4839	-0.0004	-1.2201	-0.0010 to 0.0003	-0.0010	0.0003	decreasing	0.7448	No Trend		0
Orauea River at Orawia Pukemaori Road	Organic.Nitrogen.Correction	0	0	120	15/1/07-15/12/16	0.4109	2.993	0.071	0.285	42	1500	1.0586	0.2898	0.0026	0.9228	-0.0014 to 0.0087	-0.0014	0.0087	increasing	0.8523	No Trend		0
Oreti River at Lumsden Bridge	Clarity..Black.Disc..Field..m.	11	3	109	17/1/07-13/12/16	3.7324	9.9	0.1	3.77	-38	1169.3333	-1.0082	0.2792	-0.1588	-4.1916	-0.3064 to 0.0077	-0.3064	0.0077	decreasing	0.9417	No Trend		0
Oreti River at Lumsden Bridge	E.Coli..CFU..Correction	1	4	119	17/1/07-13/12/16	195.5378	5000	5	60	131	1446.3333	3.4183	0.0006	6.653	11.0883	3.7241 to 10.0374	3.7241	10.0374	increasing	0.9998	Trend		1
Oreti River at Three Kings	Clarity..Black.Disc..Field..m.	5	3	115	18/1/07-13/12/16	4.8267	10.8	0.27	4.9	-34	1327.3333	-0.9058	0.3651	-0.0758	-1.5477	-0.2502 to 0.0444	-0.2502	0.0444	decreasing	0.9003	No Trend		0
Oreti River at Three Kings	E.Coli..CFU..Correction	1	33	119	18/1/07-13/12/16	90.563	3300	2	40	-9	1308.6667	-0.2211	0.825	0	0	-1.6669 to 1.9973	-1.6669	1.9973	decreasing	0.5	No Trend		0
Oreti River at Three Kings	Nitrogen..Nitrate.Nitrite..Correction	1	1	119	18/1/07-13/12/16	0.0412	0.2	0.003	0.035	-67	1457	-1.7291	0.0838	-0.001	-2.8598	-0.0019 to -0.0001	-0.0019	-0.0001	decreasing	0.9718	Trend		-1
Oreti River at Wallacetown	E.Coli..CFU..Correction	2	4	118	17/1/07-13/12/16	655.4831	24000	10	120	7	1417.6667	0.1594	0.8734	0.4279	0.3566	-4.0148 to 5.1242	-4.0148	5.1242	increasing	0.6631	No Trend		0
Otamita Stream at Mandeville	Clarity..Black.Disc..Field..m.	3	0	116	17/1/07-14/12/16	1.0866	2.48	0.16	1.1	-35	1367	-0.9196	0.3578	-0.0134	-1.2163	-0.0425 to 0.0176	-0.0425	0.0176	decreasing	0.8239	No Trend		0
Otamita Stream at Mandeville	E.Coli..CFU..Correction	1	0	118	17/1/07-14/12/16	1617.5932	57000	20	280	20	1424	0.5035	0.6146	2.4966	0.8916	-5.5082 to 11.1846	-5.5082	11.1846	increasing	0.7493	No Trend		0
Otamita Stream at Mandeville	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	17/1/07-14/12/16	0.8122	2.2	0.013	0.735	0	1432	0	1	0	0	-0.0168 to 0.0110	-0.0168	0.0110	increasing	0.5	No Trend		0
Otamita Stream at Mandeville	Nitrogen..Total..Correction	1	0	118	17/1/07-14/12/16	1.166	3.5	0.25	1.1	-2	1432	-0.0264	0.9789	-0.0006	-0.0506	-0.0220 to 0.0233	-0.0220	0.0233	decreasing	0.5066	No Trend		0
Otamita Stream at Mandeville	Phosphorus..Dissolved.Reactive..Correction	2	3	117	17/1/07-14/12/16	0.0122	0.05	0.004	0.01	-48	1372.6667	-1.2686	0.2046	-0.0003	-2.7126	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.9608	No Trend		0
Otamita Stream at Mandeville	Phosphorus..Total..Correction	1	2	118	17/1/07-14/12/16	0.0362	0.24	0.008	0.0285	-40	1419.3333	-1.0352	0.3006	-0.0005	-1.7562	-0.0012 to 0.0000	-0.0012	0.0000	decreasing	0.9132	No Trend		0
Otamita Stream at Mandeville	Organic.Nitrogen.Correction	2	0	117	17/1/07-14/12/16	0.3478	1.851	0.076	0.3058	36	1407.3333	0.933	0.3508	0.005	1.6367	-0.0024 to 0.0116	-0.0024	0.0116	increasing	0.8189	No Trend		0
Otapiri Stream at Otapiri Gorge	Clarity..Black.Disc..Field..m.	3	1	117	16/1/07-13/12/16	0.8064	2.5	0.1	0.81	-23	1391	-0.5899	0.5553	-0.0100	-1.2321	-0.0254 to 0.0155	-0.0254	0.0155	decreasing	0.7265	No Trend		0
Otapiri Stream at Otapiri Gorge	E.Coli..CFU..Correction	2	0	118	16/1/07-13/12/16	1405.5932	13000	10	430	-51	1425	-1.3245	0.1853	-11.7157	-2.7246	-28.2662 to 3.7714	-28.266	3.7714	decreasing	0.8947	No Trend		0
Otapiri Stream at Otapiri Gorge	Nitrogen..Nitrate.Nitrite..Correction	1	1	119	16/1/07-13/12/16	0.6396	3.72	0.039	0.56	4	1464	0.0784	0.9375	0.0001	0.1783	-0.0128 to 0.0100	-0.0128	0.0100	increasing	0.5644	No Trend		0
Otapiri Stream at Otapiri Gorge	Nitrogen..Total..Correction	1	0	119	16/1/07-13/12/16	1.0138	4.5	0.18	0.85	12	1464	0.2875	0.7737	0.0055	0.5846	-0.0198 to 0.0186	-0.0198	0.0186	increasing	0.6211	No Trend		0
Otapiri Stream at Otapiri Gorge	Phosphorus..Dissolved.Reactive..Correction	2	1	118	16/1/07-13/12/16	0.0161	0.05	0.0056	0.015	64	1408	1.679	0.0932	0.0002	1.6565	0.0000 to 0.0007	0.0000	0.0007	increasing	0.9514	No Trend		0
Otapiri Stream at Otapiri Gorge	Phosphorus..Total..Correction	2	0	118	16/1/07-13/12/16	0.0458	0.198	0.013	0.0365	1	1422.3333	0	1	0	0	-0.0010 to 0.0007	-0.0010	0.0007	increasing	0.5	No Trend		0
Otapiri Stream at Otapiri Gorge	Organic.Nitrogen.Correction	2	0	118	16/1/07-13/12/16	0.3687	4.246	0.01	0.275	37	1433	0.9951	0.3416	0.0032	1.1462	-0.0048 to 0.0104	-0.0048	0.0104	increasing	0.8209	No Trend		0
Otautau Stream at Otautau-Tuatapere Road	E.Coli..CFU..Correction	0	0	120	15/1/07-12/12/16	3508.5	75000	110	1000	23	1486.3333	0.5706	0.5682	7.8285	0.7828	-14.1804 to 60.1225	-14.180	60.1225	increasing	0.7227	No Trend		0
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	15/1/07-12/12/16	1.077	3.9	0.11	0.835	-67	1495	-1.707	0.0878	-0.0173	-2.0763	-0.0316 to 0.0000	-0.0316	0.0000	decreasing	0.9597	No Trend		0
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Total.Ammoniacal..Correction	0	18	120	15/1/07-12/12/16	0.0388	0.181	0.0026	0.0295	-73	1444.6667	-1.8943	0.0582	-0.0019	-6.3625	-0.0036 to -0.0003	-0.0036	-0.0003	decreasing	0.9774	Trend		-1
Otautau Stream at Otautau-Tuatapere Road	Nitrogen..Total..Correction	0	0	120	15/1/07-12/12/16	1.5837	5.2	0.32	1.315	-11	1495	-0.2586	0.7959	-0.0065	-0.4948	-0.0396 to 0.0201	-0.0396	0.0201	decreasing	0.592	No Trend		0
Otautau Stream at Otautau-Tuatapere Road	Phosphorus..Dissolved.Reactive..Correction	0	1	120	15/1/07-12/12/16	0.0268	0.071	0.0054	0.024	23	1485	0.5709	0.5681	0.0002	0.6946	-0.0003 to 0.0005	-0.0003	0.0005	increasing	0.7071	No Trend		0
Otautau Stream at Otautau-Tuatapere Road	Phosphorus..Total..Correction	0	0	120	15/1/07-12/12/16	0.0732	0.36	0.025	0.0565	-23	1493	-0.5694	0.5691	-0.0003	-0.5889	-0.0013 to 0.0007	-0.0013	0.0007	decreasing	0.72	No Trend		0
Otautau Stream at Otautau-Tuataper	Organic.Nitrogen.Correction	2	0	118	15/1/07-12/12/16	0.4803	2.079	0.134	0.368	-3	1433	-0.0528	0.9579	-0.0002	-0.0522	-0.0090 to 0.0074	-0.0090	0.0074	decreasing	0.5217	No Trend		0

e Road																					
Otautau Stream at Waikouro	E.Coli..CFU..Correction	0	0	120	15/1/07-12/12/16	5882.5833	130000	130	1500	-31	1495	-0.7759	0.4378	-24.9064	-1.6604	-80.1736 to 33.2348	-80.173	33.2348	decreasing	0.7575	No Trend	0
Otautau Stream at Waikouro	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	15/1/07-12/12/16	0.9299	2.8	0.095	0.81	-36	1494	-0.9055	0.3652	-0.0109	-1.3494	-0.0248 to 0.0069	-0.0248	0.0069	decreasing	0.8329	No Trend	0
Otautau Stream at Waikouro	Nitrogen..Total.Ammoniacal..Correction	0	13	120	15/1/07-12/12/16	0.0573	0.31	0.0041	0.0345	-127	1486.3333	-3.2682	0.0011	-0.004	-11.634	-0.0066 to -0.0020	-0.0066	-0.0020	decreasing	0.9997	Trend	-1
Otautau Stream at Waikouro	Nitrogen..Total..Correction	0	0	120	15/1/07-12/12/16	1.5332	4.7	0.32	1.3	-41	1495	-1.0345	0.3009	-0.0147	-1.1287	-0.0360 to 0.0095	-0.0360	0.0095	decreasing	0.8595	No Trend	0
Otautau Stream at Waikouro	Phosphorus..Dissolved.Reactive..Correction	1	2	119	15/1/07-12/12/16	0.027	0.114	0.0072	0.023	-68	1454	-1.7571	0.0789	-0.0006	-2.4862	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9708	No Trend	0
Otautau Stream at Waikouro	Phosphorus..Total..Correction	1	0	119	15/1/07-12/12/16	0.0917	0.64	0.027	0.058	-97	1463	-2.5099	0.0121	-0.002	-3.4381	-0.0030 to -0.0006	-0.0030	-0.0006	decreasing	0.9938	Trend	-1
Otautau Stream at Waikouro	Organic.Nitrogen.Correction	3	0	117	15/1/07-12/12/16	0.5641	3.338	0.12	0.375	-29	1401	-0.7481	0.4544	-0.0032	-0.8419	-0.0130 to 0.0043	-0.0130	0.0043	decreasing	0.7737	No Trend	0
Otepuni Creek at Nith Street	Clarity..Black.Disc..Field..m.	11	4	109	16/1/07-13/12/16	0.8575	2.5	0.1	0.79	5	1119	0.1196	0.9048	0.005	0.6326	-0.0244 to 0.0277	-0.0244	0.0277	increasing	0.6086	No Trend	0
Otepuni Creek at Nith Street	E.Coli..CFU..Correction	2	0	118	16/1/07-13/12/16	3799.8898	110000	67	1650	-3	1421	-0.0531	0.9577	0	0	-84.3441 to 75.1020	-84.344	75.1020	increasing	0.5	No Trend	0
Otepuni Creek at Nith Street	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-13/12/16	1.4927	4.5	0.26	1.39	-105	1465	-2.7172	0.0066	-0.0412	-2.9648	-0.0689 to -0.0167	-0.0689	-0.0167	decreasing	0.9967	Trend	-1
Otepuni Creek at Nith Street	Nitrogen..Total..Correction	1	0	119	16/1/07-13/12/16	2.2759	5	0.75	2.2	-71	1452.3333	-1.8368	0.0662	-0.0428	-1.9441	-0.0807 to 0.0000	-0.0807	0.0000	decreasing	0.9635	No Trend	0
Otepuni Creek at Nith Street	Phosphorus..Dissolved.Reactive..Correction	1	3	119	16/1/07-13/12/16	0.0195	0.53	0.004	0.014	69	1439.6667	1.7922	0.0731	0.0002	1.428	0.0000 to 0.0005	0.0000	0.0005	increasing	0.8121	No Trend	0
Otepuni Creek at Nith Street	Phosphorus..Total..Correction	1	0	119	16/1/07-13/12/16	0.0611	0.73	0.014	0.046	-103	1456.3333	-2.6728	0.0075	-0.0017	-3.624	-0.0026 to -0.0007	-0.0026	-0.0007	decreasing	0.996	Trend	-1
Otepuni Creek at Nith Street	Organic.Nitrogen.Correction	3	0	117	16/1/07-13/12/16	0.723	2.468	0.28	0.668	-29	1399	-0.7486	0.4541	-0.006	-0.8984	-0.0158 to 0.0074	-0.0158	0.0074	decreasing	0.7611	No Trend	0
Oteramika Stream at Seaward Downs	Clarity..Black.Disc..Field..m.	5	0	115	16/1/07-14/12/16	0.6233	1.2	0.12	0.62	-99	1339	-2.6782	0.0074	-0.0201	-3.2347	-0.0320 to -0.0067	-0.0320	-0.0067	decreasing	0.995	Trend	-1
Oteramika Stream at Seaward Downs	E.Coli..CFU..Correction	2	1	118	16/1/07-14/12/16	1488.2458	16000	10	530	31	1427	0.7942	0.4271	16.7392	3.1583	-17.5696 to 44.7045	-17.569	44.7045	increasing	0.7644	No Trend	0
Oteramika Stream at Seaward Downs	Nitrogen..Nitrate.Nitrite..Correction	1	2	119	16/1/07-14/12/16	1.7715	4.74	0.012	1.51	46	1464	1.1761	0.2396	0.0251	1.6602	-0.0167 to 0.0571	-0.0167	0.0571	increasing	0.8443	No Trend	0
Oteramika Stream at Seaward Downs	Nitrogen..Total..Correction	1	0	119	16/1/07-14/12/16	2.7385	6.1	0.61	2.5	71	1450.3333	1.8381	0.0661	0.04	1.5985	0.0000 to 0.0723	0.0000	0.0723	increasing	0.967	No Trend	0
Oteramika Stream at Seaward Downs	Phosphorus..Dissolved.Reactive..Correction	1	0	119	16/1/07-14/12/16	0.038	0.31	0.006	0.026	151	1448.3333	3.9415	0.0001	0.0011	4.3849	0.0005 to 0.0020	0.0005	0.0020	increasing	1	Trend	1
Oteramika Stream at Seaward Downs	Phosphorus..Total..Correction	1	0	119	16/1/07-14/12/16	0.1097	0.4	0.026	0.09	35	1463	0.8889	0.3741	0.0014	1.56	-0.0005 to 0.0028	-0.0005	0.0028	increasing	0.8205	No Trend	0
Oteramika Stream at Seaward Downs	Organic.Nitrogen.Correction	1	0	119	16/1/07-14/12/16	0.8964	2.81	0.09	0.782	89	1467	2.2976	0.0216	0.0205	2.6197	0.0053 to 0.0336	0.0053	0.0336	increasing	0.9891	Trend	1
Pourakino River at Traill Road	E.Coli..CFU..Correction	0	1	120	15/1/07-12/12/16	1392.6667	60000	20	320	86	1470.6667	2.2165	0.0267	16.6174	5.1929	1.6570 to 29.9194	1.6570	29.9194	increasing	0.9867	Trend	1
Pourakino River at Traill Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	15/1/07-12/12/16	0.171	0.44	0.009	0.154	93	1497	2.3778	0.0174	0.0033	2.165	0.0013 to 0.0062	0.0013	0.0062	increasing	0.9917	Trend	1
Pourakino River at Traill Road	Nitrogen..Total..Correction	0	0	120	15/1/07-12/12/16	0.3979	0.91	0.13	0.36	82	1488	2.0998	0.0357	0.0067	1.8582	0.0017 to 0.0125	0.0017	0.0125	increasing	0.9802	Trend	1
Pourakino River at Traill Road	Phosphorus..Total..Correction	1	2	119	15/1/07-12/12/16	0.0192	0.1	0.004	0.014	0	1447.3333	0	1	0	0	-0.0004 to 0.0003	-0.0004	0.0003	increasing	0.5	No Trend	0
Pourakino River at Traill Road	Organic.Nitrogen.Correction	1	0	119	15/1/07-12/12/16	0.2158	0.78	0.042	0.178	63	1467	1.6187	0.1055	0.004	2.2426	-0.0001 to 0.0080	-0.0001	0.0080	increasing	0.9473	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Clarity..Black.Disc..Field..m.	10	4	108	18/1/07-14/12/16	1.0362	2.8	0.14	0.98	-70	1134.3333	-2.0487	0.0405	-0.0268	-2.7329	-0.0626 to -0.0062	-0.0626	-0.0062	decreasing	0.9854	Trend	-1
Sandstone Stream at Kingston Crossing Rd	E.Coli..CFU..Correction	1	0	117	18/1/07-14/12/16	3885.5043	130000	20	400	2	1398.6667	0.0267	0.9787	0	0	-19.4796 to 15.0515	-19.479	15.0515	decreasing	0.5	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Nitrogen..Nitrate.Nitrite..Correction	0	1	118	18/1/07-14/12/16	2.2328	19	0.009	1.315	-77	1429	-2.0105	0.0444	-0.0389	-2.9567	-0.0652 to -0.0083	-0.0652	-0.0083	decreasing	0.9778	Trend	-1
Sandstone Stream at Kingston Crossing Rd	Nitrogen..Total..Correction	0	0	118	18/1/07-14/12/16	2.9619	20	0.33	2.1	-66	1428	-1.7201	0.0854	-0.0375	-1.7866	-0.0836 to 0.0000	-0.0836	0.0000	decreasing	0.9594	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Phosphorus..Dissolved.Reactive..Correction	0	0	118	18/1/07-14/12/16	0.0421	0.13	0.003	0.0355	154	1424	4.0545	0.0001	0.002	5.6454	0.0010 to 0.0030	0.0010	0.0030	increasing	1	Trend	1
Sandstone Stream at Kingston Crossing Rd	Phosphorus..Total..Correction	0	0	118	18/1/07-14/12/16	0.0912	0.32	0.024	0.0735	23	1433	0.5812	0.5611	0.001	1.3591	-0.0017 to 0.0020	-0.0017	0.0020	increasing	0.722	No Trend	0
Sandstone Stream at Kingston Crossing Rd	Organic.Nitrogen.Correction	5	0	113	18/1/07-14/12/16	0.7476	3.255	0.201	0.584	34	1292.6667	0.9178	0.3587	0.009	1.5365	-0.0064 to 0.0189	-0.0064	0.0189	increasing	0.8256	No Trend	0

Tokanui River at Fortrose Otara Road	E.Coli..CFU..Correction	0	1	119	15/1/07-12/12/16	3077.3109	110000	20	300	38	1462	0.9677	0.3332	6.6576	2.2192	-9.1618 to 25.0850	-9.1618	25.0859	increasing	0.8059	No Trend	0
Tokanui River at Fortrose Otara Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	119	15/1/07-12/12/16	1.0816	1.79	0.33	1.03	60	1460	1.5441	0.1226	0.0113	1.0934	0.0000 to 0.0232	0.0000	0.0232	increasing	0.9404	No Trend	0
Tokanui River at Fortrose Otara Road	Nitrogen..Total..Correction	0	0	119	15/1/07-12/12/16	1.5745	4.2	0.58	1.47	117	1456.3333	3.0397	0.0024	0.0243	1.6532	0.0100 to 0.0362	0.0100	0.0362	increasing	0.9988	Trend	1
Tokanui River at Fortrose Otara Road	Phosphorus..Dissolved.Reactive..Correction	0	1	119	15/1/07-12/12/16	0.0193	0.063	0.009	0.017	129	1414.3333	3.4036	0.0007	0.0003	1.9675	0.0001 to 0.0005	0.0001	0.0005	increasing	0.9988	Trend	1
Tokanui River at Fortrose Otara Road	Phosphorus..Total..Correction	0	0	119	15/1/07-12/12/16	0.0799	0.47	0.033	0.062	12	1459.3333	0.2879	0.7734	0.0002	0.2689	-0.0009 to 0.0010	-0.0009	0.0010	increasing	0.5971	No Trend	0
Tokanui River at Fortrose Otara Road	Organic.Nitrogen.Correction	1	0	118	15/1/07-12/12/16	0.4632	2.2	0.08	0.375	77	1433	2.0077	0.0447	0.01	2.6618	0.0017 to 0.0177	0.0017	0.0177	increasing	0.9773	Trend	1
Tussock Creek at Cooper Road	Clarity..Black.Disc..Field..m.	10	1	110	16/1/07-15/11/16	1.0242	2.75	0.05	1.035	25	1188.3333	0.6962	0.4863	0.01	0.9672	-0.0128 to 0.0350	-0.0128	0.0350	increasing	0.7534	No Trend	0
Tussock Creek at Cooper Road	E.Coli..CFU..Correction	4	0	116	16/1/07-13/12/16	4469.7414	42000	50	1050	44	1362	1.1651	0.244	28.7529	2.7384	-13.5901 to 79.9389	-13.590	79.9389	increasing	0.8702	No Trend	0
Tussock Creek at Cooper Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-13/12/16	1.6499	5.74	0.067	1.57	-85	1463	-2.1961	0.0281	-0.044	-2.8014	-0.0699 to -0.0124	-0.0699	-0.0124	decreasing	0.9871	Trend	-1
Tussock Creek at Cooper Road	Nitrogen..Total.Ammoniacal..Correction	1	17	119	16/1/07-13/12/16	0.0655	0.53	0.0017	0.034	-120	1429	-3.148	0.0016	-0.004	-11.7489	-0.0074 to -0.0017	-0.0074	-0.0017	decreasing	0.9994	Trend	-1
Tussock Creek at Cooper Road	Nitrogen..Total..Correction	1	0	119	16/1/07-13/12/16	2.3686	7.8	0.32	2.2	-62	1455.3333	-1.599	0.1098	-0.0368	-1.6724	-0.0855 to 0.0000	-0.0855	0.0000	decreasing	0.9236	No Trend	0
Tussock Creek at Cooper Road	Phosphorus..Dissolved.Reactive..Correction	2	4	118	16/1/07-13/12/16	0.0338	0.196	0.004	0.028	25	1420.3333	0.6368	0.5242	0	0	-0.0005 to 0.0010	-0.0005	0.0010	decreasing	0.5	No Trend	0
Tussock Creek at Cooper Road	Phosphorus..Total..Correction	2	0	118	16/1/07-13/12/16	0.0868	1.05	0.008	0.053	-49	1427	-1.2707	0.0381	-0.0011	-2.1098	-0.0030 to 0.0003	-0.0030	0.0003	decreasing	0.9156	No Trend	0
Tussock Creek at Cooper Road	Organic.Nitrogen.Correction	3	0	117	16/1/07-13/12/16	0.6723	4.56	0.177	0.462	9	1401	0.2137	0.8308	0.002	0.4344	-0.0131 to 0.0133	-0.0131	0.0133	increasing	0.5794	No Trend	0
Upukerora River at Te Anau Milford Road	Clarity..Black.Disc..Field..m.	2	0	118	18/1/07-15/12/16	3.4002	8.36	0.05	3.26	-30	1434	-0.7658	0.4438	-0.0858	-2.6326	-0.2065 to 0.0736	-0.2065	0.0736	decreasing	0.7797	No Trend	0
Upukerora River at Te Anau Milford Road	E.Coli..CFU..Correction	1	18	119	18/1/07-15/12/16	119.9664	2600	2	40	-7	1413	-0.1596	0.8732	0	0	-0.9999 to 2.1917	-0.9999	2.1917	decreasing	0.5	No Trend	0
Upukerora River at Te Anau Milford Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	18/1/07-15/12/16	0.1482	0.502	0.029	0.14	-47	1495	-1.1897	0.2342	-0.0022	-1.5567	-0.0045 to 0.0007	-0.0045	0.0007	decreasing	0.8786	No Trend	0
Upukerora River at Te Anau Milford Road	Nitrogen..Total..Correction	0	1	120	18/1/07-15/12/16	0.2652	1.9	0.1	0.235	31	1475.6667	0.7781	0.4348	0.002	0.8507	-0.0020 to 0.0050	-0.0020	0.0050	increasing	0.7899	No Trend	0
Upukerora River at Te Anau Milford Road	Organic.Nitrogen.Correction	3	1	117	18/1/07-15/12/16	0.1152	1.386	0	0.077	52	1395.3333	1.3653	0.1722	0.0016	2.0851	-0.0003 to 0.0046	-0.0003	0.0046	increasing	0.903	No Trend	0
Waiau River at Sunnyside	E.Coli..CFU..Correction	0	16	120	18/1/07-15/12/16	131.2833	5500	5	40	53	1450.3333	1.3654	0.1721	1.5052	3.7629	0.0000 to 3.1212	0.0000	3.1212	increasing	0.9649	No Trend	0
Waiau River at Sunnyside	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	18/1/07-15/12/16	0.1737	2	0.047	0.145	21	1497	0.5169	0.6052	0.0011	0.7887	-0.0025 to 0.0040	-0.0025	0.0040	increasing	0.6835	No Trend	0
Waiau River at Sunnyside	Nitrogen..Total..Correction	0	3	120	18/1/07-15/12/16	0.2811	2.6	0.0944	0.25	78	1477.3333	2.0033	0.0451	0.0039	1.5504	0.0000 to 0.0100	0.0000	0.0100	increasing	0.9538	No Trend	0
Waiau River at Sunnyside	Organic.Nitrogen.Correction	2	3	118	18/1/07-15/12/16	0.1063	0.595	0.005	0.084	78	1416	2.0463	0.0407	0.003	3.5126	0.0004 to 0.0054	0.0004	0.0054	increasing	0.9805	Trend	1
Waiau River at Tuatapere	Clarity..Black.Disc..Field..m.	11	1	109	18/1/07-15/12/16	2.0522	6.6	0.15	2	-40	1152	-1.149	0.2505	-0.0374	-1.871	-0.1435 to 0.0120	-0.1435	0.0120	decreasing	0.8955	No Trend	0
Waiau River at Tuatapere	E.Coli..CFU..Correction	2	1	118	18/1/07-15/12/16	567.5339	20000	10	80	-2	1422	-0.0265	0.9788	0	0	-4.9694 to 6.2291	-4.9694	6.2291	decreasing	0.5	No Trend	0
Waihopai River u/s Queens Drive	E.Coli..CFU..Correction	2	0	118	16/1/07-13/12/16	2640	150000	20	390	-23	1421.6667	-0.5835	0.5596	-3.8716	-0.9927	-20.0687 to 14.9804	-20.068	14.9804	decreasing	0.7197	No Trend	0
Waihopai River u/s Queens Drive	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-13/12/16	2.3304	7.07	0.53	2.2	22	1458	0.55	0.5823	0.01	0.4561	-0.0250 to 0.0398	-0.0250	0.0398	increasing	0.6784	No Trend	0
Waihopai River u/s Queens Drive	Nitrogen..Total..Correction	2	0	118	16/1/07-13/12/16	2.9648	10	0.98	2.9	11	1418.3333	0.2655	0.7906	0	0	-0.0334 to 0.0473	-0.0334	0.0473	increasing	0.5	No Trend	0
Waihopai River u/s Queens Drive	Phosphorus..Dissolved.Reactive..Correction	1	14	119	16/1/07-13/12/16	0.0165	0.064	0.004	0.011	28	1414.6667	0.7179	0.4728	-0.0001	-1.1348	-0.0004 to 0.0002	-0.0004	0.0002	decreasing	0.7872	No Trend	0
Waihopai River u/s Queens Drive	Phosphorus..Total..Correction	2	0	118	16/1/07-13/12/16	0.0474	0.3	0.004	0.03	-88	1421.3333	-2.3077	0.021	-0.0013	-4.171	-0.0020 to -0.0005	-0.0020	-0.0005	decreasing	0.9906	Trend	-1
Waihopai River u/s Queens Drive	Organic.Nitrogen.Correction	3	0	117	16/1/07-13/12/16	0.5853	2.56	0.179	0.478	36	1397.3333	0.9363	0.3491	0.0034	0.7178	-0.0032 to 0.0113	-0.0032	0.0113	increasing	0.8224	No Trend	0
Waikaia River at Waikaia	Clarity..Black.Disc..Field..m.	2	0	117	17/1/07-14/12/16	1.9365	4.59	0.08	1.8	-32	1400	-0.8285	0.4074	-0.03	-1.6678	-0.0965 to 0.0268	-0.0965	0.0268	decreasing	0.7942	No Trend	0
Waikaia River at Waikaia	E.Coli..CFU..Correction	1	1	118	17/1/07-14/12/16	471.1356	5000	10	185	19	1411.6667	0.4791	0.6319	3.3235	1.7965	-1.8009 to 12.8450	-1.8009	12.8450	increasing	0.7918	No Trend	0
Waikaia River at Waikaia	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	17/1/07-14/12/16	0.1514	0.41	0.035	0.1395	55	1431	1.4275	0.1534	0.0025	1.8218	-0.0004 to 0.0048	-0.0004	0.0048	increasing	0.927	No Trend	0
Waikaia River at Waikaia	Nitrogen..Total..Correction	1	0	118	17/1/07-14/12/16	0.3075	1.39	0.11	0.275	114	1413.3333	3.0058	0.0026	0.0067	2.4196	0.0029 to 0.0116	0.0029	0.0116	increasing	0.9981	Trend	1
Waikaia River at Waikaia	Phosphorus..Total..Correction	2	6	117	17/1/07-14/12/16	0.0251	0.46	0.002	0.014	-28	1376.6667	-0.7277	0.4668	-0.0005	-3.5794	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9689	No Trend	0
Waikaia River at Waikaia	Organic.Nitrogen.Correction	1	0	118	17/1/07-14/12/16	0.1495	1.264	0.005	0.1025	106	1432	2.7747	0.0055	0.0053	5.1934	0.0017 to 0.0084	0.0017	0.0084	increasing	0.9966	Trend	1

