



ANALYSIS REPORT

Client:	Hawkes Bay Regional Council	Lab No:	1901261	SPV1
Contact:	V Lyon C/- Hawkes Bay Regional Council Private Bag 6006 Napier 4142	Date Received:	23-Dec-2017	
		Date Reported:	11-Jan-2018	
		Quote No:	81040	
		Order No:	RM97	
		Client Reference:	Whangawehi (one only)	
		Add. Client Ref:	312-302	
		Submitted By:	Nicolas Caviale-Delzescaux	

Sample Type: Aqueous

Sample Name:	66143 - Whangawehi at George Ormonds -3301 22-Dec-2017 11:00 am				
Lab Number:	1901261.1				

Faecal Coliforms and E. coli profile

Faecal Coliforms	cfu / 100mL	36	-	-	-	-
Escherichia coli	cfu / 100mL	22	-	-	-	-

HBRC Standard River

Volatile Suspended Solids	g/m ³	< 1.1 #2	-	-	-	-
Total Suspended Solids	g/m ³	< 1.1 #1	-	-	-	-
Total Nitrogen	g/m ³	0.35	-	-	-	-
Total Ammoniacal-N	g/m ³	< 0.005	-	-	-	-
Nitrite-N	g/m ³	0.0011	-	-	-	-
Nitrate-N	g/m ³	0.0013	-	-	-	-
Nitrate-N + Nitrite-N	g/m ³	0.0024	-	-	-	-
Total Kjeldahl Nitrogen (TKN)	g/m ³	0.35	-	-	-	-
Dissolved Reactive Phosphorus	g/m ³	0.048	-	-	-	-
Total Phosphorus	g/m ³	0.062	-	-	-	-

Analyst's Comments

#1 Due to the nature of sample 1901261/1, it was not possible to filter the usual volume for the Suspended Solids analysis. As the volume filtered was less than