Waikaia River at Waipounamu Bridge Road	Clarity..Black.Disc..Field..m.	1	1	118	17/1/07-14/12/16	1.9154	5.35	0.07	1.87	-57	1427	-1.4824	0.1382	-0.0529	-2.8285	-0.1055 to 0.0091	-0.1055	0.0091	decreasing	0.9356	No Trend		0
Waikaia River at Waipounamu Bridge Road	E.Coli..CFU..Correction	1	2	118	17/1/07-14/12/16	529.3729	5400	20	140	59	1431	1.5332	0.1252	5.0172	3.5837	-1.4643 to 10.0317	-1.4643	10.0317	increasing	0.9291	No Trend		0
Waikaia River at Waipounamu Bridge Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	17/1/07-14/12/16	0.5058	1.13	0.08	0.5	37	1429	0.9523	0.3409	0.0035	0.6944	-0.0061 to 0.0136	-0.0061	0.0136	increasing	0.8044	No Trend		0
Waikaia River at Waipounamu Bridge Road	Nitrogen..Total..Correction	1	0	118	17/1/07-14/12/16	0.6772	1.43	0.25	0.65	72	1426	1.8802	0.0601	0.0134	2.065	0.0016 to 0.0249	0.0016	0.0249	increasing	0.9712	Trend		1
Waikaia River at Waipounamu Bridge Road	Phosphorus..Dissolved.Reactive..Correction	2	15	117	17/1/07-14/12/16	0.0129	0.05	0.001	0.0072	-28	1322.6667	-0.7424	0.4578	-0.0001	-1.5419	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.9191	No Trend		0
Waikaia River at Waipounamu Bridge Road	Phosphorus..Total..Correction	1	6	118	17/1/07-14/12/16	0.0289	0.48	0.006	0.014	-40	1396.6667	-1.0436	0.2967	-0.0006	-3.9421	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9859	No Trend		0
Waikaia River at Waipounamu Bridge Road	Organic.Nitrogen.Correction	4	0	115	17/1/07-14/12/16	0.1689	1.27	0	0.125	93	1335.6667	2.5173	0.0118	0.0053	4.2546	0.0024 to 0.0085	0.0024	0.0085	increasing	0.9959	Trend		1
Waikaia River u/s Piano Flat	Clarity..Black.Disc..Field..m.	3	2	116	17/1/07-14/12/16	3.3638	7.6	0.16	3.31	-40	1363	-1.0564	0.2908	-0.0719	-2.1726	-0.1520 to 0.0194	-0.1520	0.0194	decreasing	0.9106	No Trend		0
Waikaia River u/s Piano Flat	E.Coli..CFU..Correction	1	20	118	17/1/07-14/12/16	118.7458	6000	1	30	-40	1348	-1.0622	0.2881	0	0	-1.6117 to 1.4431	-1.6117	1.4431	decreasing	0.5	No Trend		0
Waikaia River u/s Piano Flat	Nitrogen..Nitrate.Nitrite..Correction	1	7	118	17/1/07-14/12/16	0.0257	0.2	0.0006	0.0125	-42	1369.3333	-1.1108	0.2679	-0.0003	-2.473	-0.0007 to 0.0000	-0.0007	0.0000	decreasing	0.9506	No Trend		0
Waikaia River u/s Piano Flat	Phosphorus..Total..Correction	1	11	118	17/1/07-14/12/16	0.0148	0.15	0.0027	0.0098	-56	1376.6667	-1.4823	0.1382	-0.0004	-4.2299	-0.0007 to -0.0002	-0.0007	-0.0002	decreasing	0.9918	Trend		-1
Waikaka Stream at Gore	Clarity..Black.Disc..Field..m.	5	2	115	16/1/07-14/12/16	0.9213	3.5	0.09	0.87	-36	1318	-0.9641	0.335	-0.0134	-1.5357	-0.0400 to 0.0100	-0.0400	0.0100	decreasing	0.8558	No Trend		0
Waikaka Stream at Gore	E.Coli..CFU..Correction	2	0	118	16/1/07-14/12/16	3093.7288	72000	60	330	15	1427	0.3706	0.7109	2.494	0.7558	-10.1492 to 18.0939	-10.149	18.0939	increasing	0.6498	No Trend		0
Waikaka Stream at Gore	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-14/12/16	0.9428	3.39	0.013	0.85	-36	1462	-0.9154	0.36	-0.0121	-1.1776	-0.0202 to 0.0066	-0.0202	0.0066	decreasing	0.8182	No Trend		0
Waikaka Stream at Gore	Nitrogen..Total.Ammoniacal..Correction	1	7	119	16/1/07-14/12/16	0.0549	0.22	0.0003	0.046	-138	1458	-3.5879	0.003	-0.0034	-7.3066	-0.0049 to -0.0017	-0.0049	-0.0017	decreasing	0.999	Trend		-1
Waikaka Stream at Gore	Nitrogen..Total..Correction	1	0	119	16/1/07-14/12/16	1.5136	4.7	0.24	1.37	9	1461	0.2093	0.8342	0.002	0.1459	-0.0196 to 0.0276	-0.0196	0.0276	increasing	0.5663	No Trend		0
Waikaka Stream at Gore	Phosphorus..Dissolved.Reactive..Correction	1	0	119	16/1/07-14/12/16	0.0265	0.081	0.006	0.023	62	1444.6667	1.6049	0.1085	0.0005	2.1402	0.0000 to 0.0008	0.0000	0.0008	increasing	0.9361	No Trend		0
Waikaka Stream at Gore	Phosphorus..Total..Correction	1	0	119	16/1/07-14/12/16	0.0797	0.56	0.024	0.06	-81	1457	-2.0959	0.0361	-0.0013	-2.2217	-0.0025 to -0.0004	-0.0025	-0.0004	decreasing	0.982	Trend		-1
Waikaka Stream at Gore	Organic.Nitrogen.Correction	3	0	117	16/1/07-14/12/16	0.5297	1.989	0.133	0.413	49	1401	1.2824	0.1997	0.0065	1.5793	-0.0029 to 0.0219	-0.0029	0.0219	increasing	0.9001	No Trend		0
Waikawa River at Progress Valley	E.Coli..CFU..Correction	0	0	119	15/1/07-12/12/16	2603.6975	81000	40	610	1	1458.3333	0	1	0	0	-19.5431 to 23.3364	-19.543	23.3364	increasing	0.5	No Trend		0
Waikawa River at Progress Valley	Nitrogen..Nitrate.Nitrite..Correction	0	0	119	15/1/07-12/12/16	0.6691	1.2	0.1	0.63	-8	1452.6667	-0.1837	0.8543	0	0	-0.0100 to 0.0044	-0.0100	0.0044	increasing	0.5	No Trend		0
Waikawa River at Progress Valley	Nitrogen..Total..Correction	0	0	119	15/1/07-12/12/16	1.034	5.2	0.22	0.99	21	1453.6667	0.5246	0.5999	0.0033	0.3357	-0.0066 to 0.0137	-0.0066	0.0137	increasing	0.6828	No Trend		0
Waikawa River at Progress Valley	Phosphorus..Dissolved.Reactive..Correction	0	2	119	15/1/07-12/12/16	0.0135	0.05	0.005	0.013	23	1411	0.5857	0.5581	0	0	-0.0002 to 0.0002	-0.0002	0.0002	increasing	0.5	No Trend		0
Waikawa River at Progress Valley	Phosphorus..Total..Correction	0	0	119	15/1/07-12/12/16	0.0588	0.68	0.016	0.038	20	1455.3333	0.4498	0.6184	0.0002	0.6539	-0.0006 to 0.0010	-0.0006	0.0010	increasing	0.7125	No Trend		0
Waikawa River at Progress Valley	Organic.Nitrogen.Correction	1	0	118	15/1/07-12/12/16	0.3484	4.589	0.035	0.247	66	1439.3333	1.7133	0.0867	0.0055	2.2344	0.0003 to 0.0112	0.0003	0.0112	increasing	0.9549	Trend		1
Waikiwi Stream at North Road	E.Coli..CFU..Correction	2	0	118	16/1/07-13/12/16	2014.8729	28000	60	500	-8	1430	-0.1851	0.8531	-2.8327	-0.5665	-24.9782 to 17.7434	-24.978	17.7434	decreasing	0.5535	No Trend		0
Waikiwi Stream at North Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-13/12/16	2.8321	4.96	1.2	2.7	39	1443.6667	1.001	0.3173	0.0125	0.4623	-0.0026 to 0.0394	-0.0026	0.0394	increasing	0.8853	No Trend		0
Waikiwi Stream at North Road	Nitrogen..Total..Correction	1	0	119	16/1/07-13/12/16	3.4324	6.5	1.6	3.4	30	1442	0.7637	0.4451	0.0167	0.4903	-0.0200 to 0.0512	-0.0200	0.0512	increasing	0.7531	No Trend		0
Waikiwi Stream at North Road	Phosphorus..Dissolved.Reactive..Correction	1	7	119	16/1/07-13/12/16	0.0142	0.05	0.004	0.011	27	1444.3333	0.6841	0.4939	0	0	-0.0003 to 0.0002	-0.0003	0.0002	increasing	0.5	No Trend		0
Waikiwi Stream at North Road	Phosphorus..Total..Correction	1	0	119	16/1/07-13/12/16	0.0501	0.28	0.005	0.032	-89	1455	-2.307	0.0211	-0.0014	-4.39	-0.0025 to -0.0003	-0.0025	-0.0003	decreasing	0.9864	Trend		-1
Waikiwi Stream at North Road	Organic.Nitrogen.Correction	3	0	117	16/1/07-13/12/16	0.5753	2.1	0.02	0.473	31	1394.3333	0.8034	0.4217	0.0035	0.7339	-0.0023 to 0.0161	-0.0023	0.0161	increasing	0.7596	No Trend		0
Waikopikopiko Stream at Haldane CurioBay	Clarity..Black.Disc..Field..m.	7	1	112	15/1/07-12/12/16	1.0068	2.5	0.1	1.065	-72	1243	-2.0138	0.044	-0.0325	-3.0474	-0.0473 to -0.0100	-0.0473	-0.0100	decreasing	0.9802	Trend		-1
Waikopikopiko Stream at Haldane CurioBay	E.Coli..CFU..Correction	0	2	119	15/1/07-12/12/16	340.4538	6000	10	140	2	1453.3333	0.0262	0.9791	0	0	-4.0038 to 5.0094	-4.0038	5.0094	decreasing	0.5	No Trend		0
Waikopikopiko Stream at Haldane CurioBay	Nitrogen..Nitrate.Nitrite..Correction	0	0	119	15/1/07-12/12/16	0.1719	0.37	0.05	0.165	-148	1459.3333	-3.8348	0.001	-0.0055	-3.3341	-0.0080 to -0.0037	-0.0080	-0.0037	decreasing	0.9999	Trend		-1
Waikopikopiko Stream at Haldane CurioBay	Nitrogen..Total..Correction	0	0	119	15/1/07-12/12/16	0.405	3.1	0.18	0.34	-42	1434	-1.0827	0.2789	-0.0022	-0.653	-0.0050 to 0.0000	-0.0050	0.0000	decreasing	0.8222	No Trend		0

Waikopikopiko Stream at Haldane CurioBay	Phosphorus..Dissolved.Reactive..Correction	0	6	119	15/1/07-12/12/16	0.0113	0.05	0.004	0.009	-37	1416.3333	-0.9566	0.3388	-0.001	-1.1043	-0.0002 to 0.0000	-0.0002	0.0000	decreasing	0.9584	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Phosphorus..Total..Correction	0	2	119	15/1/07-12/12/16	0.0274	0.38	0.007	0.02	-11	1447.6667	-0.2628	0.7927	-0.001	-0.6241	-0.0007 to 0.0002	-0.0007	0.0002	decreasing	0.7298	No Trend	0
Waikopikopiko Stream at Haldane CurioBay	Organic.Nitrogen.Correction	1	0	118	15/1/07-12/12/16	0.2267	2.9953	0.02	0.136	35	1438.3333	0.8965	0.37	0.003	2.1749	-0.0018 to 0.0072	-0.0018	0.0072	increasing	0.817	No Trend	0
Waimatuku Stream at Lornevill e Riverton Hwy	Clarity..Black.Disc..Field..m.	11	2	109	15/1/07-12/12/16	1.0917	2.7	0.12	1.05	39	1154.6667	1.1183	0.2634	0.0137	1.308	-0.0124 to 0.0423	-0.0124	0.0423	increasing	0.8571	No Trend	0
Waimatuku Stream at Lornevill e Riverton Hwy	E.Coli..CFU..Correction	0	0	120	15/1/07-12/12/16	1458.25	21000	30	500	-16	1492	-0.3883	0.6978	-4.2243	-0.8449	-27.7691 to 13.1956	-27.769	13.1956	decreasing	0.6563	No Trend	0
Waimatuku Stream at Lornevill e Riverton Hwy	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	15/1/07-12/12/16	3.6747	7.4	1.5	3.5	-84	1485.3333	-2.1536	0.0313	-0.0499	-1.4243	-0.0999 to -0.0071	-0.0999	-0.0071	decreasing	0.981	Trend	-1
Waimatuku Stream at Lornevill e Riverton Hwy	Nitrogen..Total..Correction	0	0	120	15/1/07-12/12/16	4.1735	8.2	0.22	3.95	-77	1489	-1.9695	0.0489	-0.0502	-1.2702	-0.0999 to -0.0167	-0.0999	-0.0167	decreasing	0.9789	Trend	-1
Waimatuku Stream at Lornevill e Riverton Hwy	Phosphorus..Dissolved.Reactive..Correction	0	3	120	15/1/07-12/12/16	0.0386	0.097	0.007	0.0355	215	1488.3333	5.5471	0	0.0019	5.3654	0.0013 to 0.0023	0.0013	0.0023	increasing	1	Trend	1
Waimatuku Stream at Lornevill e Riverton Hwy	Phosphorus..Total..Correction	0	0	120	15/1/07-12/12/16	0.0711	0.34	0.024	0.06	30	1494	0.7503	0.4531	0.0006	1.0758	-0.0006 to 0.0019	-0.0006	0.0019	increasing	0.7735	No Trend	0
Waimatuku Stream at Lornevill e Riverton Hwy	Organic.Nitrogen.Correction	4	0	116	15/1/07-12/12/16	0.5236	1.541	0.083	0.47	-38	1358.6667	-1.0038	0.3155	-0.0047	-0.9944	-0.0189 to 0.0015	-0.0189	0.0015	decreasing	0.8393	No Trend	0
Waimea Stream at Mandeville	Clarity..Black.Disc..Field..m.	3	1	116	17/1/07-14/12/16	1.1073	2.9	0.1	1.085	39	1356.3333	1.0318	0.3022	0.0182	1.6747	-0.0124 to 0.0549	-0.0124	0.0549	increasing	0.8383	No Trend	0
Waimea Stream at Mandeville	E.Coli..CFU..Correction	2	0	117	17/1/07-14/12/16	1906.1538	52000	10	270	29	1395.6667	0.7495	0.4536	5.3677	1.988	-6.4854 to 16.5993	-6.4854	16.5993	increasing	0.7592	No Trend	0
Waimea Stream at Mandeville	Nitrogen..Nitrate.Nitrite..Correction	1	0	118	17/1/07-14/12/16	2.8595	6.9	0.16	2.6	146	1414	3.8561	0.0001	0.1001	3.8501	0.0502 to 0.1319	0.0502	0.1319	increasing	0.9999	Trend	1
Waimea Stream at Mandeville	Nitrogen..Total..Correction	1	0	118	17/1/07-14/12/16	3.55	7.8	0.66	3.35	154	1417.3333	4.064	0	0.1142	3.4092	0.0669 to 0.1667	0.0669	0.1667	increasing	1	Trend	1
Waimea Stream at Mandeville	Phosphorus..Dissolved.Reactive..Correction	3	4	116	17/1/07-14/12/16	0.0234	0.1	0.0024	0.021	25	1345	0.6544	0.5128	0	0	-0.0007 to 0.0004	-0.0007	0.0004	increasing	0.5	No Trend	0
Waimea Stream at Mandeville	Phosphorus..Total..Correction	2	1	117	17/1/07-14/12/16	0.0607	0.32	0.01	0.047	-85	1392.3333	-2.2512	0.0244	-0.0015	-3.1948	-0.0026 to -0.0007	-0.0026	-0.0007	decreasing	0.9932	Trend	-1
Waimea Stream at Mandeville	Organic.Nitrogen.Correction	3	0	116	17/1/07-14/12/16	0.6898	2.78	0.082	0.595	45	1368.3333	1.1895	0.2343	0.0036	0.6048	-0.0012 to 0.0175	-0.0012	0.0175	increasing	0.8931	No Trend	0
Waituna Creek at Marshall Road	E.Coli..CFU..Correction	0	2	119	15/1/07-12/12/16	1363.6807	42000	30	250	81	1456.3333	2.0963	0.0361	7.5077	3.0031	0.0000 to 20.0601	0.0000	20.0601	increasing	0.938	No Trend	0
Waituna Creek at Marshall Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	119	15/1/07-12/12/16	1.5326	4.6	0.027	1.44	-60	1462	-1.543	0.1228	-0.0166	-1.154	-0.0517 to 0.0000	-0.0517	0.0000	decreasing	0.9447	No Trend	0
Waituna Creek at Marshall Road	Nitrogen..Total..Correction	0	0	119	15/1/07-12/12/16	2.302	6	0.62	2.2	-40	1460	-1.0207	0.3074	-0.0209	-0.9487	-0.0580 to 0.0109	-0.0580	0.0109	decreasing	0.8447	No Trend	0
Waituna Creek at Marshall Road	Phosphorus..Dissolved.Reactive..Correction	0	1	119	15/1/07-12/12/16	0.0163	0.057	0.005	0.015	-1	1435.6667	0	1	0	0	-0.0003 to 0.0002	-0.0003	0.0002	decreasing	0.5	No Trend	0
Waituna Creek at Marshall Road	Phosphorus..Total..Correction	0	0	119	15/1/07-12/12/16	0.064	0.53	0.022	0.046	-50	1464	-1.2806	0.2003	-0.0008	-1.812	-0.0020 to 0.0002	-0.0020	0.0002	decreasing	0.8972	No Trend	0
Waituna Creek at Marshall Road	Organic.Nitrogen.Correction	1	0	118	15/1/07-12/12/16	0.7246	2.98	0.26	0.622	36	1434	0.9243	0.3554	0.0058	0.9322	-0.0044 to 0.0164	-0.0044	0.0164	increasing	0.8237	No Trend	0
Whitestone River d/s Manapouri-Hillside	Clarity..Black.Disc..Field..m.	2	4	118	18/1/07-15/12/16	4.0786	14.5	0.12	3.6	0	1424	0	1	-0.0492	-1.368	-0.1675 to 0.0945	-0.1675	0.0945	decreasing	0.6877	No Trend	0
Whitestone River d/s Manapouri-Hillside	E.Coli..CFU..Correction	1	11	119	18/1/07-15/12/16	223.6218	7000	4	40	-39	1434.3333	-1.0034	0.3157	0	0	-3.2552 to 1.3250	-3.2552	1.3250	decreasing	0.5	No Trend	0
Whitestone River d/s Manapouri-Hillside	Nitrogen..Nitrate.Nitrite..Correction	0	0	120	18/1/07-15/12/16	0.5082	1.62	0.017	0.46	5	1493	0.1035	0.9175	0	0	-0.0062 to 0.0111	-0.0062	0.0111	decreasing	0.5	No Trend	0
Whitestone River d/s Manapouri-Hillside	Nitrogen..Total..Correction	0	0	120	18/1/07-15/12/16	0.6571	2.3	0.26	0.6	98	1490	2.5129	0.012	0.0124	2.0601	0.0041 to 0.0201	0.0041	0.0201	increasing	0.9946	Trend	1
Whitestone River d/s Manapouri-Hillside	Organic.Nitrogen.Correction	3	0	117	18/1/07-15/12/16	0.1478	1.683	0.006	0.107	100	1398.6667	2.6471	0.0081	0.005	4.6585	0.0017 to 0.0081	0.0017	0.0081	increasing	0.9952	Trend	1
Winton Stream at Lochiel	Clarity..Black.Disc..Field..m.	5	1	115	16/1/07-13/12/16	0.8258	2.5	0.06	0.82	-25	1319	-0.6608	0.5087	-0.01	-1.2237	-0.0279 to 0.0165	-0.0279	0.0165	decreasing	0.7795	No Trend	0
Winton Stream at Lochiel	E.Coli..CFU..Correction	2	0	118	16/1/07-13/12/16	2540.5932	29000	170	1100	-11	1425	-0.2649	0.7911	-2.9237	-0.2658	-59.6606 to 33.2451	-59.660	33.2451	decreasing	0.6046	No Trend	0

															1						
Winton Stream at Lochiel	Nitrogen..Nitrate.Nitrite..Correction	1	0	119	16/1/07-13/12/16	1.8193	7.3	0.075	1.5	-78	1462	-2.0138	0.044	-0.04	-2.6644	-0.0783 to -0.0034	-0.0783	-0.0034	decreasing	0.974	Trend	-1
Winton Stream at Lochiel	Nitrogen..Total.Ammoniacal..Correction	1	8	119	16/1/07-13/12/16	0.1026	0.49	0.0016	0.093	-26	1462	-0.6538	0.5132	-0.0017	-1.7746	-0.0050 to 0.0021	-0.0050	0.0021	decreasing	0.7414	No Trend	0
Winton Stream at Lochiel	Nitrogen..Total..Correction	1	0	119	16/1/07-13/12/16	2.6385	7.8	0.94	2.4	-56	1460	-1.4394	0.15	-0.0398	-1.6565	-0.0671 to 0.0021	-0.0671	0.0021	decreasing	0.9421	No Trend	0
Winton Stream at Lochiel	Phosphorus..Dissolved.Reactive..Correction	1	0	119	16/1/07-13/12/16	0.0891	0.44	0.01	0.056	-56	1457.3333	-1.4407	0.1497	-0.0013	-2.3739	-0.0030 to 0.0000	-0.0030	0.0000	decreasing	0.9323	No Trend	0
Winton Stream at Lochiel	Phosphorus..Total..Correction	1	0	119	16/1/07-13/12/16	0.1483	0.54	0.036	0.119	-92	1462	-2.3799	0.0173	-0.0035	-2.9418	-0.0060 to -0.0010	-0.0060	-0.0010	decreasing	0.9905	Trend	-1
Winton Stream at Lochiel	Organic.Nitrogen.Correction	3	0	117	16/1/07-13/12/16	0.7349	2.22	0.227	0.656	29	1401	0.7481	0.4544	0.0055	0.8373	-0.0086 to 0.0220	-0.0086	0.0220	increasing	0.7697	No Trend	0

Trend 2007-2016 - ES data - Export TimeTrends

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
Aparima River at Dunrobin	Clarity..Black.Disc..Field..m.	19	0	185	19/1/00-12/12/16	4.191	11.8	0.04	4.04	151	5370.3333	2.0469	0.0407	0.0814	2.0139	0.0173 to 0.1480	0.0173	0.1480	increasing	0.9807	Trend	1
Aparima River at Dunrobin	E.Coli..CFU..Correction	1	2	203	19/1/00-12/12/16	346.5961	19000	6	67	-126	6938.6667	-1.5006	0.1335	-0.6406	-0.9561	-1.9175 to 0.1249	-1.9175	0.1249	decreasing	0.8738	No Trend	0
Aparima River at Dunrobin	Nitrogen..Nitrate.Nitrite..Correction	1	0	203	19/1/00-12/12/16	0.0363	0.343	0.002	0.024	132	6844.6667	1.5834	0.1133	0.0001	0.5956	0.0000 to 0.0006	0.0000	0.0006	increasing	0.9433	No Trend	0
Aparima River at Dunrobin	Nitrogen..Total.Ammoniacal..Correction	1	15	203	19/1/00-12/12/16	0.0101	0.07	0.0003	0.01	-507	4583	-7.4744	0	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Aparima River at Dunrobin	Nitrogen..Total..Correction	1	3	203	19/1/00-12/12/16	0.1533	1.24	0.024	0.11	84	6742.6667	1.0108	0.3121	0	0	0.0000 to 0.0019	0.0000	0.0019	increasing	0.5	No Trend	0
Aparima River at Dunrobin	Phosphorus..Dissolved.Reactive..Correction	10	8	194	19/1/00-12/12/16	0.0073	0.057	0.0005	0.005	-903	5723	-11.9233	0	-0.0003	-5.0501	-0.0003 to -0.0002	-0.0003	-0.0002	decreasing	1	Trend	-1
Aparima River at Dunrobin	Phosphorus..Total..Correction	9	6	195	19/1/00-12/12/16	0.0167	0.43	0.0007	0.01	-680	5915.3333	-8.8284	0	-0.0005	-4.9989	-0.0006 to -0.0004	-0.0006	-0.0004	decreasing	1	Trend	-1
Aparima River at Dunrobin	Organic.Nitrogen.Correction	1	3	203	19/1/00-12/12/16	0.1076	1.2291	0.002	0.078	16	6908.6667	0.1805	0.8568	0.0001	0.0719	-0.0005 to 0.0014	-0.0005	0.0014	increasing	0.6106	No Trend	0
Aparima River at Thornbury	Clarity..Black.Disc..Field..m.	9	0	195	19/1/00-12/12/16	1.9049	5.72	0.08	1.78	95	6221	1.1918	0.2333	0.0186	1.0462	-0.0098 to 0.0401	-0.0098	0.0401	increasing	0.8873	No Trend	0
Aparima River at Thornbury	E.Coli..CFU..Correction	1	3	203	19/1/00-12/12/16	2416.468	68000	40	250	-149	6911.6667	-1.7802	0.075	-4.2886	-1.7155	-8.3352 to 0.0000	-8.3352	0.0000	decreasing	0.9599	No Trend	0
Aparima River at Thornbury	Nitrogen..Nitrate.Nitrite..Correction	1	0	203	19/1/00-12/12/16	0.7835	2.4	0.18	0.65	55	6948.3333	0.6478	0.5171	0.0017	0.2682	-0.0029 to 0.0075	-0.0029	0.0075	increasing	0.7156	No Trend	0
Aparima River at Thornbury	Nitrogen..Total..Correction	2	0	202	19/1/00-12/12/16	1.0648	3.4	0.34	0.935	105	6848.3333	1.2567	0.2089	0.0038	0.4067	-0.0008 to 0.0114	-0.0008	0.0114	increasing	0.8931	No Trend	0
Aparima River at Thornbury	Phosphorus..Total..Correction	10	9	194	19/1/00-12/12/16	0.0287	0.28	0.004	0.017	-106	6057.3333	-1.3491	0.1773	-0.0003	-1.4721	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.9458	No Trend	0
Aparima River at Thornbury	Organic.Nitrogen.Correction	6	0	198	19/1/00-12/12/16	0.2747	1.505	0.005	0.205	58	6498	0.7071	0.4795	0.001	0.4878	-0.0014 to 0.0036	-0.0014	0.0036	increasing	0.7848	No Trend	0
Bog Burn d/s Hundred Line Road	E.Coli..CFU..Correction	3	1	183	17/5/01-13/12/16	1586.8415	21000	40	780	216	5180	2.9873	0.0028	33.986	4.3572	17.1726 to 50.0273	17.1726	50.0273	increasing	0.9991	Trend	1
Bog Burn d/s Hundred Line Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	185	17/5/01-13/12/16	1.1166	6.6	0.036	0.84	380	5318.6667	5.1968	0	0.0302	3.5922	0.0212 to 0.0420	0.0212	0.0420	increasing	1	Trend	1
Bog Burn d/s Hundred Line Road	Nitrogen..Total..Correction	1	0	185	17/5/01-13/12/16	1.6337	7.8	0.26	1.3	309	5302.3333	4.2298	0	0.0313	2.4086	0.0198 to 0.0433	0.0198	0.0433	increasing	1	Trend	1
Bog Burn d/s Hundred Line Road	Organic.Nitrogen.Correction	3	0	183	17/5/01-13/12/16	0.5034	5.461	0.093	0.39	149	5160.3333	2.0603	0.0394	0.0055	1.4188	0.0007 to 0.0090	0.0007	0.0090	increasing	0.9812	Trend	1
Cascade Stream at Pourakino Valley Road	Clarity..Black.Disc..Field..m.	7	1	197	19/1/00-12/12/16	1.6878	5	0.16	1.6	23	6412	0.2747	0.7835	0.0022	0.135	-0.0124 to 0.0208	-0.0124	0.0208	increasing	0.6095	No Trend	0
Cascade Stream at Pourakino Valley Road	E.Coli..CFU..Correction	19	3	185	12/7/01-12/12/16	551.4108	67000	8	75	159	5287	2.173	0.0298	1.9992	2.6656	0.5005 to 3.5833	0.5005	3.5833	increasing	0.9878	Trend	1
Cascade Stream at Pourakino Valley Road	Nitrogen..Nitrate.Nitrite..Correction	18	11	186	12/7/01-12/12/16	0.0329	0.25	0.001	0.0175	-164	5289.3333	-2.2412	0.025	-0.0004	-2.2804	-0.0007 to -0.0001	-0.0007	-0.0001	decreasing	0.9965	Trend	-1
Cascade Stream at Pourakino Valley Road	Nitrogen..Total..Correction	18	6	186	12/7/01-12/12/16	0.1972	1.2	0.08	0.17	-35	5314.3333	-0.4664	0.6409	0	0	-0.0020 to 0.0012	-0.0020	0.0012	decreasing	0.5	No Trend	0
Cascade Stream at Pourakino Valley Road	Organic.Nitrogen.Correction	18	7	186	12/7/01-12/12/16	0.1728	1.174	0.055	0.1445	-1	5381	0	1	0.0001	0.0773	-0.0015 to 0.0017	-0.0015	0.0017	increasing	0.5573	No Trend	0
Cromel Stream at Selbie Road	Clarity..Black.Disc..Field..m.	5	1	192	12/7/00-13/12/16	4.9576	14.3	0.24	4.9	-117	5953.6667	-1.5034	0.1327	-0.0625	-1.2764	-0.1254 to 0.0020	-0.1254	0.0020	decreasing	0.9363	No Trend	0
Cromel Stream at Selbie Road	E.Coli..CFU..Correction	1	24	196	12/7/00-13/12/16	48.648	800	1	20	108	6069	1.3735	0.1696	0.5626	2.8128	0.0899 to 1.1236	0.0899	1.1236	increasing	0.9935	Trend	1
Dunsdale Stream at Dunsdale Reserve	Clarity..Black.Disc..Field..m.	7	1	196	18/1/00-15/11/16	1.7379	5	0.1	1.5	-134	6314.3333	-1.6737	0.0942	-0.0228	-1.5181	-0.0425 to 0.0000	-0.0425	0.0000	decreasing	0.9423	No Trend	0
Dunsdale Stream at Dunsdale Reserve	E.Coli..CFU..Correction	3	3	200	18/1/00-13/12/16	211.915	7300	3	91	43	6654.3333	0.5149	0.6066	0.3805	0.4181	-0.6686 to 1.9993	-0.6686	1.9993	increasing	0.7831	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Nitrate.Nitrite..Correction	1	1	202	18/1/00-13/12/16	0.1832	0.497	0.004	0.186	-94	6846.6667	-1.1239	0.261	-0.0009	-0.4929	-0.0032 to 0.0004	-0.0032	0.0004	decreasing	0.8404	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Nitrogen..Total..Correction	1	6	202	18/1/00-13/12/16	0.3819	2.9	0.0361	0.325	-89	6841.6667	-1.0639	0.2874	-0.0015	-0.4737	-0.0050 to 0.0019	-0.0050	0.0019	decreasing	0.7844	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Dissolved.Reactive..Correction	9	7	194	18/1/00-13/12/16	0.0141	0.05	0.005	0.013	-367	5998	-4.7258	0	-0.0003	-1.9247	-0.0003 to -0.0002	-0.0003	-0.0002	decreasing	1	Trend	-1
Dunsdale Stream at Dunsdale Reserve	Phosphorus..Total..Correction	9	1	194	18/1/00-13/12/16	0.03	0.48	0.005	0.021	-154	6062.6667	-1.965	0.0494	-0.0002	-1.0599	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.9787	No Trend	0
Dunsdale Stream at Dunsdale Reserve	Organic.Nitrogen.Correction	6	6	197	18/1/00-13/12/16	0.2	2.709	0.005	0.118	-50	6374	-0.6137	0.5394	-0.0007	-0.6145	-0.0027 to 0.0012	-0.0027	0.0012	decreasing	0.743	No Trend	0
Irthing Stream at Ellis	Clarity..Black.Disc..Field..m.	4	0	200	19/1/00-13/12/	2.8745	7.2	0.12	2.75	204	6680	2.4837	0.013	0.0507	1.8424	0.0141 to 0.0935	0.0141	0.0935	increasing	0.9934	Trend	1

Road					16																		
Irthing Stream at Ellis Road	E.Coli..CFU..Correction	6	3	198	10/5/00-13/12/16	396.697	14000	10	120	-277	6460.3333	-3.4339	0.0006	-3.6548	-3.0457	-6.0344 to -1.9969	-6.0344	-1.9969	decreasing	0.9994	Trend	-1
Irthing Stream at Ellis Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	203	19/1/00-13/12/16	1.28	3.3	0.014	1.2	370	6956.6667	4.4241	0	0.04	3.3306	0.0257 to 0.0500	0.0257	0.0500	increasing	1	Trend	1
Irthing Stream at Ellis Road	Nitrogen..Total..Correction	1	1	203	19/1/00-13/12/16	1.5009	3.5	0.11	1.4	370	6950	4.4262	0	0.0361	2.5781	0.0222 to 0.0499	0.0222	0.0499	increasing	1	Trend	1
Irthing Stream at Ellis Road	Organic.Nitrogen.Correction	12	1	192	19/1/00-13/12/16	0.2312	1.539	0.045	0.185	-128	5951.3333	-1.6463	0.0997	-0.0025	-1.3518	-0.0052 to 0.0000	-0.0052	0.0000	decreasing	0.9628	No Trend	0
Makarewa River at Lora Gorge Road	Clarity..Black.Disc..Field..m.	7	0	191	11/7/00-13/12/16	0.9404	3.3	0.08	0.95	-167	5896.3333	-2.1618	0.0306	-0.0144	-1.5192	-0.0260 to -0.0040	-0.0260	-0.0040	decreasing	0.9847	Trend	-1
Makarewa River at Lora Gorge Road	E.Coli..CFU..Correction	3	2	195	11/7/00-13/12/16	1996.3231	67000	30	400	-16	6162	-0.1911	0.8485	0	0	-6.4386 to 5.0514	-6.4386	5.0514	decreasing	0.5	No Trend	0
Makarewa River at Lora Gorge Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	197	11/7/00-13/12/16	0.6183	1.81	0.019	0.57	158	6366.6667	1.9676	0.0491	0.0063	1.0991	0.0002 to 0.0115	0.0002	0.0115	increasing	0.9725	Trend	1
Makarewa River at Lora Gorge Road	Nitrogen..Total..Correction	1	0	197	11/7/00-13/12/16	0.9786	6.2	0.13	0.91	123	6356.3333	1.5302	0.126	0.0055	0.6089	0.0000 to 0.0150	0.0000	0.0150	increasing	0.931	No Trend	0
Makarewa River at Lora Gorge Road	Phosphorus..Dissolved.Reactive..Correction	10	4	188	11/7/00-13/12/16	0.0174	0.1	0.004	0.015	-216	5506	-2.8975	0.0038	-0.0003	-1.667	-0.0004 to -0.0001	-0.0004	-0.0001	decreasing	1	Trend	-1
Makarewa River at Lora Gorge Road	Phosphorus..Total..Correction	10	2	188	11/7/00-13/12/16	0.0481	0.93	0.014	0.034	-137	5588.3333	-1.8193	0.0689	-0.0004	-1.0854	-0.0007 to 0.0000	-0.0007	0.0000	decreasing	0.9704	No Trend	0
Makarewa River at Lora Gorge Road	Organic.Nitrogen.Correction	5	0	193	11/7/00-13/12/16	0.3534	5.08	0.045	0.27	79	6033	1.0042	0.3153	0.0017	0.6385	-0.0012 to 0.0046	-0.0012	0.0046	increasing	0.8388	No Trend	0
Makarewa River at Wallacetown	E.Coli..CFU..Correction	7	3	197	10/5/00-13/12/16	3029.3655	67000	30	360	-19	6344.3333	-0.226	0.8212	-0.9544	-0.2651	-8.3957 to 5.7809	-8.3957	5.7809	decreasing	0.6216	No Trend	0
Makarewa River at Wallacetown	Nitrogen..Nitrate.Nitrite..Correction	1	0	203	19/1/00-13/12/16	1.1286	4.18	0.15	1	-122	6948	-1.4516	0.1466	-0.006	-0.5998	-0.0124 to 0.0000	-0.0124	0.0000	decreasing	0.9486	No Trend	0
Makarewa River at Wallacetown	Nitrogen..Total.Ammoniacal..Correction	1	7	203	19/1/00-13/12/16	0.1122	1.7	0.01	0.06	-337	6967	-4.0255	0.0001	-0.0019	-3.1365	-0.0026 to -0.0010	-0.0026	-0.0010	decreasing	0.9997	Trend	-1
Makarewa River at Wallacetown	Nitrogen..Total..Correction	2	0	202	19/1/00-13/12/16	1.7619	6.7	0.51	1.595	-93	6839	-1.1125	0.2659	-0.0086	-0.5389	-0.0200 to 0.0013	-0.0200	0.0013	decreasing	0.8858	No Trend	0
Makarewa River at Wallacetown	Phosphorus..Dissolved.Reactive..Correction	9	4	195	19/1/00-13/12/16	0.0249	0.23	0.005	0.018	116	6148.6667	1.4666	0.1425	0.0001	0.617	0.0000 to 0.0003	0.0000	0.0003	increasing	0.887	No Trend	0
Makarewa River at Wallacetown	Phosphorus..Total..Correction	9	0	195	19/1/00-13/12/16	0.0747	0.44	0.017	0.05	-103	6203	-1.2951	0.1953	-0.0003	-0.6668	-0.0009 to 0.0002	-0.0009	0.0002	decreasing	0.9023	No Trend	0
Makarewa River at Wallacetown	Organic.Nitrogen.Correction	7	0	197	19/1/00-13/12/16	0.5467	2.33	0.033	0.433	36	6418	0.4369	0.6622	0.0015	0.3468	-0.0026 to 0.0060	-0.0026	0.0060	increasing	0.6637	No Trend	0
Mararoa River at South Mavora Lake	Clarity..Black.Disc..Field..m.	8	0	195	19/1/00-15/12/16	5.6862	9.9	1.22	5.74	8	6211.3333	0.0888	0.9292	0.0015	0.0268	-0.0405 to 0.0400	-0.0405	0.0400	increasing	0.5154	No Trend	0
Mararoa River at South Mavora Lake	E.Coli..CFU..Correction	3	159	200	19/1/00-15/12/16	416.31	67000	1	100	-1	4697	0	1	0.5723	0.5723	- to -	- to -	- to -	increasing	0.694	#VALUE!	#VALUE!
Mararoa River at The Key	Clarity..Black.Disc..Field..m.	12	0	185	12/7/00-15/12/16	3.1575	8.5	0.06	3	89	5354.3333	1.2026	0.2291	0.0465	1.5515	-0.0152 to 0.0924	-0.0152	0.0924	increasing	0.8928	No Trend	0
Mararoa River at The Key	E.Coli..CFU..Correction	3	12	194	12/7/00-15/12/16	756.732	67000	2	50	-226	6070.6667	-2.8878	0.0039	-1.2643	-2.5285	-2.0875 to 0.0000	-2.0875	0.0000	decreasing	0.966	No Trend	0
Mararoa River at The Key	Nitrogen..Nitrate.Nitrite..Correction	1	2	196	12/7/00-15/12/16	0.1322	0.563	0.009	0.11	250	6294	3.1386	0.0017	0.0025	1.8163	0.0008 to 0.0030	0.0008	0.0030	increasing	0.9985	Trend	1
Mararoa River at The Key	Nitrogen..Total..Correction	1	7	196	12/7/00-15/12/16	0.2595	1.75	0.082	0.2	190	6236.6667	2.3932	0.0167	0.0025	1.2479	0.0000 to 0.0047	0.0000	0.0047	increasing	0.9119	No Trend	0
Mararoa River at The Key	Organic.Nitrogen.Correction	6	7	191	12/7/00-15/12/16	0.1292	1.522	0.005	0.081	20	5809.3333	0.2493	0.8031	0	0	-0.0013 to 0.0014	-0.0013	0.0014	increasing	0.5	No Trend	0
Mararoa River at Weir Road	Clarity..Black.Disc..Field..m.	18	3	186	19/1/00-15/12/16	2.7749	8.4	0.09	2.58	168	5403.3333	2.2719	0.0231	0.0805	3.1194	0.0155 to 0.1399	0.0155	0.1399	increasing	0.9901	Trend	1
Mararoa River at Weir Road	E.Coli..CFU..Correction	2	12	202	19/1/00-15/12/16	243.9059	6000	2	58	-260	6821.6667	-3.1358	0.0017	-1.7059	-2.9413	-3.0928 to 0.0000	-3.0928	0.0000	decreasing	0.9739	No Trend	0
Mararoa River at Weir Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	203	19/1/00-15/12/16	0.3308	0.72	0.1	0.32	484	6942.6667	5.7967	0	0.0088	2.7559	0.0058 to 0.0108	0.0058	0.0108	increasing	1	Trend	1
Mararoa River at Weir Road	Nitrogen..Total..Correction	1	0	203	19/1/00-15/12/16	0.4799	1.9	0.18	0.44	482	6942	5.773	0	0.01	2.2747	0.0067 to 0.0134	0.0067	0.0134	increasing	1	Trend	1
Mararoa River at Weir Road	Organic.Nitrogen.Correction	6	0	198	19/1/00-15/12/16	0.1469	1.583	0.005	0.0879	121	6476.3333	1.4911	0.1359	0.0012	1.4192	0.0000 to 0.0025	0.0000	0.0025	increasing	0.9263	No Trend	0
Mataura River 200m d/s Mataura Bridge	Clarity..Black.Disc..Field..m.	6	1	197	18/1/00-14/12/16	1.1363	5	0.07	1.05	189	6416.3333	2.347	0.0189	0.0301	2.867	0.0095 to 0.0447	0.0095	0.0447	increasing	0.9912	Trend	1
Mataura River 200m d/s Mataura Bridge	E.Coli..CFU..Correction	8	5	195	11/7/00-14/12/16	3946.4462	67000	57	1000	146	6149.3333	1.8491	0.0644	20.0302	2.003	2.6696 to 49.8510	2.6696	49.8510	increasing	0.9758	Trend	1
Mataura River 200m d/s Mataura Bridge	Nitrogen..Nitrate.Nitrite..Correction	1	0	202	18/1/00-14/12/16	0.844	2.4	0.28	0.78	259	6843	3.1189	0.0018	0.01	1.2785	0.0038 to 0.0143	0.0038	0.0143	increasing	0.9993	Trend	1
Mataura River 200m d/s Mataura Bridge	Nitrogen..Total.Ammoniacal..Correction	2	13	201	18/1/00-14/12/16	0.0626	0.3	0.0043	0.041	-150	6718	-1.8179	0.0691	-0.0005	-1.123	-0.0013 to 0.0001	-0.0013	0.0001	decreasing	0.9094	No Trend	0
Mataura River 200m d/s Mataura Bridge	Nitrogen..Total..Correction	1	0	202	18/1/00-14/12/16	1.2374	3.5	0.069	1.15	62	6851.3333	0.737	0.4611	0.0022	0.1933	-0.0040 to 0.0101	-0.0040	0.0101	increasing	0.7733	No Trend	0
Mataura River 200m d/s Mataura Bridge	Phosphorus..Dissolved.Reactive..Correction	11	7	192	18/1/00-14/12/16	0.0253	0.16	0.001	0.016	-546	5883.3333	-7.1053	0	-0.001	-6.2543	-0.0013 to -0.0007	-0.0013	-0.0007	decreasing	1	Trend	-1
Mataura River 200m d/s Mataura Bridge	Phosphorus..Total..Correction	11	0	192	18/1/00-14/12/16	0.0598	1.2	0.008	0.039	-388	5930.6667	-5.0253	0	-0.002	-5.1177	-0.0025 to -0.0013	-0.0025	-0.0013	decreasing	1	Trend	-1

Mataura River 200m d/s Mataura Bridge	Organic.Nitrogen.Correction	6	0	197	18/1/00-14/12/16	0.3417	2.522	0.021	0.246	-213	6405	-2.649	0.0081	-0.0051	-2.0634	-0.0086 to -0.0015	-0.0086	-0.0015	decreasing	0.996	Trend	-1
Mataura River at Gore	Clarity..Black.Disc..Field..m.	6	3	196	14/3/00-14/12/16	1.4402	5	0.06	1.19	73	6312.3333	0.9062	0.3648	0.0115	0.9701	-0.0097 to 0.0348	-0.0097	0.0348	increasing	0.8277	No Trend	0
Mataura River at Gore	E.Coli..CFU..Correction	3	1	199	14/3/00-14/12/16	1493.88894	67000	30	390	-9	6575.6667	-0.0987	0.9214	0	0	-6.9188 to 5.1555	-6.9188	5.1555	increasing	0.5	No Trend	0
Mataura River at Gore	Nitrogen..Nitrate.Nitrite..Correction	2	0	200	14/3/00-14/12/16	0.8166	2.29	0.27	0.78	278	6657.3333	3.3949	0.0007	0.0099	1.2742	0.0040 to 0.0140	0.0040	0.0140	increasing	0.9996	Trend	1
Mataura River at Gore	Nitrogen..Total..Correction	2	0	200	14/3/00-14/12/16	1.0477	3.4	0.44	0.995	289	6643.6667	3.5334	0.0004	0.01	1.0065	0.0050 to 0.0169	0.0050	0.0169	increasing	0.9998	Trend	1
Mataura River at Gore	Phosphorus..Dissolved.Reactive..Correction	12	26	190	14/3/00-14/12/16	0.0157	0.055	0.001	0.01	-247	5652	-3.2722	0.0011	-0.0002	-2.4966	-0.0004 to -0.0001	-0.0004	-0.0001	decreasing	0.9999	Trend	-1
Mataura River at Gore	Phosphorus..Total..Correction	12	6	190	14/3/00-14/12/16	0.0385	1.2	0.003	0.0185	-47	5763	-0.6059	0.5446	-0.0003	-1.352	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.9106	No Trend	0
Mataura River at Gore	Organic.Nitrogen.Correction	12	0	190	14/3/00-14/12/16	0.2329	2.229	0.015	0.1675	43	5795.6667	0.5517	0.5812	0.001	0.5979	-0.0014 to 0.0036	-0.0014	0.0036	increasing	0.6977	No Trend	0
Mataura River at Mataura Island Bridge	Clarity..Black.Disc..Field..m.	15	1	189	18/1/00-14/12/16	1.0812	5	0.08	0.98	95	5693	1.2458	0.2128	0.013	1.3271	-0.0050 to 0.0313	-0.0050	0.0313	increasing	0.8934	No Trend	0
Mataura River at Mataura Island Bridge	E.Coli..CFU..Correction	2	3	202	18/1/00-14/12/16	1749.1931	67000	17	325	-28	6834.3333	-0.3266	0.744	-1.3796	-0.4245	-7.6943 to 5.9679	-7.6943	5.9679	decreasing	0.6667	No Trend	0
Mataura River at Parawa	E.Coli..CFU..Correction	1	2	201	19/1/00-14/12/16	331.9701	7000	10	110	4	6758.6667	0.0365	0.9709	0	0	-1.8199 to 2.6866	-1.8199	2.6866	decreasing	0.5	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	E.Coli..CFU..Correction	3	30	198	18/1/00-14/12/16	58.6212	1900	1	21.5	37	6248.6667	0.4554	0.6488	0.2501	1.1632	-0.0839 to 0.6677	-0.0839	0.6677	increasing	0.852	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Nitrate.Nitrite..Correction	3	0	198	18/1/00-14/12/16	0.2374	0.88	0.013	0.189	119	6511	1.4624	0.1436	0.0037	1.9708	-0.0004 to 0.0054	-0.0004	0.0054	increasing	0.9336	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Nitrogen..Total..Correction	2	3	199	18/1/00-14/12/16	0.3837	1.7	0.087	0.34	38	6579.3333	0.4562	0.6483	0	0	-0.0053 to 0.0050	-0.0053	0.0050	increasing	0.5	No Trend	0
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Dissolved.Reactive..Correction	13	9	188	18/1/00-14/12/16	0.0141	0.05	0.005	0.012	-184	5514	-2.4644	0.0137	-0.0002	-1.8497	-0.0003 to -0.0001	-0.0003	-0.0001	decreasing	0.9995	Trend	-1
Mimihau Stream Tributary at Venlaw Forest	Phosphorus..Total..Correction	13	4	188	18/1/00-14/12/16	0.0231	0.23	0.01	0.019	-344	5545.3333	-4.6061	0	-0.0004	-2.2576	-0.0006 to -0.0003	-0.0006	-0.0003	decreasing	1	Trend	-1
Mimihau Stream Tributary at Venlaw Forest	Organic.Nitrogen.Correction	7	3	194	18/1/00-14/12/16	0.1417	1.498	0.004	0.1085	30	6141.3333	0.3701	0.7113	0	0	-0.0016 to 0.0013	-0.0016	0.0013	decreasing	0.5	No Trend	0
Mimihau Stream at Wyndham	Clarity..Black.Disc..Field..m.	8	0	190	11/7/00-14/12/16	0.7656	2	0.15	0.715	-188	5792.6667	-2.457	0.014	-0.0088	-1.2246	-0.0150 to -0.0025	-0.0150	-0.0025	decreasing	0.9934	Trend	-1
Mimihau Stream at Wyndham	E.Coli..CFU..Correction	2	1	196	11/7/00-14/12/16	946.3827	16000	7	345	93	6277	1.1612	0.2456	3.3341	0.9664	-0.8112 to 8.5156	-0.8112	8.5156	increasing	0.8968	No Trend	0
Mimihau Stream at Wyndham	Nitrogen..Nitrate.Nitrite..Correction	1	0	197	11/7/00-14/12/16	0.8058	1.8	0.1	0.79	481	6367.6667	6.0152	0	0.0188	2.382	0.0144 to 0.0231	0.0144	0.0231	increasing	1	Trend	1
Mimihau Stream at Wyndham	Nitrogen..Total..Correction	1	0	197	11/7/00-14/12/16	1.0798	2.3	0.28	1.01	492	6368	6.1529	0	0.0243	2.4034	0.0180 to 0.0299	0.0180	0.0299	increasing	1	Trend	1
Mimihau Stream at Wyndham	Phosphorus..Dissolved.Reactive..Correction	9	4	189	11/7/00-14/12/16	0.0145	0.05	0.0042	0.013	-183	5547	-2.4437	0.0145	-0.0002	-1.17	-0.0002 to 0.0000	-0.0002	0.0000	decreasing	0.9972	No Trend	0
Mimihau Stream at Wyndham	Phosphorus..Total..Correction	9	1	189	11/7/00-14/12/16	0.0458	0.21	0.015	0.037	-84	5673.3333	-1.1019	0.2705	-0.0002	-0.6749	-0.0005 to 0.0001	-0.0005	0.0001	decreasing	0.87	No Trend	0
Mimihau Stream at Wyndham	Organic.Nitrogen.Correction	4	0	194	10/8/00-14/12/16	0.2665	1.074	0.001	0.225	247	6109	3.1474	0.0016	0.005	2.2218	0.0023 to 0.0073	0.0023	0.0073	increasing	0.9992	Trend	1
Mokotua Stream at Awarua	Nitrogen..Nitrate.Nitrite..Correction	0	20	185	25/7/01-12/12/16	0.0672	2.2	0.002	0.017	-410	5107.3333	-5.723	0	-0.001	-5.8898	-0.0013 to -0.0008	-0.0013	-0.0008	decreasing	1	Trend	-1
Mokotua Stream at Awarua	Nitrogen..Total..Correction	0	0	185	25/7/01-12/12/16	0.7635	2.5	0.32	0.71	60	5296.6667	0.8107	0.4175	0.002	0.2805	-0.0020 to 0.0075	-0.0020	0.0075	increasing	0.8067	No Trend	0
Mokotua Stream at Awarua	Organic.Nitrogen.Correction	1	0	184	25/7/01-12/12/16	0.7046	1.67	0.285	0.6678	76	5244.6667	1.0356	0.3004	0.0032	0.476	-0.0018 to 0.0080	-0.0018	0.0080	increasing	0.8385	No Trend	0
Opourikii Stream at Tweedie Road	E.Coli..CFU..Correction	0	8	185	12/7/01-12/12/16	6390.1622	120000	50	800	139	5219.6667	1.9101	0.0561	14.6285	1.8286	0.0000 to 30.0300	0.0000	30.0300	increasing	0.9594	No Trend	0
Opourikii Stream at Tweedie Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	185	12/7/01-12/12/16	1.7431	5.8	0.24	1.7	436	5293.3333	5.9789	0	0.0387	2.277	0.0260 to 0.0483	0.0260	0.0483	increasing	1	Trend	1
Opourikii Stream at Tweedie Road	Nitrogen..Total..Correction	0	0	185	12/7/01-12/12/16	2.1717	4.2	0.97	2.1	383	5255.6667	5.2693	0	0.0356	1.6956	0.0250 to 0.0502	0.0250	0.0502	increasing	1	Trend	1
Oreti River at Lumsden Bridge	Clarity..Black.Disc..Field..m.	13	3	191	19/1/00-13/12/16	3.7272	9.9	0.06	3.71	-26	5881.3333	-0.326	0.7444	-0.0091	-0.2449	-0.0691 to 0.0386	-0.0691	0.0386	decreasing	0.621	No Trend	0
Oreti River at Lumsden Bridge	E.Coli..CFU..Correction	1	5	203	19/1/00-13/12/16	515.0788	67000	5	70	-83	6931.6667	-0.9849	0.3247	-0.4993	-0.7133	-2.4994 to 0.9980	-2.4994	0.9980	decreasing	0.7547	No Trend	0
Oreti River at Three Kings	Clarity..Black.Disc..Field..m.	8	3	196	19/1/00-13/12/16	4.8176	11.2	0.24	4.775	-32	6301.3333	-0.3905	0.6962	-0.01	-0.209	-0.0713 to 0.0495	-0.0713	0.0495	decreasing	0.6293	No Trend	0
Oreti River at Three Kings	E.Coli..CFU..Correction	1	35	203	19/1/00-13/12/16	403.5764	67000	1	23	-144	6688.6667	-1.7485	0.0804	0	0	-0.4983 to 0.5998	-0.4983	0.5998	decreasing	0.5	No Trend	0

Oreti River at Three Kings	Nitrogen..Nitrate.Nitrite..Correction	1	3	203	19/1/00-13/12/16	0.0401	0.25	0.003	0.032	189	6934.3333	2.2576	0.024	0.0004	1.3769	0.0000 to 0.0008	0.0000	0.0008	increasing	0.9756	No Trend	0
Oreti River at Wallacetown	E.Coli..CFU..Correction	3	5	199	15/3/00-13/12/16	942.5176	67000	6	150	-278	6558.6667	-3.4204	0.0006	-5.9986	-3.9991	-9.2851 to -2.5013	-9.2851	-2.5013	decreasing	0.9985	Trend	-1
Otamita Stream at Mandeville	Clarity..Black.Disc..Field..m.	3	0	200	18/1/00-14/12/16	1.1752	7.5	0.14	1.2	-119	6678.3333	-1.4439	0.1488	-0.011	-0.9144	-0.0217 to 0.0013	-0.0217	0.0013	decreasing	0.9293	No Trend	0
Otamita Stream at Mandeville	E.Coli..CFU..Correction	1	2	202	18/1/00-14/12/16	1971.9406	67000	20	270	51	6806.3333	0.6061	0.5445	0.9093	0.3368	-1.6669 to 4.9941	-1.6669	4.9941	increasing	0.7463	No Trend	0
Otamita Stream at Mandeville	Nitrogen..Nitrate.Nitrite..Correction	1	0	202	18/1/00-14/12/16	0.7149	2.2	0.012	0.64	270	6870	3.2454	0.0012	0.013	2.0307	0.0054 to 0.0204	0.0054	0.0204	increasing	0.9994	Trend	1
Otamita Stream at Mandeville	Nitrogen..Total..Correction	1	0	202	18/1/00-14/12/16	1.07	3.5	0.25	0.955	223	6846.3333	2.683	0.0073	0.014	1.4658	0.0040 to 0.0233	0.0040	0.0233	increasing	0.9966	Trend	1
Otamita Stream at Mandeville	Phosphorus..Dissolved.Reactive..Correction	10	6	193	18/1/00-14/12/16	0.014	0.12	0.004	0.012	-292	5919.3333	-3.7823	0.0002	-0.0003	-2.5835	-0.0004 to -0.0002	-0.0004	-0.0002	decreasing	1	Trend	-1
Otamita Stream at Mandeville	Phosphorus..Total..Correction	9	3	194	18/1/00-14/12/16	0.0386	0.24	0.008	0.029	-188	6062.6667	-2.4017	0.0163	-0.0003	-1.193	-0.0007 to -0.0001	-0.0007	-0.0001	decreasing	0.9932	Trend	-1
Otamita Stream at Mandeville	Organic.Nitrogen.Correction	3	0	200	18/1/00-14/12/16	0.348	1.851	0	0.3	98	6689.3333	1.186	0.2356	0.002	0.6663	-0.0010 to 0.0048	-0.0010	0.0048	increasing	0.887	No Trend	0
Otapiri Stream at Otapiri Gorge	Clarity..Black.Disc..Field..m.	5	1	193	11/7/00-13/12/16	0.8551	5	0.09	0.82	-159	6013	-2.0376	0.0416	-0.0157	-1.9153	-0.0251 to -0.0035	-0.0251	-0.0035	decreasing	0.9807	Trend	-1
Otapiri Stream at Otapiri Gorge	E.Coli..CFU..Correction	2	2	196	11/7/00-13/12/16	1987.4439	67000	10	425	22	6257.3333	0.2655	0.7906	0.5558	0.1308	-4.9937 to 8.8466	-4.9937	8.8466	increasing	0.5763	No Trend	0
Otapiri Stream at Otapiri Gorge	Nitrogen..Nitrate.Nitrite..Correction	1	1	197	11/7/00-13/12/16	0.5612	3.72	0.019	0.43	278	6388.6667	3.4656	0.0005	0.011	2.5571	0.0050 to 0.0161	0.0050	0.0161	increasing	0.9998	Trend	1
Otapiri Stream at Otapiri Gorge	Nitrogen..Total..Correction	1	0	197	11/7/00-13/12/16	0.9553	6.8	0.12	0.77	208	6381.3333	2.5913	0.0096	0.0114	1.4847	0.0033 to 0.0200	0.0033	0.0200	increasing	0.9954	Trend	1
Otapiri Stream at Otapiri Gorge	Phosphorus..Dissolved.Reactive..Correction	10	3	188	11/7/00-13/12/16	0.0176	0.05	0.0056	0.016	-111	5563	-1.4748	0.1403	-0.0002	-1.0419	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.9557	No Trend	0
Otapiri Stream at Otapiri Gorge	Phosphorus..Total..Correction	10	0	188	11/7/00-13/12/16	0.0509	0.62	0.013	0.036	-45	5590.3333	-0.5885	0.5562	-0.0001	-0.278	-0.0004 to 0.0002	-0.0004	0.0002	decreasing	0.7165	No Trend	0
Otapiri Stream at Otapiri Gorge	Organic.Nitrogen.Correction	3	0	195	11/7/00-13/12/16	0.3871	6.314	0.01	0.275	66	6214	0.8246	0.4096	0.0014	0.5142	-0.0020 to 0.0050	-0.0020	0.0050	increasing	0.7885	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	Clarity..Black.Disc..Field..m.	16	3	187	19/1/00-12/12/16	0.924	5	0.1	0.85	-33	5558.6667	-0.4292	0.6678	-0.002	-0.2352	-0.0134 to 0.0081	-0.0134	0.0081	decreasing	0.6368	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	E.Coli..CFU..Correction	6	4	197	12/7/00-12/12/16	4156.9137	75000	100	800	144	6326.6667	1.7978	0.0722	14.7059	1.8382	0.0000 to 35.0850	0.0000	35.0850	increasing	0.96	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	203	19/1/00-12/12/16	1.0427	4	0.07	0.89	-7	6943	-0.072	0.9426	0	0	-0.0076 to 0.0064	-0.0076	0.0064	increasing	0.5	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	Nitrogen..Total.Ammoniacal..Correction	0	20	203	19/1/00-12/12/16	0.0396	0.181	0.0026	0.03	-188	6887.6667	-2.2532	0.0242	-0.0003	-0.834	-0.0007 to 0.0002	-0.0007	0.0002	decreasing	0.8367	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	Nitrogen..Total..Correction	0	0	203	19/1/00-12/12/16	1.5407	5.2	0.32	1.4	-3	6944.3333	-0.024	0.9809	0	0	-0.0082 to 0.0109	-0.0082	0.0109	decreasing	0.5	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	Phosphorus..Dissolved.Reactive..Correction	8	1	195	19/1/00-12/12/16	0.0255	0.071	0.0054	0.023	148	6160.6667	1.8729	0.0611	0.0002	0.8726	0.0000 to 0.0003	0.0000	0.0003	increasing	0.9715	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	Phosphorus..Total..Correction	8	0	195	19/1/00-12/12/16	0.0724	0.85	0.025	0.054	56	6196.6667	0.6987	0.4847	0.0002	0.3702	-0.0003 to 0.0007	-0.0003	0.0007	increasing	0.7576	No Trend	0
Otautau Stream at Otautau - Tuatapere Road	Organic.Nitrogen.Correction	5	0	198	19/1/00-12/12/16	0.4762	2.079	0.127	0.368	-17	6525	-0.1981	0.843	-0.0005	-0.1358	-0.0047 to 0.0030	-0.0047	0.0030	decreasing	0.5774	No Trend	0
Otautau Stream at Waikouro	E.Coli..CFU..Correction	0	4	185	11/7/01-12/12/16	5813.9892	130000	78	1500	-80	5262.3333	-1.089	0.2761	-14.9846	-0.9999	-37.1901 to 14.4109	-37.190	14.4109	decreasing	0.7726	No Trend	0
Otautau Stream at Waikouro	Nitrogen..Nitrate.Nitrite..Correction	0	0	185	11/7/01-12/12/16	0.9059	2.8	0.045	0.82	36	5319.3333	0.4799	0.6313	0.0021	0.2513	-0.0057 to 0.0100	-0.0057	0.0100	increasing	0.6633	No Trend	0
Otautau Stream at Waikouro	Nitrogen..Total.Ammoniacal..Correction	0	14	185	11/7/01-12/12/16	0.0613	0.54	0.0041	0.044	-271	5311.6667	-3.7047	0.0002	-0.0018	-4.1587	-0.0027 to -0.0010	-0.0027	-0.0010	decreasing	0.9981	Trend	-1
Otautau Stream at Waikouro	Nitrogen..Total..Correction	0	0	185	11/7/01-12/12/16	1.4781	4.7	0.32	1.3	-3	5315.6667	-0.0274	0.9781	0	0	-0.0139 to 0.0113	-0.0139	0.0113	decreasing	0.5	No Trend	0
Otepuni Creek at Nith Street	Clarity..Black.Disc..Field..m.	11	4	191	18/1/00-13/12/16	0.913	5	0.1	0.82	-46	5818.6667	-0.5899	0.5552	-0.0042	-0.5102	-0.0139 to 0.0058	-0.0139	0.0058	decreasing	0.7227	No Trend	0
Otepuni Creek at Nith Street	E.Coli..CFU..Correction	2	3	200	18/1/00-13/12/16	3928.285	110000	67	1450	146	6639.3333	1.7795	0.0752	25.0573	1.7281	0.0000 to 50.1717	0.0000	50.1717	increasing	0.9597	No Trend	0
Otepuni Creek at Nith Street	Nitrogen..Nitrate.Nitrite..Correction	1	0	201	18/1/00-13/12/16	1.4571	4.5	0.23	1.39	-112	6777.3333	-1.3483	0.1776	-0.0077	-0.5538	-0.0185 to 0.0014	-0.0185	0.0014	decreasing	0.9125	No Trend	0
Otepuni Creek at Nith Street	Nitrogen..Total.Ammoniacal..Correction	1	19	201	18/1/00-13/12/16	0.0875	2.1	0.006	0.059	-163	6708.3333	-1.9779	0.0479	-0.0003	-0.5296	-0.0013 to 0.0005	-0.0013	0.0005	decreasing	0.7695	No Trend	0
Otepuni Creek at Nith Street	Nitrogen..Total..Correction	1	0	201	18/1/00-13/12/16	2.2726	5	0.75	2.2	-198	6726.6667	-2.402	0.0163	-0.0206	-0.9378	-0.0330 to -0.0015	-0.0330	-0.0015	decreasing	0.9864	Trend	-1

Otepuni Creek at Nith Street	Phosphorus..Dissolved.Reactive..Correction	9	3	193	18/10/00-13/12/16	0.0198	0.53	0.004	0.014	-185	5978.3333	-2.3797	0.0173	-0.0002	-1.19 09	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.9994	No Trend	0
Otepuni Creek at Nith Street	Phosphorus..Total..Correction	9	1	193	18/10/00-13/12/16	0.063	0.73	0.014	0.048	-250	6038	-3.2044	0.0014	-0.001	-2.0827	-0.0015 to -0.0005	-0.0015	-0.0005	decreasing	0.9994	Trend	-1
Otepuni Creek at Nith Street	Organic.Nitrogen.Correction	3	0	199	18/10/00-13/12/16	0.7367	3.19	0.016	0.672	-87	6599	-1.0587	0.2898	-0.003	-0.4404	-0.0088 to 0.0027	-0.0088	0.0027	decreasing	0.8457	No Trend	0
Oteramika Stream at Seaward Downs	Clarity..Black.Disc..Field..m.	6	0	198	18/10/00-14/12/16	0.6426	1.29	0.12	0.64	-209	6487.6667	-2.5824	0.0098	-0.0087	-1.3602	-0.0150 to -0.0025	-0.0150	-0.0025	decreasing	0.9947	Trend	-1
Oteramika Stream at Seaward Downs	E.Coli..CFU..Correction	2	4	202	18/10/00-14/12/16	2230.703	67000	10	480	97	6813	1.1631	0.2448	8.054	1.6779	-2.5925 to 19.0483	-2.5925	19.0483	increasing	0.9207	No Trend	0
Oteramika Stream at Seaward Downs	Nitrogen..Nitrate.Nitrite..Correction	1	6	203	18/10/00-14/12/16	1.7017	7.9	0.012	1.51	208	6930	2.4866	0.0129	0.0196	1.2954	0.0000 to 0.0335	0.0000	0.0335	increasing	0.9834	No Trend	0
Oteramika Stream at Seaward Downs	Nitrogen..Total..Correction	1	0	203	18/10/00-14/12/16	2.6172	8.7	0.48	2.4	238	6929.3333	2.8471	0.0044	0.0333	1.3878	0.0163 to 0.0500	0.0163	0.0500	increasing	0.9985	Trend	1
Oteramika Stream at Seaward Downs	Phosphorus..Dissolved.Reactive..Correction	9	0	195	18/10/00-14/12/16	0.0385	0.47	0.005	0.026	108	6155.3333	1.3638	0.1726	0.0002	0.7685	0.0000 to 0.0004	0.0000	0.0004	increasing	0.906	No Trend	0
Oteramika Stream at Seaward Downs	Phosphorus..Total..Correction	9	1	195	18/10/00-14/12/16	0.109	1.3	0.015	0.086	44	6194	0.5464	0.5848	0.0001	0.1452	-0.0005 to 0.0011	-0.0005	0.0011	increasing	0.6486	No Trend	0
Oteramika Stream at Seaward Downs	Organic.Nitrogen.Correction	2	0	202	18/10/00-14/12/16	0.8889	8.08	0.063	0.7973	213	6877	2.5564	0.0106	0.0099	1.2379	0.0039 to 0.0165	0.0039	0.0165	increasing	0.9948	Trend	1
Pourakino River at Traill Road	E.Coli..CFU..Correction	0	3	185	12/70/01-12/12/16	1892.373	67000	20	310	135	5267	1.8464	0.0648	6.0363	1.9472	0.0000 to 10.8968	0.0000	10.8968	increasing	0.9571	No Trend	0
Pourakino River at Traill Road	Nitrogen..Nitrate.Nitrite..Correction	0	0	185	12/70/01-12/12/16	0.1747	1.5	0.009	0.154	150	5312.6667	2.0442	0.0409	0.0017	1.1139	0.0003 to 0.0033	0.0003	0.0033	increasing	0.982	Trend	1
Pourakino River at Traill Road	Nitrogen..Total..Correction	0	0	185	12/70/01-12/12/16	0.402	1.1	0.13	0.37	72	5294	0.9758	0.3292	0.0017	0.4506	-0.0009 to 0.0046	-0.0009	0.0046	increasing	0.845	No Trend	0
Pourakino River at Traill Road	Organic.Nitrogen.Correction	2	0	183	12/70/01-12/12/16	0.221	0.929	0.042	0.177	23	5175.6667	0.3058	0.7598	0.0005	0.2842	-0.0018 to 0.0025	-0.0018	0.0025	increasing	0.6201	No Trend	0
Tussock Creek at Cooper Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	185	16/70/01-13/12/16	1.6378	5.74	0.016	1.6	-127	5300.3333	-1.7307	0.0835	-0.017	-1.0621	-0.0333 to 0.0000	-0.0333	0.0000	decreasing	0.9588	No Trend	0
Tussock Creek at Cooper Road	Nitrogen..Total.Ammoniacal..Correction	1	20	185	16/70/01-13/12/16	0.0792	0.97	0.0017	0.046	-285	5270	-3.9121	0.0001	-0.002	-4.3455	-0.0035 to -0.0010	-0.0035	-0.0010	decreasing	0.9985	Trend	-1
Tussock Creek at Cooper Road	Nitrogen..Total..Correction	1	0	185	16/70/01-13/12/16	2.3741	7.8	0.32	2.3	-145	5283	-1.9812	0.0476	-0.0245	-1.0671	-0.0432 to 0.0000	-0.0432	0.0000	decreasing	0.9617	No Trend	0
Upukerora River at Te Anau Milford Road	E.Coli..CFU..Correction	2	19	189	12/12/00-15/12/16	502.455	67000	2	45	-266	5605	-3.5396	0.0004	-1.1817	-2.6261	-2.5453 to 0.0000	-2.5453	0.0000	decreasing	0.972	No Trend	0
Upukerora River at Te Anau Milford Road	Nitrogen..Nitrate.Nitrite..Correction	3	1	188	8/2/01-15/12/16	0.1445	0.54	0.02	0.132	34	5570.6667	0.4421	0.6584	0.0003	0.2514	-0.0014 to 0.0020	-0.0014	0.0020	increasing	0.6893	No Trend	0
Upukerora River at Te Anau Milford Road	Nitrogen..Total..Correction	5	1	186	8/2/01-15/12/16	0.2602	1.9	0.085	0.23	5	5365.6667	0.0546	0.9565	0	0	-0.0017 to 0.0023	-0.0017	0.0023	increasing	0.5	No Trend	0
Waiau River at Sunnyside	Clarity..Black.Disc..Field..m.	19	5	185	19/10/00-15/12/16	2.7191	7	0.1	2.67	89	5341.6667	1.204	0.2286	0.0327	1.2254	-0.0087 to 0.0858	-0.0087	0.0858	increasing	0.8935	No Trend	0
Waiau River at Sunnyside	E.Coli..CFU..Correction	0	17	204	19/10/00-15/12/16	447.4755	67000	5	30	-21	6987.6667	-0.2393	0.8109	0.3992	1.3306	0.0000 to 1.1990	0.0000	1.1990	increasing	0.8631	No Trend	0
Waiau River at Sunnyside	Nitrogen..Nitrate.Nitrite..Correction	6	1	198	12/70/00-15/12/16	0.161	2.8	0.031	0.1265	432	6478	5.355	0	0.004	3.1618	0.0027 to 0.0055	0.0027	0.0055	increasing	1	Trend	1
Waiau River at Sunnyside	Nitrogen..Total..Correction	6	3	198	12/70/00-15/12/16	0.2641	2.6	0.094	0.23	270	6420	3.3573	0.0008	0.0042	1.8114	0.0022 to 0.0063	0.0022	0.0063	increasing	0.9998	Trend	1
Waiau River at Sunnyside	Organic.Nitrogen.Correction	11	3	193	12/70/00-15/12/16	0.1141	0.861	0.005	0.085	-15	5987.6667	-0.1809	0.8564	0	0	-0.0012 to 0.0013	-0.0012	0.0013	increasing	0.5	No Trend	0
Waiau River at Tuatapere	E.Coli..CFU..Correction	5	4	199	19/10/00-15/12/16	1496.1759	67000	10	90	-164	6536.3333	-2.0161	0.0438	-2.4978	-2.7753	-4.6990 to -0.2865	-4.6990	-0.2865	decreasing	0.9711	Trend	-1
Waihopai River u/s Queens Drive	Clarity..Black.Disc..Field..m.	13	2	190	18/10/00-13/12/16	1.1446	5	0.18	1.1	29	5790	0.368	0.7129	0.0017	0.1516	-0.0075 to 0.0143	-0.0075	0.0143	increasing	0.6458	No Trend	0
Waihopai River u/s Queens Drive	E.Coli..CFU..Correction	2	2	201	18/10/00-13/12/16	2615.4577	150000	20	370	-34	6735.6667	-0.4021	0.6876	-2.5034	-0.6766	-10.0068 to 5.4198	-10.006	5.4198	decreasing	0.6951	No Trend	0
Waihopai River u/s Queens Drive	Nitrogen..Nitrate.Nitrite..Correction	1	0	202	18/10/00-13/12/16	2.1881	7.07	0.43	2.05	202	6845.3333	2.4294	0.0151	0.023	1.1205	0.0086 to 0.0357	0.0086	0.0357	increasing	0.9934	Trend	1
Waihopai River u/s Queens Drive	Nitrogen..Total.Ammoniacal..Correction	1	27	202	18/10/00-13/12/16	0.0532	0.41	0.0003	0.0315	-331	6737	-4.0205	0.0001	-0.0013	-4.1403	-0.0020 to -0.0006	-0.0020	-0.0006	decreasing	0.998	Trend	-1
Waihopai River u/s Queens Drive	Nitrogen..Total..Correction	2	0	201	18/10/00-13/12/16	2.8241	10	0.79	2.7	152	6724	1.8415	0.0656	0.0167	0.6174	0.0000 to 0.0334	0.0000	0.0334	increasing	0.9763	No Trend	0
Waihopai River u/s Queens Drive	Phosphorus..Dissolved.Reactive..Correction	9	15	194	18/10/00-13/12/16	0.0154	0.064	0.004	0.011	-252	6006.6667	-3.2386	0.0012	-0.0002	-1.8172	-0.0003 to -0.0001	-0.0003	-0.0001	decreasing	0.9992	Trend	-1
Waihopai River u/s Queens Drive	Phosphorus..Total..Correction	10	0	193	18/10/00-13/12/16	0.0463	0.3	0.004	0.037	-320	6022	-4.1107	0	-0.001	-2.6964	-0.0012 to -0.0006	-0.0012	-0.0006	decreasing	1	Trend	-1
Waihopai River u/s Queens Drive	Organic.Nitrogen.Correction	4	0	199	18/10/00-13/12/16	0.5955	2.56	0.057	0.495	-1	6586.3333	0	1	0	0	-0.0044 to 0.0046	-0.0044	0.0046	decreasing	0.5	No Trend	0
Waikaia River at Waipounamu Bridge Road	Clarity..Black.Disc..Field..m.	1	1	202	18/10/00-14/12/16	1.975	5.35	0.07	1.9	-96	6864	-1.1467	0.2515	-0.0192	-1.0119	-0.0521 to 0.0076	-0.0521	0.0076	decreasing	0.8811	No Trend	0

Waikaia River at Waipounamu Bridge Road	E.Coli..CFU..Correction	1	2	202	18/1/00-14/12/16	624.5297	8700	20	150	-96	6854.6667	-1.1474	0.2512	-1.6655	-1.1104	-3.6851 to 0.9998	-3.6851	0.9998	decreasing	0.839	No Trend	0
Waikaia River at Waipounamu Bridge Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	202	18/1/00-14/12/16	0.4983	1.4	0.056	0.48	64	6859.3333	0.7607	0.4469	0.0019	0.3921	-0.0029 to 0.0067	-0.0029	0.0067	increasing	0.7505	No Trend	0
Waikaia River at Waipounamu Bridge Road	Nitrogen..Total..Correction	1	0	202	18/1/00-14/12/16	0.6735	2	0.25	0.645	110	6855.3333	1.3165	0.188	0.0041	0.6424	-0.0009 to 0.0089	-0.0009	0.0089	increasing	0.908	No Trend	0
Waikaia River at Waipounamu Bridge Road	Phosphorus..Dissolved.Reactive..Correction	10	24	193	18/1/00-14/12/16	0.0135	0.05	0.001	0.008	-313	5820.3333	-4.0896	0	-0.0002	-2.499	-0.0003 to -0.0001	-0.0003	-0.0001	decreasing	1	Trend	-1
Waikaia River at Waipounamu Bridge Road	Phosphorus..Total..Correction	9	17	194	18/1/00-14/12/16	0.0278	0.48	0.006	0.015	-120	5992	-1.5373	0.1242	-0.0003	-2.2157	-0.0005 to -0.0001	-0.0005	-0.0001	decreasing	0.9943	Trend	-1
Waikaia River at Waipounamu Bridge Road	Organic.Nitrogen.Correction	8	0	195	18/1/00-14/12/16	0.1757	1.27	0	0.126	7	6222.3333	0.0761	0.9394	0	0	-0.0016 to 0.0018	-0.0016	0.0018	decreasing	0.5	No Trend	0
Waikaia River u/s Piano Flat	Clarity..Black.Disc..Field..m.	3	2	200	18/1/00-14/12/16	3.3992	10.4	0.1	3.33	-24	6677	-0.2815	0.7783	-0.0073	-0.2198	-0.0473 to 0.0329	-0.0473	0.0329	decreasing	0.6382	No Trend	0
Waikaia River u/s Piano Flat	E.Coli..CFU..Correction	1	21	202	18/1/00-14/12/16	162.9257	15000	1	25	-115	6731.6667	-1.3895	0.1647	0	0	-0.2993 to 0.5700	-0.2993	0.5700	decreasing	0.5	No Trend	0
Waikakaia Stream at Gore	Clarity..Black.Disc..Field..m.	5	2	199	18/1/00-14/12/16	0.93	5	0.06	0.87	-57	6557	-0.6916	0.4892	-0.0033	-0.3831	-0.0143 to 0.0072	-0.0143	0.0072	decreasing	0.7538	No Trend	0
Waikakaia Stream at Gore	E.Coli..CFU..Correction	2	2	202	18/1/00-14/12/16	3111.7129	72000	60	360	-8	6818	-0.0848	0.9324	0	0	-5.8352 to 5.1912	-5.8352	5.1912	decreasing	0.5	No Trend	0
Waikakaia Stream at Gore	Nitrogen..Nitrate.Nitrite..Correction	1	0	203	18/1/00-14/12/16	0.8814	3.39	0.013	0.81	111	6954.3333	1.3191	0.1871	0.0039	0.4836	-0.0008 to 0.0110	-0.0008	0.0110	increasing	0.8799	No Trend	0
Waikakaia Stream at Gore	Nitrogen..Total.Ammoniacal..Correction	1	7	203	18/1/00-14/12/16	0.0597	0.22	0.0003	0.055	-268	6958	-3.2009	0.0014	-0.0012	-2.1526	-0.0019 to -0.0004	-0.0019	-0.0004	decreasing	0.9915	Trend	-1
Waikakaia Stream at Gore	Nitrogen..Total..Correction	1	0	203	18/1/00-14/12/16	1.4524	4.7	0.24	1.35	44	6952	0.5157	0.6061	0.0025	0.1849	-0.0060 to 0.0144	-0.0060	0.0144	increasing	0.7076	No Trend	0
Waikakaia Stream at Gore	Phosphorus..Dissolved.Reactive..Correction	9	0	195	18/1/00-14/12/16	0.0253	0.081	0.006	0.022	181	6157	2.294	0.0218	0.0003	1.3627	0.0000 to 0.0005	0.0000	0.0005	increasing	0.9891	No Trend	0
Waikakaia Stream at Gore	Phosphorus..Total..Correction	9	0	195	18/1/00-14/12/16	0.0798	0.56	0.011	0.062	-142	6183.3333	-1.7931	0.073	-0.0006	-0.9216	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9708	No Trend	0
Waikakaia Stream at Gore	Organic.Nitrogen.Correction	4	0	200	18/1/00-14/12/16	0.5226	2.24	0.112	0.4185	-24	6686	-0.2813	0.7785	-0.0009	-0.2039	-0.0048 to 0.0031	-0.0048	0.0031	decreasing	0.6122	No Trend	0
Waikawaia River at Progress Valley	Clarity..Black.Disc..Field..m.	15	1	187	18/1/00-12/12/16	0.7081	1.9	0.07	0.67	34	5527.3333	0.4439	0.6571	0.0014	0.2135	-0.0034 to 0.0086	-0.0034	0.0086	increasing	0.6872	No Trend	0
Waikawaia River at Progress Valley	E.Coli..CFU..Correction	6	1	196	13/7/00-12/12/16	2388.9541	81000	40	650	22	6259.3333	0.2654	0.7907	0	0	-6.6697 to 9.9800	-6.6697	9.9800	increasing	0.5	No Trend	0
Waikawaia River at Progress Valley	Nitrogen..Nitrate.Nitrite..Correction	0	0	202	18/1/00-12/12/16	0.6658	1.4	0.1	0.659	8	6837.3333	0.0847	0.9325	0	0	-0.0029 to 0.0033	-0.0029	0.0033	increasing	0.5	No Trend	0
Waikawaia River at Progress Valley	Nitrogen..Total.Ammoniacal..Correction	0	30	202	18/1/00-12/12/16	0.0242	0.13	0.0011	0.019	-397	6729.6667	-4.8272	0	-0.0007	-3.5208	-0.0010 to -0.0004	-0.0010	-0.0004	decreasing	0.9993	Trend	-1
Waikawaia River at Progress Valley	Nitrogen..Total..Correction	0	0	202	18/1/00-12/12/16	1.0054	5.2	0.22	0.98	94	6797.3333	1.128	0.2593	0.0017	0.1701	0.0000 to 0.0063	0.0000	0.0063	increasing	0.8392	No Trend	0
Waikawaia River at Progress Valley	Phosphorus..Dissolved.Reactive..Correction	8	2	194	18/1/00-12/12/16	0.0141	0.05	0.005	0.013	-176	5993.3333	-2.2605	0.0238	-0.0001	-1.0618	-0.0002 to 0.0000	-0.0002	0.0000	decreasing	0.997	No Trend	0
Waikawaia River at Progress Valley	Phosphorus..Total..Correction	8	0	194	18/1/00-12/12/16	0.055	0.68	0.016	0.04	-22	6084.6667	-0.2692	0.7878	0	0	-0.0004 to 0.0003	-0.0004	0.0003	decreasing	0.5	No Trend	0
Waikawaia River at Progress Valley	Organic.Nitrogen.Correction	3	0	199	18/1/00-12/12/16	0.3227	4.589	0.035	0.247	87	6622.3333	1.0568	0.2906	0.0018	0.7284	-0.0011 to 0.0046	-0.0011	0.0046	increasing	0.8516	No Trend	0
Waikiwi Stream at North Road	E.Coli..CFU..Correction	8	4	196	12/7/00-13/12/16	3140.7398	67000	60	560	-2	6231.3333	-0.0127	0.9899	0	0	-10.0556 to 10.0208	-10.055	10.0208	increasing	0.5	No Trend	0
Waikiwi Stream at North Road	Nitrogen..Nitrate.Nitrite..Correction	1	0	203	19/1/00-13/12/16	2.6762	4.96	0.79	2.6	278	6912.6667	3.3316	0.0009	0.0246	0.9462	0.0105 to 0.0334	0.0105	0.0334	increasing	0.9996	Trend	1
Waikiwi Stream at North Road	Nitrogen..Total.Ammoniacal..Correction	1	26	203	19/1/00-13/12/16	0.0476	0.433	0.0025	0.033	-320	6782.6667	-3.8734	0.0001	-0.0008	-2.335	-0.0015 to -0.0002	-0.0015	-0.0002	decreasing	0.9892	Trend	-1
Waikiwi Stream at North Road	Nitrogen..Total..Correction	2	0	202	19/1/00-13/12/16	3.3142	6.5	1.6	3.3	287	6805	3.467	0.0005	0.0286	0.8664	0.0167 to 0.0414	0.0167	0.0414	increasing	0.9997	Trend	1
Waikiwi Stream at North Road	Phosphorus..Dissolved.Reactive..Correction	9	10	195	19/1/00-13/12/16	0.0149	0.05	0.004	0.012	-194	6108.6667	-2.4694	0.0135	-0.0002	-1.5151	-0.0003 to -0.0001	-0.0003	-0.0001	decreasing	0.9986	Trend	-1
Waikiwi Stream at North Road	Phosphorus..Total..Correction	10	0	194	19/1/00-13/12/16	0.0495	0.28	0.005	0.037	-203	6102.3333	-2.5859	0.0097	-0.0006	-1.6253	-0.0010 to -0.0002	-0.0010	-0.0002	decreasing	0.9953	Trend	-1
Waikiwi Stream at North Road	Organic.Nitrogen.Correction	10	0	194	19/1/00-13/12/16	0.6201	3.853	0.02	0.4775	75	6113.6667	0.9464	0.3439	0.0029	0.5988	-0.0020 to 0.0097	-0.0020	0.0097	increasing	0.8238	No Trend	0
Waimatuku Stream at Lorneville Riverton Hwy	E.Coli..CFU..Correction	0	3	186	16/7/01-12/12/16	2353.2258	67000	30	555	-17	5350.3333	-0.2187	0.8269	0	0	-13.2120 to 7.4965	-13.212	7.4965	increasing	0.5	No Trend	0
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen..Nitrate.Nitrite..Correction	2	0	184	16/7/01-12/12/16	3.514	7.4	0.31	3.3	91	5214.3333	1.2464	0.2126	0.0182	0.5509	0.0000 to 0.0336	0.0000	0.0336	increasing	0.9317	No Trend	0
Waimatuku Stream at Lorneville Riverton Hwy	Nitrogen..Total..Correction	0	0	186	16/7/01-12/12/16	4.041	8.2	0.22	3.9	147	5362.3333	1.9938	0.0462	0.025	0.6418	0.0000 to 0.0464	0.0000	0.0464	increasing	0.9756	No Trend	0
Waituna Creek at Marshall Road	Clarity..Black.Disc..Field..m.	17	1	185	18/1/00-12/12/16	0.7794	5	0.08	0.75	230	5351.6667	3.1303	0.0017	0.0185	2.4631	0.0099 to 0.0260	0.0099	0.0260	increasing	0.999	Trend	1

Waituna Creek at Marshall Road	E.Coli..CFU..Correction	6	4	196	13/7/00-12/12/16	2014.8163	67000	30	290	31	6258.3333	0.3792	0.7045	0.1667	0.0575	-3.6693 to 5.7723	-3.6693	5.7723	increasing	0.5986	No Trend	0
Waituna Creek at Marshall Road	Nitrogen..Nitrate.Nitrite..Correction	0	1	202	18/1/00-12/12/16	1.4562	4.6	0.027	1.355	84	6856.6667	1.0024	0.3162	0.006	0.4426	-0.0055 to 0.0176	-0.0055	0.0176	increasing	0.8152	No Trend	0
Waituna Creek at Marshall Road	Nitrogen..Total.Ammoniacal..Correction	0	24	202	18/1/00-12/12/16	0.0836	2.4	0.0012	0.051	-465	6771	-5.6389	0	-0.0022	-4.36	-0.0034 to -0.0013	-0.0034	-0.0013	decreasing	1	Trend	-1
Waituna Creek at Marshall Road	Nitrogen..Total..Correction	0	0	202	18/1/00-12/12/16	2.2516	6	0.55	2.1	-42	6834.6667	-0.4959	0.6199	-0.0007	-0.0319	-0.0167 to 0.0100	-0.0167	0.0100	decreasing	0.5588	No Trend	0
Waituna Creek at Marshall Road	Phosphorus..Dissolved.Reactive..Correction	8	1	194	18/1/00-12/12/16	0.0193	0.081	0.005	0.0165	-423	6032.6667	-5.4332	0	-0.0005	-3.036	-0.0007 to -0.0004	-0.0007	-0.0004	decreasing	1	Trend	-1
Waituna Creek at Marshall Road	Phosphorus..Total..Correction	8	0	194	18/1/00-12/12/16	0.0704	0.53	0.022	0.053	-379	6115	-4.8339	0	-0.0016	-2.9629	-0.0022 to -0.0011	-0.0022	-0.0011	decreasing	1	Trend	-1
Waituna Creek at Marshall Road	Organic.Nitrogen.Correction	4	0	198	18/1/00-12/12/16	0.7346	2.98	0.26	0.643	-45	6505	-0.5455	0.5854	-0.0021	-0.3282	-0.0085 to 0.0044	-0.0085	0.0044	decreasing	0.7048	No Trend	0
Winton Stream at Lochiel	Clarity..Black.Disc..Field..m.	5	2	199	19/1/00-13/12/16	0.9047	5	0.06	0.86	-195	6543.3333	-2.3983	0.0165	-0.0133	-1.5486	-0.0227 to -0.0037	-0.0227	-0.0037	decreasing	0.9886	Trend	-1
Winton Stream at Lochiel	E.Coli..CFU..Correction	2	5	202	19/1/00-13/12/16	3938.302	67000	100	1100	28	6785	0.3278	0.7431	0	0	-16.5730 to 24.9658	-16.573	24.9658	decreasing	0.5	No Trend	0
Winton Stream at Lochiel	Nitrogen..Nitrate.Nitrite..Correction	2	0	202	19/1/00-13/12/16	1.701	7.3	0.075	1.42	63	6857.6667	0.7487	0.454	0.0068	0.4787	-0.0066 to 0.0200	-0.0066	0.0200	increasing	0.7601	No Trend	0
Winton Stream at Lochiel	Nitrogen..Total.Ammoniacal..Correction	1	10	203	19/1/00-13/12/16	0.0882	0.49	0.0016	0.073	301	6950.6667	3.5984	0.0003	0.0027	3.6499	0.0014 to 0.0039	0.0014	0.0039	increasing	1	Trend	1
Winton Stream at Lochiel	Nitrogen..Total..Correction	1	0	203	19/1/00-13/12/16	2.4997	7.8	0.92	2.2	107	6915.6667	1.2746	0.2024	0.01	0.4549	0.0000 to 0.0250	0.0000	0.0250	increasing	0.9124	No Trend	0
Winton Stream at Lochiel	Phosphorus..Dissolved.Reactive..Correction	10	0	194	19/1/00-13/12/16	0.0934	0.44	0.01	0.057	-134	6108.6667	-1.7017	0.0888	-0.0005	-0.9555	-0.0013 to 0.0000	-0.0013	0.0000	decreasing	0.9535	No Trend	0
Winton Stream at Lochiel	Phosphorus..Total..Correction	10	0	194	19/1/00-13/12/16	0.1515	0.6	0.011	0.119	-91	6112.3333	-1.1512	0.2497	-0.0007	-0.5801	-0.0016 to 0.0003	-0.0016	0.0003	decreasing	0.8751	No Trend	0
Winton Stream at Lochiel	Organic.Nitrogen.Correction	6	0	198	19/1/00-13/12/16	0.7321	3.54	0.09	0.6455	200	6502	2.4679	0.0136	0.0074	1.1527	0.0036 to 0.0131	0.0036	0.0131	increasing	0.9939	Trend	1

Trend 2012-2016 - NIWA data - Export TimeTrends																					
Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
Mataura at Seaward Down	Visual.clarity..m.	0	0	57	11/1/12-14/9/16	1.1465	2.96	0.04	1.12	-9	175	-0.6047	0.5453	-0.0374	-3.3355	-0.1907 to 0.1009	-0.1907	0.1009	decreasing	0.7104	No Trend	0
Mataura at Seaward Down	E..coli..MPN.100.ml.	0	1	57	11/1/12-14/9/16	755.8281	6488	20	345	-10	172	-0.6862	0.4926	-24.2188	-7.02	-70.9337 to 73.4747	-70.933	73.4747	decreasing	0.7657	No Trend	0
Mataura at Seaward Down	Nitrate.nitrite..g.m3.N.	0	0	57	11/1/12-14/9/16	1.2711	2.001	0.381	1.214	10	176	0.6784	0.4975	0.0223	1.8395	-0.0483 to 0.0861	-0.0483	0.0861	increasing	0.7418	No Trend	0
Mataura at Seaward Down	Ammoniacal.nitrogen..g.m3.N.	0	0	57	11/1/12-14/9/16	0.0285	0.059	0.007	0.026	15	175	1.0583	0.2899	0.002	7.5731	-0.0014 to 0.0030	-0.0014	0.0030	increasing	0.8661	No Trend	0
Mataura at Seaward Down	Total.nitrogen..g.m3.N.	0	0	57	11/1/12-14/9/16	1.5211	2.169	0.648	1.515	16	176	1.1307	0.2582	0.0355	2.3464	-0.0155 to 0.0806	-0.0155	0.0806	increasing	0.8566	No Trend	0
Mataura at Seaward Down	Dissolved.reactive.phosphorus..g.m3.P.	0	0	57	11/1/12-14/9/16	0.0096	0.024	0.001	0.01	-17	168.3333	-1.2332	0.2175	-0.0007	-6.6957	-0.0015 to 0.0000	-0.0015	0.0000	decreasing	0.8916	No Trend	0
Mataura at Seaward Down	Total.phosphorus..g.m3.P.	0	0	57	11/1/12-14/9/16	0.0422	0.302	0.013	0.03	5	175	0.3024	0.7624	0.0007	2.4995	-0.0026 to 0.0027	-0.0026	0.0027	increasing	0.5995	No Trend	0
Mataura at Seaward Down	Organic.Nitrogen..g.m3..Correction	0	0	57	11/1/12-14/9/16	0.2215	0.882	0.085	0.201	14	176	0.9799	0.3271	0.0071	3.5179	-0.0050 to 0.0151	-0.0050	0.0151	increasing	0.8385	No Trend	0
Monowai below Gates	Nitrate.nitrite..g.m3.N.	1	18	56	10/1/12-13/9/16	0.008	0.024	0.001	0.006	-1	108.3333	0	1	0	0	-0.0010 to 0.0010	-0.0010	0.0010	increasing	0.5	No Trend	0
Monowai below Gates	Ammoniacal.nitrogen..g.m3.N.	1	1	56	10/1/12-13/9/16	0.0026	0.005	0.001	0.0025	7	135.6667	0.5151	0.6065	0	0	0.0000 to 0.0003	0.0000	0.0003	increasing	0.5	No Trend	0
Monowai below Gates	Total.nitrogen..g.m3.N.	1	0	56	10/1/12-13/9/16	0.0783	0.102	0.063	0.077	4	166	0.2328	0.8159	0.0003	0.3785	-0.0014 to 0.0034	-0.0014	0.0034	increasing	0.5617	No Trend	0
Monowai below Gates	Total.phosphorus..g.m3.P.	1	0	56	10/1/12-13/9/16	0.0029	0.007	0	0.003	12	115.3333	1.0243	0.3057	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Monowai below Gates	Organic.Nitrogen..g.m3..Correction	2	0	55	10/1/12-13/9/16	0.0679	0.099	0.045	0.067	16	156	1.201	0.2298	0.0012	1.8614	-0.0005 to 0.0024	-0.0005	0.0024	increasing	0.8854	No Trend	0
Waiau at Tuatapere	Visual.clarity..m.	0	0	57	10/1/12-13/9/16	2.2404	6.19	0.14	1.73	1	175	0	1	0.0125	0.7211	-0.1515 to 0.2971	-0.1515	0.2971	increasing	0.5349	No Trend	0
Waiau at Tuatapere	E..coli..MPN.100.ml.	0	1	57	10/1/12-13/9/16	247.8807	3255	5	54	-16	172	-1.1437	0.2527	-3.3448	-6.194	-15.5742 to 2.0980	-15.574	2.0980	decreasing	0.8738	No Trend	0
Waiau at Tuatapere	Nitrate.nitrite..g.m3.N.	0	0	57	10/1/12-13/9/16	0.2672	0.65	0.073	0.246	-11	175	-0.7559	0.4497	-0.0102	-4.1386	-0.0253 to 0.0290	-0.0253	0.0290	decreasing	0.7598	No Trend	0
Waiau at Tuatapere	Ammoniacal.nitrogen..g.m3.N.	0	0	57	10/1/12-13/9/16	0.0052	0.032	0.001	0.004	-4	160.6667	-0.2367	0.8129	0	0	-0.0005 to 0.0005	-0.0005	0.0005	decreasing	0.5	No Trend	0
Waiau at Tuatapere	Total.nitrogen..g.m3.N.	0	0	57	10/1/12-13/9/16	0.4136	0.85	0.14	0.36	-7	175	-0.4536	0.6501	-0.0073	-2.0208	-0.0255 to 0.0320	-0.0255	0.0320	decreasing	0.6313	No Trend	0
Waiau at Tuatapere	Dissolved.reactive.phosphorus..g.m3.P	0	3	57	10/1/12-13/9/16	0.002	0.008	0.001	0.001	-14	121.3333	-1.1802	0.2379	0	0	0.0000 to 0.0000	0.0000	0.0000	decreasing	0.5	No Trend	0
Waiau at Tuatapere	Total.phosphorus..g.m3.P.	0	0	57	10/1/12-13/9/16	0.0178	0.122	0.003	0.01	-7	168.3333	-0.4625	0.6438	-0.0001	-1.2474	-0.0020 to 0.0005	-0.0020	0.0005	decreasing	0.6453	No Trend	0
Waiau at Tuatapere	Organic.Nitrogen..g.m3..Correction	0	0	57	10/1/12-13/9/16	0.1412	0.525	0.032	0.113	0	176	0	1	-0.0007	-0.5855	-0.0137 to 0.0095	-0.0137	0.0095	decreasing	0.4849	No Trend	0

Trend 2007-2016 - NIWA data - Export TimeTrends

Site	Variable	Missing	Non-detects	n used	Sampling period	Mean	Maximum	Minimum	Median	S statistic	Variance	Z	P	Sen's slope (annual)	% change	95% CI for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
Mataura at Parawa	Visual.clarity..m.	0	0	109	10/1/07-6/1/16	2.3529	6.02	0.03	2.22	-2	1134	-0.0297	0.9763	0	0	-0.0748 to 0.0532	-0.0748	0.0532		0.5000	No Trend	0
Mataura at Parawa	E..coli..MPN.100.ml.	0	4	109	10/1/07-6/1/16	297.6312	2419.2	11	91	105	1103	3.1315	0.0017	6.2213	6.8366	3.0209 to 10.1717	3.0209	10.1717	increasing	0.9989	Trend	1
Mataura at Parawa	Nitrate.nitrite..g.m3.N.	0	0	109	10/1/07-6/1/16	0.2924	0.525	0.061	0.284	92	1136	2.6999	0.0069	0.0086	3.0386	0.0030 to 0.0138	0.0030	0.0138	increasing	0.9966	Trend	1
Mataura at Parawa	Ammoniacal.nitrogen..g.m3.N.	0	0	109	10/1/07-6/1/16	0.0068	0.018	0.002	0.007	-10	1078.667	-0.274	0.7841	0	0	-0.0002 to 0.0000	-0.0002	0.0000	increasing	0.5	No Trend	0
Mataura at Parawa	Total.nitrogen..g.m3.N.	0	0	109	10/1/07-6/1/16	0.3793	0.844	0.202	0.358	106	1132	3.1208	0.0018	0.0104	2.901	0.0051 to 0.0150	0.0051	0.0150	increasing	0.9992	Trend	1
Mataura at Parawa	Dissolved.reactive.phosphorus..g.m3.P.	0	0	109	10/1/07-6/1/16	0.0061	0.025	0.002	0.005	-18	1029.333	-0.5299	0.5962	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Mataura at Parawa	Total.phosphorus..g.m3.P.	0	0	109	10/1/07-6/1/16	0.0225	0.336	0.006	0.01	-25	1090.333	-0.7268	0.4673	0	0	-0.0003 to 0.0000	-0.0003	0.0000	increasing	0.5	No Trend	0
Mataura at Parawa	Organic.Nitrogen..g.m3..Correction	0	0	109	10/1/07-6/1/16	0.08	0.447	0.024	0.057	50	1134	1.4551	0.1456	0.0017	2.9153	-0.0002 to 0.0031	-0.0002	0.0031	increasing	0.9272	No Trend	0
Mataura at Seaward Down	Visual.clarity..m.	0	0	117	10/1/07-14/9/16	1.0799	3.43	0.04	1.01	12	1400	0.294	0.7688	0.0075	0.7416	-0.0234 to 0.0408	-0.0234	0.0408	increasing	0.6197	No Trend	0
Mataura at Seaward Down	E..coli..MPN.100.ml.	0	5	117	10/1/07-14/9/16	883.4872	15531	15	318	2	1358	0.0271	0.9784	-0.2509	-0.0789	-14.2019 to 8.7110	-14.201	8.7110	decreasing	0.5001	No Trend	0
Mataura at Seaward Down	Nitrate.nitrite..g.m3.N.	0	0	117	10/1/07-14/9/16	1.2259	2.168	0.381	1.159	72	1400	1.8976	0.0578	0.0151	1.2987	0.0029 to 0.0330	0.0029	0.0330	increasing	0.9732	Trend	1
Mataura at Seaward Down	Ammoniacal.nitrogen..g.m3.N.	0	0	117	10/1/07-14/9/16	0.0324	0.104	0.006	0.027	-80	1394	-2.1159	0.0344	-0.001	-3.681	-0.0015 to -0.0003	-0.0015	-0.0003	decreasing	0.9834	Trend	-1
Mataura at Seaward Down	Total.nitrogen..g.m3.N.	0	0	117	10/1/07-14/9/16	1.4912	2.725	0.648	1.434	77	1401	2.0305	0.0423	0.0246	1.7144	0.0032 to 0.0397	0.0032	0.0397	increasing	0.9785	Trend	1
Mataura at Seaward Down	Dissolved.reactive.phosphorus..g.m3.P.	0	0	117	10/1/07-14/9/16	0.0123	0.042	0.001	0.012	-161	1377.667	-4.3107	0	-0.0007	-6.2415	-0.0010 to -0.0005	-0.0010	-0.0005	decreasing	1	Trend	-1
Mataura at Seaward Down	Total.phosphorus..g.m3.P.	0	0	117	10/1/07-14/9/16	0.048	0.302	0.013	0.032	-71	1384.333	-1.8814	0.0599	-0.001	-3.1237	-0.0020 to 0.0000	-0.0020	0.0000	decreasing	0.97	No Trend	0
Mataura at Seaward Down	Organic.Nitrogen..g.m3..Correction	0	0	117	10/1/07-14/9/16	0.233	0.882	0.006	0.201	5	1399	0.1069	0.9148	0.0004	0.199	-0.0040 to 0.0036	-0.0040	0.0036	increasing	0.5489	No Trend	0
Monowai below Gates	Visual.clarity..m.	7	0	110	9/1/07-13/9/16	6.4888	9.64	1.93	6.475	41	1189	1.16	0.246	0.062	0.9571	-0.0374 to 0.1560	-0.0374	0.1560	increasing	0.8743	No Trend	0
Monowai below Gates	Ammoniacal.nitrogen..g.m3.N.	1	2	116	9/1/07-13/9/16	0.0023	0.005	0.001	0.002	133	1179	3.8443	0.0001	0.0001	6.2393	0.0000 to 0.0002	0.0000	0.0002	increasing	0.9999	No Trend	0
Monowai below Gates	Total.nitrogen..g.m3.N.	1	0	116	9/1/07-13/9/16	0.0783	0.113	0.052	0.0775	-1	1354.333	0	1	0	0	-0.0006 to 0.0007	-0.0006	0.0007	increasing	0.5	No Trend	0
Monowai below Gates	Total.phosphorus..g.m3.P.	1	0	116	9/1/07-13/9/16	0.0029	0.007	0	0.003	35	1101.667	1.0244	0.3057	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Monowai below Gates	Organic.Nitrogen..g.m3..Correction	2	0	115	9/1/07-13/9/16	0.0682	0.109	0.036	0.068	15	1315.667	0.386	0.6995	0	0	-0.0004 to 0.0007	-0.0004	0.0007	increasing	0.5	No Trend	0
Oreti at Lumsden	Visual.clarity..m.	0	0	109	10/1/07-5/1/16	4.1102	9.64	0.03	4.15	-4	1136	-0.089	0.9291	-0.0167	-0.4034	-0.1524 to 0.1306	-0.1524	0.1306	decreasing	0.5277	No Trend	0
Oreti at Lumsden	E..coli..MPN.100.ml.	0	0	109	10/1/07-5/1/16	145.0642	1733	4	51	-1	1133	0	1	0	0	-1.7933 to 2.3682	-1.7933	2.3682	decreasing	0.5	No Trend	0
Oreti at Lumsden	Nitrate.nitrite..g.m3.N.	0	0	109	10/1/07-5/1/16	0.6637	2.134	0.133	0.613	-9	1137	-0.2373	0.8125	-0.0063	-1.0231	-0.0227 to 0.0156	-0.0227	0.0156	decreasing	0.6006	No Trend	0
Oreti at Lumsden	Ammoniacal.nitrogen..g.m3.N.	0	0	109	10/1/07-5/1/16	0.0047	0.01	0.001	0.005	47	1044.333	1.4234	0.1546	0	0	0.0000 to 0.0002	0.0000	0.0002	decreasing	0.5	No Trend	0
Oreti at Lumsden	Total.nitrogen..g.m3.N.	1	0	108	10/1/07-5/1/16	0.7773	2.219	0.282	0.7305	-17	1103	-0.4818	0.63	-0.0045	-0.6171	-0.0185 to 0.0164	-0.0185	0.0164	decreasing	0.681	No Trend	0
Oreti at Lumsden	Dissolved.reactive.phosphorus..g.m3.P.	0	1	109	10/1/07-5/1/16	0.0029	0.01	0.001	0.003	-16	900.6667	-0.4998	0.6172	0	0	0.0000 to 0.0000	0.0000	0.0000	decreasing	0.5	No Trend	0
Oreti at Lumsden	Total.phosphorus..g.m3.P.	1	0	108	10/1/07-5/1/16	0.0141	0.312	0.002	0.005	35	1011.667	1.069	0.2851	0	0	0.0000 to 0.0002	0.0000	0.0002	decreasing	0.5	No Trend	0
Oreti at Lumsden	Organic.Nitrogen..g.m3..Correction	1	0	108	10/1/07-5/1/16	0.1077	0.629	0.025	0.0815	79	1099	2.3529	0.0186	0.0043	5.3207	0.0020 to 0.0066	0.0020	0.0066	increasing	0.9931	Trend	1
Oreti at Riverton HW Br.	Visual.clarity..m.	0	0	109	9/1/07-5/1/16	1.7862	6.43	0.04	1.65	-2	1134	-0.0297	0.9763	0	0	-0.0632 to 0.0876	-0.0632	0.0876	increasing	0.5	No Trend	0
Oreti at Riverton HW Br.	E..coli..MPN.100.ml.	1	3	108	9/1/07-5/1/16	307.4593	4611	3	53.5	20	1081.333	0.5778	0.5634	1.3294	2.4848	-2.0069 to 4.6602	-2.0069	4.6602	increasing	0.7136	No Trend	0
Oreti at Riverton HW Br.	Nitrate.nitrite..g.m3.N.	0	0	109	9/1/07-5/1/16	1.1897	3.349	0.399	0.965	-32	1136	-0.9198	0.3577	-0.0092	-0.9501	-0.0311 to 0.0060	-0.0311	0.0060	decreasing	0.8149	No Trend	0
Oreti at Riverton HW Br.	Ammoniacal.nitrogen..g.m3.N.	0	0	109	9/1/07-5/1/16	0.0099	0.05	0.001	0.008	-16	1100	-0.4523	0.6511	0	0	-0.0004 to 0.0002	-0.0004	0.0002	decreasing	0.5	No Trend	0
Oreti at Riverton HW Br.	Total.nitrogen..g.m3.N.	0	0	109	9/1/07-5/1/16	1.3785	3.94	0.57	1.142	-8	1136	-0.2077	0.8355	-0.0038	-0.3357	-0.0232 to 0.0136	-0.0232	0.0136	decreasing	0.577	No Trend	0
Oreti at Riverton HW Br.	Dissolved.reactive.phosphorus..g.m3.P.	0	0	109	9/1/07-5/1/16	0.0067	0.033	0.001	0.006	-46	1089.333	-1.3634	0.1727	-0.0002	-2.7784	-0.0004 to 0.0000	-0.0004	0.0000	decreasing	0.9139	No Trend	0
Oreti at Riverton HW Br.	Total.phosphorus..g.m3.P.	0	0	109	9/1/07-5/1/16	0.0269	0.366	0.004	0.014	-13	1118.333	-0.3588	0.7197	0	0	-0.0005 to 0.0004	-0.0005	0.0004	decreasing	0.5	No Trend	0
Oreti at Riverton HW Br.	Organic.Nitrogen..g.m3..Correction	0	0	109	9/1/07-5/1/16	0.179	0.789	-0.005	0.137	112	1136	3.2933	0.001	0.008	5.8595	0.0037 to 0.0114	0.0037	0.0114	increasing	0.9995	Trend	1
Waiau at Tuatapere	Visual.clarity..m.	0	0	117	9/1/07-13/9/16	2.1933	6.19	0.13	1.82	6	1398	0.1337	0.8936	0.0033	0.183	-0.0560 to 0.1114	-0.0560	0.1114	increasing	0.542	No Trend	0
Waiau at Tuatapere	E..coli..MPN.100.ml.	0	1	117	9/1/07-13/9/16	275.6684	3255	1	57	-19	1389	-0.483	0.6291	-0.749	-1.314	-3.5865 to 1.2782	-3.5865	1.2782	decreasing	0.7012	No Trend	0
Waiau at Tuatapere	Nitrate.nitrite..g.m3.N.	0	0	117	9/1/07-13/9/16	0.261	0.712	0.064	0.233	-6	1396	-0.1338	0.8935	-0.0001	-0.0537	-0.0055 to 0.0050	-0.0055	0.0050	decreasing	0.5077	No Trend	0
Waiau at Tuatapere	Ammoniacal.nitrogen..g.m3.N.	0	1	117	9/1/07-13/9/16	0.0047	0.032	0.001	0.004	59	1295	1.6117	0.107	0	0	0.0000 to 0.0002	0.0000	0.0002	decreasing	0.5	No Trend	0
Waiau at Tuatapere	Total.nitrogen..g.m3.N.	0	0	117	9/1/07-13/9/16	0.4057	1.098	0.14	0.353	12	1400	0.294	0.7688	0.0024	0.6796	-0.0048 to 0.0079	-0.0048	0.0079	increasing	0.6126	No Trend	0
Waiau at Tuatapere	Dissolved.reactive.phosphorus..g.m3.P.	0	9	117	9/1/07-13/9/16	0.0021	0.008	0.001	0.001	-52	1079.667	-1.5521	0.1206	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Waiau at Tuatapere	Total.phosphorus..g.m3.P.	0	0	117	9/1/07-13/9/16	0.0174	0.122	0.003	0.01	4	1372	0.081	0.9354	0	0	-0.0003 to 0.0003	-0.0003	0.0003	increasing	0.5	No Trend	0
Waiau at Tuatapere	Organic.Nitrogen..g.m3..Correction	0	0	117	9/1/07-13/9/16	0.14	0.525	0.032	0.112	-8	1400	-0.1871	0.8516	-0.0005	-0.4458	-0.0024 to 0.0017	-0.0024	0.0017	decreasing	0.5826	No Trend	0

Trend 2000-2016 - NIWA data - Export TimeTrends

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
Mataura at Parawa	Visual.clarity..m.	0	0	193	12/1/00-6/1/16	2.2634	6.02	0.03	2.22	93	6009	1.1868	0.2353	0.0251	1.1284	-0.0100 to 0.0585	-0.0100	0.0585	increasing	0.8789	No Trend	0
Mataura at Parawa	Nitrate.nitrite..g.m3.N.	1	0	192	12/1/00-6/1/16	0.2725	0.525	0.061	0.266	331	5925	4.2872	0	0.0051	1.9241	0.0033 to 0.0075	0.0033	0.0075	increasing	1	Trend	1
Mataura at Parawa	Ammoniacal.nitrogen..g.m3.N.	1	0	192	12/1/00-6/1/16	0.0066	0.018	0.002	0.006	75	5653	0.9842	0.325	0	0	0.0000 to 0.0001	0.0000	0.0001	increasing	0.5	No Trend	0
Mataura at Parawa	Total.nitrogen..g.m3.N.	1	0	192	12/1/00-6/1/16	0.355	0.844	0.19	0.341	393	5919	5.0952	0	0.0066	1.9448	0.0043 to 0.0086	0.0043	0.0086	increasing	1	Trend	1
Mataura at Parawa	Dissolved.reactive.phosphorus..g.m3.P.	1	0	192	12/1/00-6/1/16	0.0064	0.08	0.002	0.005	-55	5521.667	-0.7267	0.4674	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Mataura at Parawa	Total.phosphorus..g.m3.P.	1	0	192	12/1/00-6/1/16	0.0199	0.336	0.006	0.0105	-76	5747.333	-0.9893	0.3225	0	0	-0.0001 to 0.0000	-0.0001	0.0000	increasing	0.5	No Trend	0
Mataura at Parawa	Organic.Nitrogen..g.m3..Correction	1	0	192	12/1/00-6/1/16	0.0759	0.447	0.018	0.0575	83	5923	1.0655	0.2867	0.0006	0.9674	-0.0003 to 0.0013	-0.0003	0.0013	increasing	0.8589	No Trend	0
Mataura at Seaward Down	Visual.clarity..m.	0	0	201	12/1/00-14/9/16	0.9956	3.43	0.04	0.9	174	6778	2.1013	0.0356	0.018	1.9992	0.0040 to 0.0340	0.0040	0.0340	increasing	0.9832	Trend	1
Mataura at Seaward Down	Nitrate.nitrite..g.m3.N.	1	0	200	12/1/00-14/9/16	1.1505	2.168	0.381	1.1195	354	6686	4.3171	0	0.0202	1.8085	0.0131 to 0.0272	0.0131	0.0272	increasing	1	Trend	1
Mataura at Seaward Down	Ammoniacal.nitrogen..g.m3.N.	1	0	200	12/1/00-14/9/16	0.0383	0.148	0.006	0.0335	-409	6660.333	-4.9993	0	-0.001	-2.9885	-0.0014 to -0.0007	-0.0014	-0.0007	decreasing	1	Trend	-1
Mataura at Seaward Down	Total.nitrogen..g.m3.N.	1	0	200	12/1/00-14/9/16	1.4333	2.725	0.623	1.383	311	6687	3.7909	0.0002	0.0192	1.3883	0.0124 to 0.0270	0.0124	0.0270	increasing	0.9999	Trend	1
Mataura at Seaward Down	Dissolved.reactive.phosphorus..g.m3.P.	1	0	200	12/1/00-14/9/16	0.0165	0.058	0.001	0.014	-696	6626	-8.5381	0	-0.0009	-6.2153	-0.0010 to -0.0007	-0.0010	-0.0007	decreasing	1	Trend	-1
Mataura at Seaward Down	Total.phosphorus..g.m3.P.	1	0	200	12/1/00-14/9/16	0.0541	0.302	0.013	0.038	-412	6654.667	-5.0382	0	-0.0014	-3.6184	-0.0020 to -0.0010	-0.0020	-0.0010	decreasing	1	Trend	-1
Mataura at Seaward Down	Organic.Nitrogen..g.m3..Correction	1	0	200	12/1/00-14/9/16	0.2445	0.968	0.006	0.207	-157	6679	-1.9088	0.0563	-0.0026	-1.261	-0.0046 to -0.0002	-0.0046	-0.0002	decreasing	0.9722	Trend	-1
Monowai below Gates	Visual.clarity..m.	7	0	194	11/1/00-13/9/16	6.5691	10.2	1.93	6.585	-24	6142	-0.2935	0.7692	-0.0066	-0.1009	-0.0393 to 0.0345	-0.0393	0.0345	decreasing	0.6193	No Trend	0
Monowai below Gates	Nitrate.nitrite..g.m3.N.	2	40	199	11/1/00-13/9/16	0.0083	0.033	0.001	0.005	-202	5864.333	-2.6247	0.0087	0	0	-0.0001 to 0.0000	-0.0001	0.0000	decreasing	0.5	No Trend	0
Monowai below Gates	Ammoniacal.nitrogen..g.m3.N.	2	5	199	11/1/00-13/9/16	0.0024	0.008	0.001	0.002	-5	5857	-0.0523	0.9583	0	0	0.0000 to 0.0000	0.0000	0.0000	decreasing	0.5	No Trend	0
Monowai below Gates	Total.nitrogen..g.m3.N.	2	0	199	11/1/00-13/9/16	0.0826	0.162	0.047	0.08	-315	6547.667	-3.8805	0.0001	-0.0007	-0.9362	-0.0010 to -0.0004	-0.0010	-0.0004	decreasing	0.9999	Trend	-1
Monowai below Gates	Total.phosphorus..g.m3.P.	2	0	199	11/1/00-13/9/16	0.0031	0.009	0	0.003	-119	5646.333	-1.5704	0.1163	0	0	0.0000 to 0.0000	0.0000	0.0000	decreasing	0.5	No Trend	0
Monowai below Gates	Organic.Nitrogen..g.m3..Correction	3	0	198	11/1/00-13/9/16	0.0721	0.134	0.036	0.072	-256	6442	-3.1771	0.0015	-0.0005	-0.7186	-0.0009 to -0.0002	-0.0009	-0.0002	decreasing	0.9993	Trend	-1
Oreti at Lumsden	Visual.clarity..m.	0	0	193	12/1/00-5/1/16	3.971	9.64	0.03	3.95	66	6014	0.8382	0.4019	0.0338	0.8553	-0.0328 to 0.0958	-0.0328	0.0958	increasing	0.8012	No Trend	0
Oreti at Lumsden	Nitrate.nitrite..g.m3.N.	1	0	192	12/1/00-5/1/16	0.5984	2.134	0.124	0.5475	279	5929	3.6104	0.0003	0.0128	2.3369	0.0071 to 0.0189	0.0071	0.0189	increasing	0.9998	Trend	1
Oreti at Lumsden	Ammoniacal.nitrogen..g.m3.N.	1	0	192	12/1/00-5/1/16	0.0045	0.014	0.001	0.004	120	5547.333	1.5977	0.1101	0	0	0.0000 to 0.0001	0.0000	0.0001	increasing	0.5	No Trend	0
Oreti at Lumsden	Total.nitrogen..g.m3.N.	2	0	191	12/1/00-5/1/16	0.7067	2.219	0.203	0.657	302	5834	3.9408	0.0001	0.0155	2.3616	0.0099 to 0.0207	0.0099	0.0207	increasing	1	Trend	1
Oreti at Lumsden	Dissolved.reactive.phosphorus..g.m3.P.	1	1	192	12/1/00-5/1/16	0.0027	0.01	0.001	0.003	61	4937	0.8539	0.3931	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Oreti at Lumsden	Total.phosphorus..g.m3.P.	2	0	191	12/1/00-5/1/16	0.0123	0.312	0.002	0.005	-89	5523.667	-1.184	0.2364	0	0	-0.0001 to 0.0000	-0.0001	0.0000	increasing	0.5	No Trend	0
Oreti at Lumsden	Organic.Nitrogen..g.m3..Correction	2	0	191	12/1/00-5/1/16	0.1035	0.629	0.024	0.082	154	5822	2.0052	0.0449	0.0015	1.7737	0.0002 to 0.0025	0.0002	0.0025	increasing	0.9771	Trend	1
Oreti at Riverton HW Br.	Visual.clarity..m.	0	0	193	11/1/00-5/1/16	1.7096	6.43	0.04	1.55	58	6009.333	0.7353	0.4622	0.0148	0.9524	-0.0132 to 0.0448	-0.0132	0.0448	increasing	0.7565	No Trend	0
Oreti at Riverton HW Br.	Nitrate.nitrite..g.m3.N.	1	0	192	11/1/00-5/1/16	1.1293	3.349	0.313	0.956	201	5929	2.5974	0.0094	0.0107	1.1215	0.0038 to 0.0183	0.0038	0.0183	increasing	0.9955	Trend	1
Oreti at Riverton HW Br.	Ammoniacal.nitrogen..g.m3.N.	1	0	192	11/1/00-5/1/16	0.0107	0.19	0.001	0.008	-88	5783.333	-1.144	0.2526	0	0	-0.0001 to 0.0000	-0.0001	0.0000	increasing	0.5	No Trend	0
Oreti at Riverton HW Br.	Total.nitrogen..g.m3.N.	1	0	192	11/1/00-5/1/16	1.3166	3.94	0.43	1.1285	233	5929	3.013	0.0026	0.0152	1.3428	0.0075 to 0.0223	0.0075	0.0223	increasing	0.9986	Trend	1
Oreti at Riverton HW Br.	Dissolved.reactive.phosphorus..g.m3.P.	1	0	192	11/1/00-5/1/16	0.007	0.063	0.001	0.006	-139	5707	-1.8267	0.0677	0	0	-0.0002 to 0.0000	-0.0002	0.0000	increasing	0.5	No Trend	0
Oreti at Riverton HW Br.	Total.phosphorus..g.m3.P.	1	0	192	11/1/00-5/1/16	0.0269	0.373	0.004	0.014	-40	5864	-0.5093	0.6105	0	0	-0.0002 to 0.0001	-0.0002	0.0001	increasing	0.5	No Trend	0
Oreti at Riverton HW Br.	Organic.Nitrogen..g.m3..Correction	1	0	192	11/1/00-5/1/16	0.1766	1.245	-0.005	0.129	224	5924	2.8973	0.0038	0.0026	2.0224	0.0010 to 0.0039	0.0010	0.0039	increasing	0.9981	Trend	1
Waiau at Tuatapere	Visual.clarity..m.	0	0	201	11/1/00-13/9/16	2.0577	6.19	0.06	1.78	90	6778	1.081	0.2797	0.021	1.1791	-0.0100 to 0.0526	-0.0100	0.0526	increasing	0.8617	No Trend	0
Waiau at Tuatapere	Nitrate.nitrite..g.m3.N.	1	0	200	11/1/00-13/9/16	0.2404	0.712	0.064	0.205	288	6675.333	3.5127	0.0004	0.004	1.9486	0.0020 to 0.0057	0.0020	0.0057	increasing	0.9998	Trend	1
Waiau at Tuatapere	Ammoniacal.nitrogen..g.m3.N.	1	3	200	11/1/00-13/9/16	0.0054	0.068	0.001	0.004	-181	6358.333	-2.2574	0.024	0	0	-0.0001 to 0.0000	-0.0001	0.0000	increasing	0.5	No Trend	0
Waiau at Tuatapere	Total.nitrogen..g.m3.N.	1	0	200	11/1/00-13/9/16	0.3883	1.219	0.133	0.3405	223	6683	2.7156	0.0066	0.0048	1.4	0.0019 to 0.0066	0.0019	0.0066	increasing	0.9964	Trend	1
Waiau at Tuatapere	Dissolved.reactive.phosphorus..g.m3.P.	1	16	200	11/1/00-13/9/16	0.0023	0.015	0.001	0.002	-196	5574	-2.6119	0.009	0	0	0.0000 to 0.0000	0.0000	0.0000	increasing	0.5	No Trend	0
Waiau at Tuatapere	Total.phosphorus..g.m3.P.	1	0	200	11/1/00-13/9/16	0.0196	0.317	0.003	0.01	-110	6594	-1.3423	0.1795	-0.0001	-1.0558	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.8987	No Trend	0
Waiau at Tuatapere	Organic.Nitrogen..g.m3..Correction	1	0	200	11/1/00-13/9/16	0.1426	0.753	0.012	0.115	2	6684	0.0122	0.9902	0	0	-0.0013 to 0.0011	-0.0013	0.0011	decreasing	0.5	No Trend	0

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
D43/0004	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	15/2/12-21/12/16	2.5363	3.1	2.1	2.6	4	57.6667	0.3951	0.6928	0.0081	0.3117	-0.0568 to 0.0901	-0.0568	0.0901	increasing	0.6039	No Trend	0
D43/0004	Phosphorus..Dissolved.Reactive.	0	1	19	15/2/12-21/12/16	0.0073	0.01	0.003	0.008	13	55.6667	1.6084	0.1078	0.0005	6.2543	0.0000 to 0.0009	0.0000	0.0009	increasing	0.9435	No Trend	0
D45/0004	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	5/3/12-21/12/16	1.071	1.88	0.8	1.01	4	66.6667	0.3674	0.7133	0.0239	2.3704	-0.0886 to 0.0802	-0.0886	0.0802	increasing	0.6202	No Trend	0
D45/0004	Phosphorus..Dissolved.Reactive.	0	1	20	5/3/12-21/12/16	0.0287	0.046	0.001	0.031	0	66.6667	0	1	0.0003	0.8255	-0.0044 to 0.0035	-0.0044	0.0035	increasing	0.4758	No Trend	0
D45/0005	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	18	8/3/12-21/12/16	3.3033	3.8	2.9	3.34	21	49.6667	2.8379	0.0045	0.1025	3.0685	0.0805 to 0.1441	0.0805	0.1441	increasing	0.9986	Trend	1
D45/0005	Phosphorus..Dissolved.Reactive.	0	0	18	8/3/12-21/12/16	0.0163	0.019	0.013	0.0165	12	50.6667	1.5454	0.1223	0.0007	4.5409	0.0000 to 0.0010	0.0000	0.0010	increasing	0.9494	No Trend	0
E43/0026	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	2/3/12-22/12/16	4.1742	9.2	0.08	4.2	0	58.6667	0	1	-0.1113	-2.6494	-0.7608 to 0.7448	-0.7608	0.7448	decreasing	0.479	No Trend	0
E43/0026	Phosphorus..Dissolved.Reactive.	0	0	19	2/3/12-22/12/16	0.0176	0.021	0.006	0.018	-10	56.6667	-1.1956	0.2319	-0.0004	-2.0308	-0.0010 to 0.0001	-0.0010	0.0001	decreasing	0.907	No Trend	0
E44/0007	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	18	27/6/12-22/12/16	7.0244	10.3	4.97	6.66	9	53.6667	1.092	0.2748	0.3703	5.5594	-0.3559 to 0.6271	-0.3559	0.6271	increasing	0.8713	No Trend	0
E44/0007	Phosphorus..Dissolved.Reactive.	2	0	18	27/6/12-22/12/16	0.0124	0.02	0.006	0.012	-4	50.6667	-0.4215	0.6734	-0.0001	-1.0353	-0.0015 to 0.0014	-0.0015	0.0014	decreasing	0.4934	No Trend	0
E44/0008	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	9/3/12-20/12/16	8.5547	11	6.6	8.5	-32	58.6667	-4.0473	0.0001	-0.8573	-10.0854	-1.0111 to -0.5586	-1.0111	-0.5586	decreasing	1	Trend	-1
E44/0008	Phosphorus..Dissolved.Reactive.	0	0	19	9/3/12-20/12/16	0.0217	0.04	0.016	0.021	-1	57.6667	0	1	-0.0001	-0.5973	-0.0007 to 0.0003	-0.0007	0.0003	decreasing	0.5466	No Trend	0
E44/0036	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	9/3/12-20/12/16	13.2779	14.39	12.46	13.1	13	57.6667	1.5802	0.1141	0.143	1.0916	-0.0049 to 0.3553	-0.0049	0.3553	increasing	0.9506	No Trend	0
E44/0036	Phosphorus..Dissolved.Reactive.	0	1	19	9/3/12-20/12/16	0.0138	0.016	0.009	0.014	-11	56.6667	-1.3284	0.184	-0.0003	-2.3696	-0.0006 to 0.0000	-0.0006	0.0000	decreasing	0.9445	No Trend	0
E44/0044	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	2/3/12-22/12/16	0.0189	0.02	0.01	0.02	0	6.6667	0	1	0	0	0.0000 to 0.0000	0.0000	0.0000	decreasing	0.5	No Trend	0
E44/0044	Phosphorus..Dissolved.Reactive.	0	0	19	2/3/12-22/12/16	0.0135	0.0165	0.011	0.014	18	56.6667	2.2583	0.0239	0.0006	4.558	0.0004 to 0.0011	0.0004	0.0011	increasing	0.9921	Trend	1
E44/0087	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	18	2/3/12-22/12/16	1.6283	7.26	0.19	1.055	10	50.6667	1.2644	0.2061	0.2699	25.5852	-0.0321 to 0.6688	-0.0321	0.6688	increasing	0.9017	No Trend	0
E44/0173	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	2/3/12-22/12/16	6.6285	9.87	3.55	6.45	6	66.6667	0.6124	0.5403	0.0997	1.5451	-0.2924 to 0.6260	-0.2924	0.6260	increasing	0.6958	No Trend	0
E44/0173	Phosphorus..Dissolved.Reactive.	0	6	20	2/3/12-22/12/16	0.0049	0.023	0.003	0.004	-12	47	-1.6045	0.1086	-0.0003	-8.0781	-0.0037 to 0.0000	-0.0037	0.0000	decreasing	0.8611	No Trend	0
E45/0011	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	5/3/12-21/12/16	10.7385	13.9	8.6	10.49	-22	66.6667	-2.572	0.0101	-0.6778	-6.4612	-1.0634 to -0.3914	-1.0634	-0.3914	decreasing	0.996	Trend	-1
E45/0011	Phosphorus..Dissolved.Reactive.	0	1	20	5/3/12-21/12/16	0.0157	0.038	0.004	0.0147	1	65.6667	0	1	0.0001	0.5695	-0.0013 to 0.0009	-0.0013	0.0009	increasing	0.5155	No Trend	0
E45/0012	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	5/3/12-21/12/16	4.1365	6.3	2.6	4.13	7	65.6667	0.7404	0.459	0.0936	2.266	-0.0332 to 0.3729	-0.0332	0.3729	increasing	0.755	No Trend	0
E45/0012	Phosphorus..Dissolved.Reactive.	0	0	20	5/3/12-21/12/16	0.0388	0.05	0.0093	0.039	3	65.6667	0.2468	0.8051	0.0008	1.9746	-0.0006 to 0.0030	-0.0006	0.0030	increasing	0.5704	No Trend	0
E45/0034	Phosphorus..Dissolved.Reactive.	0	1	20	2/3/12-22/12/16	0.0239	0.028	0.015	0.024	11	61	1.2804	0.2004	0.0003	1.3767	0.0000 to 0.0005	0.0000	0.0005	increasing	0.9465	No Trend	0
E45/0055	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	7/3/12-20/12/16	7.7142	11.69	6	7.7	-1	57.6667	0	1	-0.0097	-0.1266	-0.7691 to 0.2911	-0.7691	0.2911	decreasing	0.4984	No Trend	0
E45/0055	Phosphorus..Dissolved.Reactive.	0	0	19	7/3/12-20/12/16	0.0083	0.012	0.004	0.0085	-9	55.6667	-1.0722	0.2836	-0.0004	-4.8513	-0.0010 to 0.0001	-0.0010	0.0001	decreasing	0.8693	No Trend	0
E45/0330_3m	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	15/2/12-21/12/16	10.9916	14.3	8	11.1	-24	58.6667	-3.0028	0.0027	-1.1555	-10.4096	-1.4308 to -0.6340	-1.4308	-0.6340	decreasing	0.999	Trend	-1
E46/0094	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	5/3/12-21/12/16	1.5695	1.98	1.18	1.59	-2	64.6667	-0.1244	0.901	-0.0017	-0.1041	-0.0571 to 0.0580	-0.0571	0.0580	decreasing	0.4545	No Trend	0
E46/0094	Phosphorus..Dissolved.Reactive.	0	0	20	5/3/12-21/12/16	0.0352	0.044	0.004	0.0367	1	65.6667	0	1	0.0001	0.1688	-0.0014 to 0.0018	-0.0014	0.0018	increasing	0.4343	No Trend	0
E46/0097	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	19	6/3/12-19/12/16	5.8368	6.7	4.9	5.74	-15	57.6667	-1.8436	0.0652	-0.1628	-2.8366	-0.3538 to -0.0152	-0.3538	-0.0152	decreasing	0.9711	Trend	-1
E46/0097	Phosphorus..Dissolved.Reactive.	1	5	19	6/3/12-19/12/16	0.0057	0.024	0.0035	0.004	3	51	0.2801	0.7794	-0.0001	-3.7406	-0.0044 to 0.0004	-0.0044	0.0004	decreasing	0.6593	No Trend	0
E46/0099	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	18	7/3/12-21/12/16	5.5217	6.64	4	5.37	19	49.6667	2.5541	0.0106	0.2655	4.9449	0.1785 to 0.4479	0.1785	0.4479	increasing	0.9932	Trend	1
E46/0099	Phosphorus..Dissolved.Reactive.	2	0	18	7/3/12-21/12/16	0.0718	0.077	0.064	0.073	-4	50.6667	-0.4215	0.6734	-0.0006	-0.8166	-0.0028 to 0.0009	-0.0028	0.0009	decreasing	0.6633	No Trend	0
F44/0039	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	18	7/3/12-20/12/16	4.4311	4.82	3.7	4.45	21	49.6667	2.8379	0.0045	0.1132	2.543	0.0600 to 0.1468	0.0600	0.1468	increasing	0.9982	Trend	1
F44/0039	Phosphorus..Dissolved.Reactive.	0	0	18	7/3/12-20/12/16	0.017	0.02	0.015	0.017	-8	47	-1.0211	0.3072	-0.0004	-2.1978	-0.0006 to 0.0001	-0.0006	0.0001	decreasing	0.7202	No Trend	0
F44/0139	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	7/3/12-20/12/16	13.9958	15.8	12.7	13.9	-5	57.6667	-0.5267	0.5984	-0.024	-0.1726	-0.5104 to 0.2000	-0.5104	0.2000	decreasing	0.6638	No Trend	0
F44/0139	Phosphorus..Dissolved.Reactive.	0	1	19	7/3/12-20/12/16	0.0124	0.02	0.004	0.0128	9	57.6667	1.0535	0.2921	0.0005	3.8904	-0.0001 to 0.0012	-0.0001	0.0012	increasing	0.8413	No Trend	0
F45/0167	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	6/3/12-19/12/16	7.7505	8.51	6.6	7.895	-15	65.6667	-1.7276	0.0841	-0.0922	-1.1674	-0.2797 to -0.0125	-0.2797	-0.0125	decreasing	0.9621	Trend	-1
F45/0167	Phosphorus..Dissolved.Reactive.	0	0	20	6/3/12-19/12/16	0.0097	0.012	0.007	0.0096	-10	60	-1.1619	0.2453	-0.0001	-1.1631	-0.0005 to 0.0000	-0.0005	0.0000	decreasing	0.7917	No Trend	0
F45/0168	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	6/3/12-19/12/16	3.363	5.83	2.2	2.95	-4	66.6667	-0.3674	0.7133	-0.0501	-1.6966	-0.1787 to 0.1401	-0.1787	0.1401	decreasing	0.634	No Trend	0
F45/0168	Phosphorus..Dissolved.Reactive.	0	0	20	6/3/12-19/12/16	0.0231	0.034	0.018	0.0224	1	63.6667	0	1	0	0	-0.0010 to 0.0005	-0.0010	0.0005	decreasing	0.5	No Trend	0
F45/0172	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	19	6/3/12-19/12/16	16.8021	19.2	8.9	17	16	56.6667	1.9926	0.0463	0.3923	2.3075	0.1015 to 0.7527	0.1015	0.7527	increasing	0.9902	Trend	1
F45/0463	Phosphorus..Dissolved.Reactive.	0	0	9	16/5/14-16/11/16	0.0103	0.0115	0.01	0.01	3	6.3333	0.7947	0.4205	0	0	0.0000 to 0.0004	0.0000	0.0004	decreasing	0.5	No Trend	0
F46/0183	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	6/3/12-19/12/16	1.7588	2.71	1.52	1.71	27	65.6667	3.2085	0.0013	0.0499	2.921	0.0299 to 0.0700	0.0299	0.0700	increasing	0.9989	Trend	1
F46/0184	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	20	6/3/12-19/12/16	4.1395	7.26	3	3.86	12	66.6667	1.3472	0.1779	0.2558	6.6272	-0.1171 to 0.4743	-0.1171	0.4743	increasing	0.8939	No Trend	0
F46/0184	Phosphorus..Dissolved.Reactive.	0	1	20	6/3/12-19/12/16	0.0085	0.012	0.004	0.0084	2	62	0.127	0.8989	0	0	-0.0005 to 0.0003	-0.0005	0.0003	increasing	0.5	No Trend	0
F46/0185	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	19	15/2/12-19/12/16	7.9774	9.5	6.7	7.76	-30	58.6667	-3.7862	0.0002	-0.5745	-7.4029	-0.7232 to -0.3630	-0.7232	-0.3630	decreasing	0.9999	Trend	-1
F46/0185	Phosphorus..Dissolved.Reactive.	1	0	19	6/3/12-19/12/16	0.018	0.026	0.007	0.019	3	57.6667	0.2634	0.7923	0.0004	2.2477	-0.0014 to 0.0026	-0.0014	0.0026	increasing	0.5477	No Trend	0

Trend 2007-2016 - ES Groundwater data - Export TimeTrends

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
D43/0004	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	38	27/3/07-21/12/16	2.5162	4.1	1.4	2.5425	43	432	2.0207	0.0433	0.0553	2.1769	0.0065 to 0.1060	0.0065	0.1060	increasing	0.9729	Trend	1
D43/0004	Phosphorus..Dissolved.Reactive.	0	1	38	27/3/07-21/12/16	0.0095	0.024	0.003	0.0085	-79	424.3333	-3.7865	0.0002	-0.0006	-7.4633	-0.0010 to -0.0003	-0.0010	-0.0003	decreasing	0.9998	Trend	-1
D45/0004	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	37	28/3/07-21/12/16	1.1334	2.05	0.65	1.04	-12	405.3333	-0.5464	0.5848	-0.0126	-1.2137	-0.0542 to 0.0159	-0.0542	0.0159	decreasing	0.7201	No Trend	0
D45/0004	Phosphorus..Dissolved.Reactive.	0	2	37	28/3/07-21/12/16	0.0263	0.046	0.001	0.03	35	404.3333	1.6909	0.0909	0.0012	4.0005	0.0000 to 0.0027	0.0000	0.0027	increasing	0.9481	No Trend	0
D45/0005	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	34	28/3/07-21/12/16	3.1018	3.8	2.2	3.1	96	328.6667	5.2402	0	0.098	3.1615	0.0768 to 0.1151	0.0768	0.1151	increasing	1	Trend	1
D45/0005	Phosphorus..Dissolved.Reactive.	1	0	34	28/3/07-21/12/16	0.018	0.033	0.013	0.017	-35	331.6667	-1.8669	0.0619	-0.0003	-2.0427	-0.0007 to 0.0000	-0.0007	0.0000	decreasing	0.9583	No Trend	0
E44/0007	Nitrogen..Nitrate.Nitrite..g.m3.	3	0	37	27/3/07-22/12/16	6.0043	10.3	1.4	6.2	87	406.3333	4.2664	0	0.4551	7.3399	0.3187 to 0.5705	0.3187	0.5705	increasing	1	Trend	1
E44/0007	Phosphorus..Dissolved.Reactive.	3	0	37	27/3/07-22/12/16	0.0149	0.024	0.006	0.014	-67	402.3333	-3.2904	0.001	-0.0012	-8.6462	-0.0015 to -0.0005	-0.0015	-0.0005	decreasing	0.9996	Trend	-1
E44/0008	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	37	29/3/07-20/12/16	8.5086	11	6.6	8.5	-11	404.3333	-0.4973	0.619	-0.0287	-0.3382	-0.1732 to 0.1004	-0.1732	0.1004	decreasing	0.6887	No Trend	0
E44/0008	Phosphorus..Dissolved.Reactive.	1	0	37	29/3/07-20/12/16	0.022	0.04	0.016	0.021	-19	395.6667	-0.9049	0.3655	-0.0002	-0.7912	-0.0004 to 0.0001	-0.0004	0.0001	decreasing	0.8582	No Trend	0
E44/0036	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	37	29/3/07-20/12/16	12.5711	14.39	10	12.7	113	404.3333	5.5699	0	0.2515	1.9803	0.2005 to 0.3055	0.2005	0.3055	increasing	1	Trend	1
E44/0036	Phosphorus..Dissolved.Reactive.	31	1	36	29/3/07-20/12/16	0.0146	0.023	0.0095	0.014	-53	366.3333	-2.7168	0.0066	-0.0002	-1.7736	-0.0004 to -0.0001	-0.0004	-0.0001	decreasing	0.9982	Trend	-1
E44/0044	Nitrogen..Nitrate.Nitrite..g.m3.	0	5	38	27/3/07-22/12/16	0.0157	0.03	0	0.02	71	334.3333	3.8283	0.0001	0	0	0.0000 to 0.0015	0.0000	0.0015	decreasing	0.5	No Trend	0
E44/0044	Phosphorus..Dissolved.Reactive.	0	0	38	27/3/07-22/12/16	0.013	0.017	0.0079	0.0132	38	430.6667	1.7829	0.0746	0.0004	3.0045	0.0000 to 0.0005	0.0000	0.0005	increasing	0.9554	No Trend	0
E44/0087	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	34	27/3/07-22/12/16	1.3456	7.26	0.04	1.04	29	320.3333	1.5644	0.1177	0.0591	5.6866	-0.0090 to 0.1728	-0.0090	0.1728	increasing	0.9407	No Trend	0
E44/0173	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	39	27/3/07-22/12/16	5.761	9.87	1.3	5.6	72	466	3.289	0.001	0.2758	4.9242	0.1592 to 0.4216	0.1592	0.4216	increasing	0.9994	Trend	1
E44/0173	Phosphorus..Dissolved.Reactive.	0	20	39	27/3/07-22/12/16	0.0053	0.023	0.003	0.005	-19	344.3333	-0.97	0.332	-0.0004	-7.9691	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9262	No Trend	0
E45/0010	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	29	28/3/07-1/11/16	6.8266	9.2	4	6.7	17	230.3333	1.0542	0.2918	0.1001	1.4936	-0.1026 to 0.3804	-0.1026	0.3804	increasing	0.8401	No Trend	0
E45/0011	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	37	28/3/07-21/12/16	10.4395	13.9	7.3	10.1	25	406.3333	1.1906	0.2338	0.0817	0.8089	-0.0759 to 0.2751	-0.0759	0.2751	increasing	0.8797	No Trend	0
E45/0011	Phosphorus..Dissolved.Reactive.	2	1	37	28/3/07-21/12/16	0.0164	0.038	0.005	0.016	-43	400.3333	-2.0991	0.0358	-0.0003	-2.0715	-0.0006 to 0.0000	-0.0006	0.0000	decreasing	0.9798	No Trend	0
E45/0012	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	37	28/3/07-21/12/16	3.7927	6.3	2.2	3.7	71	401.6667	3.4927	0.0005	0.1591	4.2996	0.0893 to 0.1985	0.0893	0.1985	increasing	0.9998	Trend	1
E45/0012	Phosphorus..Dissolved.Reactive.	1	0	37	28/3/07-21/12/16	0.0391	0.053	0.0093	0.04	0	401.3333	0	1	0	0	-0.0005 to 0.0006	-0.0005	0.0006	increasing	0.5	No Trend	0
E45/0034	Nitrogen..Nitrate.Nitrite..g.m3.	1	21	39	29/3/07-22/12/16	0.0073	0.04	0	0.01	-21	317.3333	-1.1227	0.2616	0	0	-0.0071 to 0.0000	-0.0071	0.0000	decreasing	0.5	No Trend	0
E45/0034	Phosphorus..Dissolved.Reactive.	1	1	39	29/3/07-22/12/16	0.0242	0.033	0.0155	0.024	12	443.3333	0.5224	0.6014	0	0	-0.0001 to 0.0003	-0.0001	0.0003	decreasing	0.5	No Trend	0
E45/0055	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	36	29/3/07-20/12/16	7.3047	11.69	3.2	7.4	10	378.6667	0.4625	0.6437	0.0451	0.6094	-0.0986 to 0.2730	-0.0986	0.2730	increasing	0.6875	No Trend	0
E45/0055	Phosphorus..Dissolved.Reactive.	0	0	36	29/3/07-20/12/16	0.0096	0.022	0.004	0.009	-47	371	-2.3882	0.0169	-0.0004	-4.0713	-0.0006 to -0.0002	-0.0006	-0.0002	decreasing	0.9956	Trend	-1
E45/0330_3m	Nitrogen..Nitrate.Nitrite..g.m3.	5	0	39	2/3/07-21/12/16	11.7382	16	7.3	11.5	-66	466	-3.0111	0.0026	-0.375	-3.2609	-0.5877 to -0.2284	-0.5877	-0.2284	decreasing	0.999	Trend	-1
E45/0330_3m	Phosphorus..Dissolved.Reactive.	36	0	30	2/3/07-21/12/16	0.0081	0.016	0.001	0.007	-34	215.3333	-2.2488	0.0245	-0.0003	-4.8855	-0.0007 to -0.0001	-0.0007	-0.0001	decreasing	0.994	Trend	-1
E46/0094	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	37	28/3/07-21/12/16	1.5105	1.98	0.62	1.56	18	403.3333	0.8465	0.3973	0.0139	0.8883	-0.0085 to 0.0317	-0.0085	0.0317	increasing	0.7911	No Trend	0
E46/0094	Phosphorus..Dissolved.Reactive.	0	0	37	28/3/07-21/12/16	0.0381	0.075	0.004	0.037	-31	402.3333	-1.4956	0.1347	-0.0005	-1.3374	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9462	No Trend	0
E46/0097	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	37	26/3/07-19/12/16	6.0414	7	3.4	6.1	-54	403.3333	-2.639	0.0083	-0.1006	-1.6484	-0.1439 to -0.0499	-0.1439	-0.0499	decreasing	0.9964	Trend	-1
E46/0097	Phosphorus..Dissolved.Reactive.	1	14	37	26/3/07-19/12/16	0.0061	0.024	0.0006	0.005	-27	380.3333	-1.3332	0.1825	-0.0002	-3.994	-0.0006 to 0.0000	-0.0006	0.0000	decreasing	0.9077	No Trend	0
E46/0099	Nitrogen..Nitrate.Nitrite..g.m3.	3	0	35	27/3/07-21/12/16	5.1769	6.7	2.8	5.2	74	338	3.9707	0.0001	0.2133	4.1014	0.1212 to 0.2632	0.1212	0.2632	increasing	1	Trend	1
E46/0099	Phosphorus..Dissolved.Reactive.	3	0	35	27/3/07-21/12/16	0.071	0.082	0.014	0.073	2	344.6667	0.0539	0.957	0	0	-0.0007 to 0.0006	-0.0007	0.0006	increasing	0.5	No Trend	0
F44/0039	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	37	29/3/07-20/12/16	4.0173	4.82	3.2	4	106	403.3333	5.2283	0	0.1332	3.3311	0.1164 to 0.1587	0.1164	0.1587	increasing	1	Trend	1
F44/0039	Phosphorus..Dissolved.Reactive.	1	0	36	29/3/07-20/12/16	0.019	0.054	0.015	0.0179	-67	355	-3.5029	0.0005	-0.0003	-1.8686	-0.0005 to -0.0002	-0.0005	-0.0002	decreasing	0.9987	Trend	-1
F44/0139	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	38	29/3/07-20/12/16	12.4611	15.8	8.3	13	103	433	4.9018	0	0.5517	4.2435	0.4291 to 0.6779	0.4291	0.6779	increasing	1	Trend	1
F44/0139	Phosphorus..Dissolved.Reactive.	1	1	38	29/3/07-20/12/16	0.0133	0.02	0.005	0.0139	-46	422.6667	-2.1888	0.0286	-0.0002	-1.443	-0.0004 to 0.0000	-0.0004	0.0000	decreasing	0.9653	No Trend	0
F45/0167	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	39	26/3/07-19/12/16	7.9535	10.2	4.6	7.95	-54	461.3333	-2.4676	0.0136	-0.0747	-0.9402	-0.1434 to -0.0266	-0.1434	-0.0266	decreasing	0.9889	Trend	-1
F45/0167	Phosphorus..Dissolved.Reactive.	2	0	39	26/3/07-19/12/16	0.0096	0.024	0.0011	0.0097	3	449.6667	0.0943	0.9249	0	0	-0.0002 to 0.0002	-0.0002	0.0002	decreasing	0.5	No Trend	0
F45/0168	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	38	26/3/07-19/12/16	3.573	8.05	1.8	3.16	-39	435.6667	-1.8206	0.0687	-0.0636	-2.0123	-0.1342 to -0.0033	-0.1342	-0.0033	decreasing	0.9623	Trend	-1
F45/0168	Phosphorus..Dissolved.Reactive.	0	0	38	26/3/07-19/12/16	0.0257	0.051	0.014	0.0234	-41	422.3333	-1.9464	0.0516	-0.0004	-1.7515	-0.0010 to 0.0000	-0.0010	0.0000	decreasing	0.9908	No Trend	0
F46/0183	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	38	26/3/07-19/12/16	1.6291	2.71	0.89	1.655	114	435.3333	5.4159	0	0.046	2.7798	0.0384 to 0.0543	0.0384	0.0543	increasing	1	Trend	1
F46/0184	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	39	26/3/07-19/12/16	4.9694	7.915	2.6	4.88	-54	466	-2.4552	0.0141	-0.2775	-5.6856	-0.4071 to -0.1241	-0.4071	-0.1241	decreasing	0.9937	Trend	-1
F46/0184	Phosphorus..Dissolved.Reactive.	1	1	39	26/3/07-19/12/16	0.0093	0.025	0.004	0.009	-16	446	-0.7103	0.4775	0	0	-0.0003 to 0.0001	-0.0003	0.0001	decreasing	0.5	No Trend	0
F46/0185	Nitrogen..Nitrate.Nitrite..g.m3.	5	0	38	26/3/07-19/12/16	8.4863	10.5	5.2	8.6	-59	440.3333	-2.764	0.0057	-0.2104	-2.4471	-0.3201 to -0.0856	-0.3201	-0.0856	decreasing	0.9971	Trend	-1
F46/0185	Phosphorus..Dissolved.Reactive.	5	0	38	26/3/07-19/12/16	0.0188	0.027	0.007	0.0195	-9	423.6667	-0.3887	0.6975	0	0	-0.0004 to 0.0003	-0.0004	0.0003	decreasing	0.5	No Trend	0

Trend 2000-2016 - ES Groundwater data - Export TimeTrends																					
Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
D43/0004	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	57	15/2/02-21/12/16	2.2892	4.1	1.4	2.3	185	1405	4.9088	0	0.0711	3.0932	0.0502 to 0.0928	0.0502	0.0928	increasing	1	Trend	1
D43/0004	Phosphorus..Dissolved.Reactive.	3	1	55	16/11/02-21/12/16	0.0122	0.081	0.003	0.01	-184	1250.667	-5.1746	0	-0.0005	-5.0247	-0.0007 to -0.0004	-0.0007	-0.0004	decreasing	1	Trend	-1
D45/0004	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	62	4/4/00-21/12/16	1.2823	3.3	0.65	1.17	-146	1795.333	-3.4221	0.0006	-0.0372	-3.1784	-0.0527 to -0.0201	-0.0527	-0.0201	decreasing	0.9996	Trend	-1
D45/0004	Phosphorus..Dissolved.Reactive.	0	2	62	4/4/00-21/12/16	0.025	0.21	0.001	0.0222	135	1791.667	3.1657	0.0015	0.0011	5.142	0.0005 to 0.0019	0.0005	0.0019	increasing	0.9998	Trend	1
E44/0007	Nitrogen..Nitrate.Nitrite..g.m3.	3	0	63	16/5/00-22/12/16	5.6022	10.3	1.4	5.4	209	1932.333	4.7318	0	0.2145	3.9723	0.1515 to 0.2781	0.1515	0.2781	increasing	1	Trend	1
E44/0007	Phosphorus..Dissolved.Reactive.	4	1	62	16/5/00-22/12/16	0.0192	0.085	0.006	0.0162	-237	1867.667	-5.4609	0	-0.001	-6.1751	-0.0013 to -0.0008	-0.0013	-0.0008	decreasing	1	Trend	-1
E44/0008	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	63	16/5/00-20/12/16	7.6665	11	4.8	7.75	207	1892.333	4.7355	0	0.1941	2.5046	0.1418 to 0.2692	0.1418	0.2692	increasing	1	Trend	1
E44/0008	Phosphorus..Dissolved.Reactive.	1	1	63	16/5/00-20/12/16	0.0255	0.12	0.01	0.022	-116	1863.333	-2.6641	0.0077	-0.0003	-1.3578	-0.0004 to -0.0001	-0.0004	-0.0001	decreasing	0.9994	Trend	-1
E44/0036	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	60	27/3/01-20/12/16	11.648	14.39	8.7	11.9	313	1617	7.7589	0	0.3002	2.5227	0.2678 to 0.3319	0.2678	0.3319	increasing	1	Trend	1
E44/0036	Phosphorus..Dissolved.Reactive.	31	2	59	27/3/01-20/12/16	0.0185	0.11	0.009	0.015	-165	1534.333	-4.1868	0	-0.0003	-2.2293	-0.0004 to -0.0002	-0.0004	-0.0002	decreasing	1	Trend	-1
E44/0173	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	60	26/9/01-22/12/16	4.9472	9.87	1.3	5.02	240	1648	5.8873	0	0.2978	5.9319	0.2207 to 0.3512	0.2207	0.3512	increasing	1	Trend	1
E44/0173	Phosphorus..Dissolved.Reactive.	1	25	60	26/9/01-22/12/16	0.0095	0.058	0.003	0.0085	-163	1486.667	-4.2015	0	-0.0004	-4.4773	-0.0007 to -0.0001	-0.0007	-0.0001	decreasing	0.9886	Trend	-1
E45/0010	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	51	16/5/00-1/11/16	6.9632	11	3.95	6.7	0	1096.667	0	1	0	0	-0.0943 to 0.1010	-0.0943	0.1010	decreasing	0.5	No Trend	0
E45/0011	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	63	16/5/00-21/12/16	9.6559	14	5.3	9.7	209	1898.333	4.7739	0	0.2467	2.5435	0.1603 to 0.3172	0.1603	0.3172	increasing	1	Trend	1
E45/0011	Phosphorus..Dissolved.Reactive.	2	1	63	16/5/00-21/12/16	0.0207	0.15	0.009	0.016	-98	1876.667	-2.2391	0.0251	-0.0002	-1.1776	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.961	No Trend	0
E45/0012	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	64	16/5/00-21/12/16	3.7298	6.3	2.2	3.625	108	1970	2.4107	0.0159	0.0454	1.2532	0.0140 to 0.0751	0.0140	0.0751	increasing	0.9933	Trend	1
E45/0012	Phosphorus..Dissolved.Reactive.	2	0	64	16/5/00-21/12/16	0.0433	0.28	0.0093	0.04	2	1970.667	0.0225	0.982	0	0	-0.0003 to 0.0003	-0.0003	0.0003	increasing	0.5	No Trend	0
E45/0055	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	58	28/3/01-20/12/16	7.6016	12	3.2	7.6	-45	1501	-1.1357	0.2561	-0.0531	-0.6982	-0.1268 to 0.0197	-0.1268	0.0197	decreasing	0.8789	No Trend	0
E45/0055	Phosphorus..Dissolved.Reactive.	0	1	58	28/3/01-20/12/16	0.0111	0.061	0.004	0.01	-88	1481.667	-2.2602	0.0238	-0.0002	-2.0191	-0.0003 to -0.0001	-0.0003	-0.0001	decreasing	0.9979	Trend	-1
E45/0088	Nitrogen..Nitrate.Nitrite..g.m3.	4	0	43	15/2/02-18/12/14	3.7191	8.6	1.8	3.3	61	645	2.3625	0.0182	0.093	2.8171	0.0252 to 0.1554	0.0252	0.1554	increasing	0.9881	Trend	1
E45/0330_3m	Nitrogen..Nitrate.Nitrite..g.m3.	7	0	44	12/5/05-21/12/16	11.3566	16	6.5	11.25	-30	666.6667	-1.1232	0.2614	-0.2062	-1.8328	-0.3664 to 0.0387	-0.3664	0.0387	decreasing	0.8823	No Trend	0
E46/0092	Nitrogen..Nitrate.Nitrite..g.m3.	3	0	56	16/5/00-18/3/16	6.2259	10.1	2.6	6.2	135	1331.667	3.672	0.0002	0.1086	1.7518	0.0699 to 0.1670	0.0699	0.1670	increasing	0.9999	Trend	1
E46/0092	Phosphorus..Dissolved.Reactive.	3	1	56	16/5/00-18/3/16	0.0279	0.11	0.007	0.027	59	1329	1.591	0.1116	0.0006	2.117	0.0001 to 0.0010	0.0001	0.0010	increasing	0.9734	Trend	1
E46/0094	Nitrogen..Nitrate.Nitrite..g.m3.	0	0	63	16/5/00-21/12/16	1.6125	2.96	0.62	1.6	-111	1887	-2.5323	0.0113	-0.0264	-1.6484	-0.0377 to -0.0085	-0.0377	-0.0085	decreasing	0.9937	Trend	-1
E46/0094	Phosphorus..Dissolved.Reactive.	1	0	63	27/6/00-21/12/16	0.0433	0.25	0.004	0.038	-120	1879.333	-2.745	0.0061	-0.0004	-0.9421	-0.0006 to -0.0001	-0.0006	-0.0001	decreasing	0.9968	Trend	-1
E46/0097	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	63	16/5/00-19/12/16	5.8184	7	3.4	5.8	85	1907	1.9236	0.0544	0.034	0.5862	0.0006 to 0.0597	0.0006	0.0597	increasing	0.985	Trend	1
E46/0097	Phosphorus..Dissolved.Reactive.	1	17	63	16/5/00-19/12/16	0.0119	0.12	0.0006	0.009	-203	1873.667	-4.6666	0	-0.0005	-5.0784	-0.0006 to -0.0002	-0.0006	-0.0002	decreasing	0.9998	Trend	-1
E46/0099	Nitrogen..Nitrate.Nitrite..g.m3.	3	0	61	16/5/00-21/12/16	4.8038	6.7	2	5	201	1701	4.8493	0	0.1106	2.2127	0.0669 to 0.1648	0.0669	0.1648	increasing	1	Trend	1
E46/0099	Phosphorus..Dissolved.Reactive.	3	0	61	16/5/00-21/12/16	0.0743	0.21	0.014	0.073	-11	1705.667	-0.2421	0.8087	0	0	-0.0006 to 0.0003	-0.0006	0.0003	increasing	0.5	No Trend	0
F44/0039	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	58	26/9/01-20/12/16	3.8536	4.82	3	3.8	213	1495	5.483	0	0.0895	2.3544	0.0671 to 0.1125	0.0671	0.1125	increasing	1	Trend	1
F44/0039	Phosphorus..Dissolved.Reactive.	1	0	57	26/9/01-20/12/16	0.0215	0.1	0.006	0.018	-139	1381.333	-3.713	0.0002	-0.0003	-1.5485	-0.0004 to -0.0002	-0.0004	-0.0002	decreasing	1	Trend	-1
F44/0139	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	55	31/10/02-20/12/16	11.324	15.8	2	11.1	231	1267.667	6.4599	0	0.4433	3.9935	0.3860 to 0.5090	0.3860	0.5090	increasing	1	Trend	1
F45/0167	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	64	25/9/00-19/12/16	7.3435	10.2	4.6	7.62	105	1980.333	2.337	0.0194	0.0834	1.0942	0.0278 to 0.1346	0.0278	0.1346	increasing	0.9937	Trend	1
F45/0167	Phosphorus..Dissolved.Reactive.	4	3	64	25/9/00-19/12/16	0.0126	0.074	0.0011	0.01	-91	1924.333	-2.0516	0.0402	-0.0002	-1.6672	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.9849	No Trend	0
F45/0168	Nitrogen..Nitrate.Nitrite..g.m3.	1	0	64	29/6/00-19/12/16	3.8962	8.05	1.8	3.675	-191	1989.667	-4.2595	0	-0.1011	-2.7519	-0.1331 to -0.0709	-0.1331	-0.0709	decreasing	1	Trend	-1
F45/0168	Phosphorus..Dissolved.Reactive.	0	2	64	29/6/00-19/12/16	0.0248	0.092	0.01	0.022	119	1963.667	2.6629	0.0077	0.0003	1.2187	0.0001 to 0.0005	0.0001	0.0005	increasing	0.9926	Trend	1
F46/0183	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	60	3/4/00-19/12/16	1.7007	2.71	0.89	1.665	12	1674.667	0.2688	0.7881	0	0	-0.0102 to 0.0137	-0.0102	0.0137	increasing	0.5	No Trend	0
F46/0184	Nitrogen..Nitrate.Nitrite..g.m3.	2	0	65	16/5/00-19/12/16	4.8627	8.8	2.6	4.7	-57	2076.333	-1.229	0.2191	-0.055	-1.171	-0.1120 to 0.0165	-0.1120	0.0165	decreasing	0.8898	No Trend	0
F46/0184	Phosphorus..Dissolved.Reactive.	2	3	65	16/5/00-19/12/16	0.011	0.062	0.004	0.0095	-82	2005	-1.809	0.0705	-0.0001	-1.1693	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.8142	No Trend	0
F46/0185	Nitrogen..Nitrate.Nitrite..g.m3.	9	0	64	16/5/00-19/12/16	7.8073	10.5	5.2	7.725	179	1992.333	3.9879	0.0001	0.1634	2.1152	0.0973 to 0.2594	0.0973	0.2594	increasing	1	Trend	1
F46/0185	Phosphorus..Dissolved.Reactive.	9	0	64	16/5/00-19/12/16	0.0218	0.093	0.007	0.02	-61	1955.667	-1.3568	0.1749	-0.0001	-0.6304	-0.0003 to 0.0000	-0.0003	0.0000	decreasing	0.9791	No Trend	0

Trend 2012-2016 -GNS data - Export TimeTrends																					
Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
D45/0006	Nitrate.mg.L.as.N..filterable	1	0	16	27/6/12-20/9/16	6.1344	7.4	4.9	6.075	-13	37.6667	-1.9553	0.0506	-0.4198	-6.9107	-0.7557 to -0.0985	-0.7557	-0.0985	decreasing	0.9736	Trend	-1
E46/0104	Nitrate.mg.L.as.N..filterable	2	2	15	28/2/12-21/6/16	0.2443	0.905	0.01	0.2	-17	29.6667	-2.9376	0.0033	-0.1045	-52.2267	-0.3284 to -0.0092	-0.3284	-0.0092	decreasing	0.9615	Trend	-1
F45/0170	Nitrate.mg.L.as.N..filterable	1	0	15	28/2/12-20/9/16	4.8467	6.9	3.4	4.6	1	29.6667	0	1	0.1044	2.2686	-0.3203 to 0.3885	-0.3203	0.3885	increasing	0.5257	No Trend	0
F45/0350	Nitrate.mg.L.as.N..filterable	1	0	17	28/2/12-20/9/16	2.1744	3.2	1.5	1.9	-6	38.6667	-0.8041	0.4213	-0.0091	-0.4791	-0.2287 to 0.0371	-0.2287	0.0371	decreasing	0.6063	No Trend	0
F46/0194	Nitrate.mg.L.as.N..filterable	2	0	17	28/2/12-20/9/16	8.1353	9.2	6.5	8.2	2	42.6667	0.1531	0.8783	0.0473	0.5763	-0.3321 to 0.2290	-0.3321	0.2290	increasing	0.5461	No Trend	0
F46/0195	Nitrate.mg.L.as.N..filterable	0	0	16	27/6/12-20/9/16	1.2937	1.8	1.1	1.2	5	33	0.6963	0.4862	0.024	2.0025	-0.0343 to 0.0570	-0.0343	0.0570	increasing	0.8063	No Trend	0

Trend 2007-2016 -GNS data - Export TimeTrends

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	90% confidence limits for	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
D45/0006	Nitrate.mg.L.as.N. ..filterable	2	0	36	20/3/07-20/9/16	6.3764	8	4.9	6.275	-20	369.3333	-0.9887	0.3228	-0.0593	-0.9449	-0.1641 to 0.0458	-0.1641	0.0458	decreasing	0.8655	No Trend	0
E46/0104	Nitrate.mg.L.as.N. ..filterable	5	2	32	20/3/07-21/6/16	0.578	7	0.01	0.345	-60	266	-3.6175	0.0	-0.0576	-16.706	-0.1041 to 0.0258	-0.1041	-0.0258	decreasing	0.9	Trend	-1
F45/0170	Nitrate.mg.L.as.N. ..filterable	2	0	35	20/3/07-20/9/16	5.1886	7.3	2.4	5.2	-28	339.3333	-1.4657	0.1427	-0.1012	-1.9465	-0.2024 to 0.0166	-0.2024	0.0166	decreasing	0.9379	No Trend	0
F45/0350	Nitrate.mg.L.as.N. ..filterable	3	0	37	20/3/07-20/9/16	2.3585	3.3	1.5	2.4	-14	391.3333	-0.6572	0.5111	-0.0166	-0.6905	-0.0965 to 0.0186	-0.0965	0.0186	decreasing	0.7927	No Trend	0
F46/0194	Nitrate.mg.L.as.N. ..filterable	3	0	36	20/3/07-20/9/16	7.7569	9.2	0.25	8.05	59	372.3333	3.0058	0.0026	0.1582	1.9652	0.0777 to 0.1975	0.0777	0.1975	increasing	0.9987	Trend	1
F46/0195	Nitrate.mg.L.as.N. ..filterable	1	0	36	20/3/07-20/9/16	1.245	1.8	0.62	1.2	43	338.3	2.2834	0.0224	0.0	1.3	0.0000 to 0.0291	0.0000	0.0291	increasing	0.994	No Trend	0

Trend 2000-2016 -GNS data - Export TimeTrends

Site	Variable	Missing	Non-detects	Samples used	Sampling period	Mean	Maximum	Minimum	Median	Kendall statistic	Variance	Z	P	Sen slope (annual)	Percent annual change	confidence limits for slope	Limit_min	Limit_max	Trend direction	Probability	Trend ?	Trend code
D45/0006	Nitrate.mg.La s.N...filterable	10	0	53	19/9/00-20/9/16	6.5186	8.8	4.9	6.4	-59	1148.3333	-1.7116	0.087	-0.0501	-0.7821	-0.1001 to 0.0000	-0.1001	0.0000	decreasing	0.9518	No Trend	0
E46/0104	Nitrate.mg.La s.N...filterable	12	2	47	28/6/00-21/6/16	0.5286	7	0.01	0.4	-65	834.3333	-2.2157	0.0267	-0.0125	-3.1357	-0.0251 to 0.0023	-0.0251	0.0023	decreasing	0.9211	No Trend	0
F45/0170	Nitrate.mg.La s.N...filterable	10	0	50	19/9/00-20/9/16	5.8055	9.8	2.4	5.6	-137	967.6667	-4.372	0	-0.2013	-3.595	-0.2800 to 0.1339	-0.2800	-0.1339	decreasing	1	Trend	-1
F45/0350	Nitrate.mg.La s.N...filterable	4	0	43	21/9/04-20/9/16	2.2639	3.3	0.83	2.3	29	615	1.1291	0.2589	0.0328	1.4268	-0.0082 to 0.0602	-0.0082	0.0602	increasing	0.8704	No Trend	0
F46/0194	Nitrate.mg.La s.N...filterable	9	0	51	18/12/00-20/9/16	7.2746	9.2	0.25	7.6	192	1030	5.9513	0	0.1893	2.4913	0.1520 to 0.2177	0.1520	0.2177	increasing	1	Trend	1
F46/0195	Nitrate.mg.La s.N...filterable	4	0	56	28/3/00-20/9/16	1.2593	2.7	0.62	1.2	78	1273.3333	2.1578	0.0309	0.0091	0.7577	0.0000 to 0.0197	0.0000	0.0197	increasing	0.9798	No Trend	0

Appendix 6 : ES surface water state analysis results

State - ES data - 2012-2016															
Site	NO3-N - Toxicity (median)	NO3-N - Toxicity (95 percentile)	NO3-N - Toxicity	NH4-N - Toxicity (median)	NH4-N - Toxicity (95 percentile)	NH4-N - Toxicity	E.coli (median)	E.coli (95 percentile)	Human Health Recreation	Clarity (median)	NH4-N (median)	NO3-N (median)	TN (median)	DRP (median)	TP (median)
Aparima River at Dunrobin	A	A	A	A	A	A	A	D	D	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Aparima River at Thornbury	A	B	B	A	A	A	A	D	D	>0.6	<0.021	>0.444	>0.617	<0.01	<0.033
Bog Burn d/s Hundred Line Road	B	B	B	A	B	B	C	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Carran Creek at Waituna Lagoon Road	A	B	B	A	B	B	A	D	D	<0.6	<0.021	<0.444	>0.617	>0.01	>0.033
Cascade Stream at Pourakino Valley Road	A	A	A	A	A	A	A	D	D	>0.6	<0.021	<0.444	<0.617	<0.01	<0.033
Cromel Stream at Selbie Road	A	A	A	A	A	A	A	A	A	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Dunsdale Stream at Dunsdale Reserve	A	A	A	A	A	A	A	D	D	>0.8	<0.01	>0.167	<0.295	>0.009	<0.026
Irthing Stream at Ellis Road	B	B	B	A	B	B	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Longridge Stream at Sandstone	C	C	C	A	C	C	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Makarewa River at Lora Gorge Road	A	A	A	A	A	A	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	<0.033
Makarewa River at Wallacetown	B	B	B	A	B	B	B	D	D	>0.6	>0.021	>0.444	>0.617	>0.01	>0.033
Mararoa River at South Mavora Lake	A	A	A	A	A	A	A	A	A	>0.8	<0.01	<0.167	<0.295		<0.026
Mararoa River at The Key	A	A	A	A	A	A	A	D	D	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Mararoa River at Weir Road	A	A	A	A	A	A	A	B	B	>0.8	<0.01	>0.167	>0.295		<0.026
Mataura River 200m d/s Mataura Bridge	A	A	A	A	B	B	D	D	D	>0.8	>0.01	>0.167	>0.295	>0.009	<0.026
Mataura River at Gore	A	A	A	A	A	A	B	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Mataura River at Mataura Island Bridge	A	A	A	A	A	A	B	D	D	>0.6	<0.021	>0.444	>0.617	<0.01	<0.033
Mataura River at Parawa	A	A	A	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Mimihau Stream at Wyndham	A	A	A	A	A	A	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Mimihau Stream Tributary at Venlaw Forest	A	A	A	A	A	A	A	A	A	>0.8	<0.01	<0.167	<0.295	>0.009	<0.026
Moffat Creek at Moffat Road	A	B	B	A	B	B	B	D	D	<0.6	<0.021	<0.444	>0.617	>0.01	>0.033
Mokoreta River at Wyndham River Road	B	B	B	A	A	A	B	D	D	>0.6	<0.021	>0.444	>0.617	<0.01	<0.033
Mokotua Stream at Awarua	A	A	A			A	A	A	A	<0.6		<0.444	>0.617	<0.01	<0.033
North Peak Stream at Waimea Valley Road	A	A	A	A	C	C	A	D	D	>0.6	<0.021	<0.444	>0.617	>0.01	>0.033
Opouriki Stream at Tweedie Road	B	B	B	A	B	B	C	D	D	>0.6	<0.021	>0.444	>0.617	<0.01	>0.033
Orauea River at Orawia Pukemaori Road	A	A	A	A	B	B	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	<0.033
Oreti River at Lumsden Bridge	A	A	A	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Oreti River at Three Kings	A	A	A	A	A	A	A	A	A	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Oreti River at Wallacetown	A	B	B	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Otamita Stream at Mandeville	A	B	B	A	A	A	B	D	D	>0.6	<0.021	>0.444	>0.617	<0.01	<0.033
Otapiri Stream at Otapiri Gorge	A	B	B	A	A	A	B	D	D	<0.8	<0.01	>0.167	>0.295	>0.009	>0.026
Otautau Stream at Otautau-Tuatapere Road	A	B	B	A	B	B	D	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Otautau Stream at Waikouro	A	B	B	A	B	B	D	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Otepuni Creek at Nith Street	B	B	B	A	B	B	D	D	D	>0.6	>0.021	>0.444	>0.617	>0.01	>0.033
Oteramika Stream at Seaward Downs	B	C	C	A	C	C	C	D	D	<0.6	>0.021	>0.444	>0.617	>0.01	>0.033
Pourakino River at Traill Road	A	A	A	A	A	A	B	D	D		<0.021	<0.444	<0.617	<0.01	<0.033
Sandstone Stream at Kingston Crossing Rd	B	C	C	A	C	C	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Tokanui River at Fortrose Otara Road	B	B	B	A	B	B	B	D	D	<0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Tussock Creek at Cooper Road	B	C	C	A	B	B	D	D	D	>0.6	>0.021	>0.444	>0.617	>0.01	>0.033
Upukerora River at Te Anau Milford Road	A	A	A	A	A	A	A	B	B	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Waiau River at Sunnyside	A	A	A	A	A	A	A	B	B	>0.8	<0.01	<0.167	<0.295		<0.026
Waiau River at Tuatapere	A	A	A	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Waihopai River u/s Queens Drive	B	C	C	A	B	B	B	D	D	>0.6	<0.021	>0.444	>0.617	<0.01	<0.033
Waikaia River at Waikaia	A	A	A	A	A	A	A	D	D	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Waikaia River at Waipounamu Bridge Road	A	A	A	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Waikaia River u/s Piano Flat	A	A	A	A	A	A	A	A	A	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Waikaka Stream at Gore	A	B	B	A	B	B	B	D	D	>0.6	>0.021	>0.444	>0.617	>0.01	>0.033
Waikawa River at Progress Valley	A	A	A	A	A	A	C	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Waikiwi Stream at North Road	C	C	C	A	B	B	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	<0.033
Waikopikopiko Stream at Haldane CurioBay	A	A	A	A	A	A	A	D	D	>0.6	<0.021	<0.444	<0.617	<0.01	<0.033
Waimatuku Stream at Lorneville Riverton Hwy	C	C	C	A	B	B	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Waimea Stream at Mandeville	C	C	C	A	B	B	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Waituna Creek at Marshall Road	B	B	B	A	B	B	B	D	D	>0.6	<0.021	>0.444	>0.617	>0.01	>0.033
Whitestone River d/s Manapouri-Hillside	A	A	A	A	A	A	A	B	B	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Winton Stream at Lochiel	B	C	C	B	B	B	D	D	D	>0.6	>0.021	>0.444	>0.617	>0.01	>0.033

Appendix 7: NIWA surface water state analysis results

State - NIWA data - 2012-2016															
Site	NO3-N - Toxicity (median)	NO3-N - Toxicity (95 percentile)	NO3-N - Toxicity	NH4-N - Toxicity (median)	NH4-N - Toxicity (95 percentile)	NH4-N - Toxicity	E.coli (median)	E.coli (95 percentile)	Human Health Recreation	Clarity (median)	NH4-N (median)	NO3-N (median)	TN (median)	DRP (median)	TP (median)
Mataura at Parawa	A	A	A	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Mataura at Seaward Down	B	B	B	A	A	A	B	D	D	>0.8	>0.01	>0.167	>0.295	>0.009	>0.026
Monowai below Gates	A	A	A	A	A	A	A	A	A	>0.8	<0.01	<0.167	<0.295	<0.009	<0.026
Oreti at Lumsden	A	A	A	A	A	A	A	B	B	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Oreti at Riverton HW Br	A	B	B	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026
Waiau at Tuatapere	A	A	A	A	A	A	A	D	D	>0.8	<0.01	>0.167	>0.295	<0.009	<0.026

Appendix 8: GNS groundwater state analysis results

Table : State - GNS data - 2012-2016				
Site	NO3 - Toxicity (median)	NO3 - Toxicity (95 percentile)	NO3 - Toxicity	NO3 - Drinking water
D45/0006	C	C	C	<11.3
E46/0104	A	A	A	<11.3
F45/0170	C	C	C	<11.3
F45/0350	B	B	B	<11.3
F46/0194	D	C	D	<11.3
F46/0195	B	B	B	<11.3

Appendix 9: ES groundwater state analysis results

State - ES Groundwater data - 2012-2016 (2/2)				
Site	NO3 - Toxicity (median)	NO3 - Toxicity (95 percentile)	NO3 - Toxicity	NO3 - Drinking water
E46/0311	C	C	C	<11.3
E46/0415	A	C	C	<11.3
E46/0445	D	D	D	<11.3
E46/0446	C	C	C	<11.3
E46/0454	D	D	D	<11.3
E46/0491	D	D	D	>11.3
E46/0498	D	D	D	<11.3
E46/0547	A	A	A	<11.3
E46/0650	C	C	C	<11.3
E46/0685	A		A	<11.3
E46/0740	B	B	B	<11.3
E46/0793	C	C	C	<11.3
E46/0842	D	D	D	<11.3
E46/0860	B	B	B	<11.3
E46/0878	A	A	A	<11.3
E46/0895	D	D	D	>11.3
E46/0906	B	D	D	<11.3
E46/0941	C	C	C	<11.3
E46/0994	B	A	B	<11.3
E46/1005	D	D	D	<11.3
E47/0188	A	A	A	<11.3
F44/0018	D	D	D	>11.3
F44/0022	C	C	C	<11.3
F44/0039	C	C	C	<11.3
F44/0058	D	D	D	<11.3
F44/0079	D	D	D	>11.3
F44/0109	C	C	C	<11.3
F44/0114	B	B	B	<11.3
F44/0123	B	B	B	<11.3
F44/0139	D	D	D	>11.3
F44/0253	C	C	C	<11.3
F44/0274	C	C	C	<11.3
F44/0321	C	C	C	<11.3
F44/0327	A	A	A	<11.3
F45/0167	D	C	D	<11.3
F45/0168	C	C	C	<11.3
F45/0172	D	D	D	>11.3
F45/0179	C	C	C	<11.3
F45/0182	D	C	D	<11.3
F45/0247	C	C	C	<11.3
F45/0289	C	C	C	<11.3
F45/0305	B	B	B	<11.3
F45/0343	D	D	D	>11.3
F45/0348	C	C	C	<11.3
F45/0388	C	D	D	<11.3
F45/0457	D	C	D	<11.3
F45/0464	A	A	A	<11.3
F45/0465	D	D	D	>11.3
F45/0475	D	D	D	<11.3
F45/0479	D	D	D	<11.3
F45/0540	D	C	D	<11.3
F46/0183	B	B	B	<11.3
F46/0184	C	C	C	<11.3
F46/0185	D	C	D	<11.3
F46/0192	D	C	D	<11.3
F46/0221	D	D	D	<11.3
F46/0261	C	C	C	<11.3
F46/0265	C	C	C	<11.3
F46/0419	D	C	D	<11.3
F46/0420	B	C	C	<11.3
F46/0422	D	D	D	<11.3
F46/0436	D	D	D	<11.3
F46/0453	C	C	C	<11.3
F46/0456	D	D	D	<11.3
F46/0463	D	D	D	<11.3
F46/0469	D	C	D	<11.3
F46/0506	D	C	D	<11.3
F46/0511	A	A	A	<11.3
F46/0520	D	C	D	<11.3
F46/0592	C	D	D	<11.3
F46/0593	C	C	C	<11.3
F46/0729	A	A	A	<11.3
F46/0773	D	D	D	>11.3
F46/0844	A	D	D	<11.3
F46/0855	D	C	D	<11.3
F46/0907	A	A	A	<11.3
F46/0929	C	C	C	<11.3
F47/0252	C	C	C	<11.3

Appendix 10: R Script for Lake Data Analysis

```
library(plyr)


#############COPY PASTE FUNCTION#########################

write.excel <- function(x,row.names=FALSE,col.names=TRUE,...) {


write.table(x,"clipboard",sep="\t",row.names=row.names,col.names=col.nam
es,...)


###################DATA PREP#################################


Raw <- read.csv("H:/R/Datasets for R/Lakes NOF 06032017.csv")

colnames(Raw) <-
c("Site","Easting","Northing","Time","ChlA","TN","TP","AdjTAMN","EColi")

Raw$Time <- as.POSIXct(strptime(Raw$Time,"%d-%b-%Y %H:%M:%S"))


#Ensure the correct data period is selected

Raw <- Raw[Raw$Time >= "2012-01-01" & Raw$Time <= "2016-12-31",]


#correct the units to comply with the NOF

Raw$ChlA  <- Raw$ChlA*1000

Raw$TN  <- Raw$TN*1000

Raw$TP  <- Raw$TP*1000


#Load the Waituna dataset separately because this includes an extra
field that defines open/closed state

Waituna <- read.csv("H:/R/Datasets for R/Waituna NOF 06032017.csv")

colnames(Waituna) <-
c("Site","Easting","Northing","Time","ChlA","TN","TP","AdjTAMN","EColi",
"State")


#correct the Waituna units to comply with the NOF
```

```
Waituna$ChlA  <- Waituna$ChlA*1000

Waituna$TN  <- Waituna$TN*1000

Waituna$TP  <- Waituna$TP*1000


#Tidy up the Waituna times

Waituna$Time <- as.POSIXct(strptime(Waituna$Time,"%d-%b-%Y %H:%M:%S"))

Waituna <- Waituna[Waituna$Time >= "2012-01-01" & Waituna$Time <= "2016-
12-31",]


#Create a subset for Polymictic Lakes

Polymictic <- subset(Raw, Raw$Site =="Lake George NE"| Raw$Site =="Lake
George SW"|Raw$Site == "Lake Vincent Centre"|

                     Raw$Site == "Lake Vincent North"|Raw$Site == "The
Reservoir West"|Raw$Site == "The Reservoir Centre")


#Create a subset for Stratified Lakes

Stratified <- subset(Raw, Raw$Site =="Lake Manapouri at Pomona Island
Top"| Raw$Site =="Lake Manapouri at Stony Point Top"|Raw$Site == "Lake
Manapouri near Frazers Beach Top"|Raw$Site == "Lake Te Anau at Blue Gum
Point Top"|Raw$Site == "Lake Te Anau at South Fiord Top")


#Create a subset for Stratified Bathing Sites

Stratified.Bathing <- subset(Raw, Raw$Site == "Lake Te Anau at Boat
Harbour Beach"|Raw$Site == "Lake Manapouri at Frazers Beach")



#Create a subset for Waituna States

W.Open <- Waituna[Waituna$State=="Open",]

W.Closed <- Waituna[Waituna$State=="Closed",]


##################SET UP#####################

#Manually cycle through datasets
```

```
Currentdata <- Polymictic

#Currentdata <- Stratified

#Currentdata <- W.Open

#Currentdata <- W.Closed

#Currentdata <- Stratified.Bathing

#Currentdata <-Freshwater



#############

####ChlA#####

#############


#Create summary table

ChlASummary<- ddply(Currentdata, .(Site), summarise, "Minimum" =
min(ChlA,na.rm = TRUE),"Maximum" = max(ChlA,na.rm = TRUE), "Median" =
median(ChlA,na.rm = TRUE),n = length(ChlA[!is.na(ChlA)]))


#Usually I would calculate the bands withing ddply, but in this case it
seems like it would require too many nested 'if' statements.

#I decided to append the bands to the table separately.  Note that this
calculates the bands for 'Maximum' and 'Median' and then takes the worst
of the two.


#Calculate banding for each row in table

for (i in 1:nrow(ChlASummary)){

  MedianBand <- ifelse(ChlASummary[i,4]
<=2,1,ifelse(ChlASummary[i,4]<=5,2,ifelse(ChlASummary[i,4]<=12,3,4)))

  MaximumBand<- ifelse(ChlASummary[i,3]
<=10,1,ifelse(ChlASummary[i,3]<=25,2,ifelse(ChlASummary[i,3]<=60,3,4)))

  CombBandNo <- ifelse(MedianBand >= MaximumBand,MedianBand,MaximumBand)

  FinalBand  <- ifelse(CombBandNo == 1, "A", ifelse(CombBandNo == 2 ,
"B", ifelse(CombBandNo == 3, "C", "D")))

  ChlASummary$AttributeBand[i]  <- FinalBand

}
```

```
#Copy to excel

write.excel(ChlASummary)


################################################

#############Total Nitrogen TABLE###############

################################################


#Create summary table

TNSummary<- ddply(Currentdata, .(Site), summarise, "Minimum" =
min(TN,na.rm = TRUE),"Maximum" = max(TN,na.rm = TRUE), "Median" =
median(TN,na.rm = TRUE),n = length(TN[!is.na(TN)]))


#Calculate banding for each row in table

for (i in 1:nrow(TNSummary)){

  if (grepl("George", TNSummary[i,1])|grepl("Vincent",
TNSummary[i,1])|grepl("Reservoir", TNSummary[i,1])|grepl("Murihiku",
TNSummary[i,1])){

    FinalBand<- ifelse(TNSummary[i,4]
<=300,"A",ifelse(TNSummary[i,4]<=500,"B",ifelse(TNSummary[i,4]<=800,"C",
"D")))

  }else{

    FinalBand<- ifelse(TNSummary[i,4]
<=160,"A",ifelse(TNSummary[i,4]<=350,"B",ifelse(TNSummary[i,4]<=750,"C",
"D")))

  }

  TNSummary$AttributeBand[i]  <- FinalBand

}


#Copy to excel

write.excel(TNSummary)


################################################

############Total Phosphorus TABLE###############
```

```
################################################


#Create summary table and include bandings

TPSummary<- ddply(Currentdata, .(Site), summarise, "Minimum" =
min(TP,na.rm = TRUE),"Maximum" = max(TP,na.rm = TRUE), "Annual Median" =
median(TP,na.rm = TRUE),n = length(TP[!is.na(TP)]),"Attribute Band" =
ifelse(median(TP,na.rm = TRUE) <=10,"A",ifelse(median(TP,na.rm =
TRUE)<=20,"B",ifelse(median(TP,na.rm = TRUE)<=50,"C","D")))

)


#Copy to excel

write.excel(TPSummary)




################################################

#########          NH3            ###############

################################################


#Create summary table

NH3Summary<- ddply(Currentdata, .(Site), summarise, "Minimum" =
min(AdjTAMN,na.rm = TRUE),"Maximum" = max(AdjTAMN,na.rm = TRUE),
"Median" = median(AdjTAMN,na.rm = TRUE),n =
length(AdjTAMN[!is.na(AdjTAMN)]))


#Calculate banding for each row in table

for (i in 1:nrow(NH3Summary)){

  MedianBand <- ifelse(NH3Summary[i,4]
<=0.03,1,ifelse(NH3Summary[i,4]<=0.24,2,ifelse(NH3Summary[i,4]<=1.3,3,4)
))

  MaximumBand<- ifelse(NH3Summary[i,3]
<=0.05,1,ifelse(NH3Summary[i,3]<=0.40,2,ifelse(NH3Summary[i,3]<=2.2,3,4)
))

  CombBandNo <- ifelse(MedianBand >= MaximumBand,MedianBand,MaximumBand)

  FinalBand  <- ifelse(CombBandNo == 1, "A", ifelse(CombBandNo == 2 ,
"B", ifelse(CombBandNo == 3, "C", "D")))
```

```
  NH3Summary$AttributeBand[i]  <- FinalBand


}


#Copy to excel

write.excel(NH3Summary)



################################################

#########          ECOLI            #############

################################################


#An overly complicated table that calculates primary and secondary
contact according to the current NOF, and the proposed changes to the
NPS (released March 2017).  Note that the new changes rely on specific
bands across multiple measurements (e.g. % exceedance 540 = 10-20% AND
median >130 AND 95th%ile >1200 AND % of samples above 100 >34%).  This
was hard to automate, so the code below throws an error whenever this a
site doesn't fit into an obvious band.  The table can then be amended
manually.


ECOLISummary<- ddply(Currentdata, .(Site), summarise, "Data Start"=
min(Time),"Data End" = max(Time), "Minimum" = min(EColi, na.rm = TRUE),
"Maximum" = max(EColi,na.rm = TRUE), "Median" = median(EColi,na.rm =
TRUE),"Exceedances 540" = sum(EColi > 540,na.rm = TRUE), "Exceedances
260" = sum(EColi > 260,na.rm = TRUE),n = length(EColi[!is.na(EColi)]),
Percentile95 = quantile(EColi,.95,na.rm = TRUE),"PercentExceed540" =
sum(EColi > 540,na.rm = TRUE)/length(EColi[!is.na(EColi)])*100,
"PercentExceed260" = sum(EColi > 260,na.rm =
TRUE)/length(EColi[!is.na(EColi)])*100,"Primary Contact" =
ifelse(quantile(EColi,.95,na.rm = TRUE)<=260
,"A",ifelse(quantile(EColi,.95,na.rm = TRUE)<=540, "B", "Fail")),
"Secondary Contact" = ifelse(Median <=260 ,"A",ifelse(Median <=540, "B",
ifelse(Median <=1000, "C", "D"))),"ProposedBand" =
ifelse(PercentExceed540<= 5 & Median <= 130 & Percentile95 <=540 &
PercentExceed260 < 20, "Blue",
ifelse(PercentExceed540<= 10 & Median <= 130 & Percentile95 <=1000 &
PercentExceed260 < 30, "Green",
ifelse(PercentExceed540<= 20 & Median <=130 & Percentile95 <=1200 &
PercentExceed260 < 34, "Yellow",
ifelse(PercentExceed540<= 30 & Median > 130 & Percentile95 > 1200 &
PercentExceed260 >34, "Orange",
```

```
ifelse(PercentExceed540 > 30 & Median > 260 & Percentile95 > 1200 &
PercentExceed260 > 50, "Red","Error")))))),
"ProposedSwimmable?" = ifelse(ProposedBand == "Blue"|| ProposedBand ==
"Green"||ProposedBand == "Yellow","Swimmable","Not Swimmable"))


#Copy to excel

write.excel(ECOLISummary)
```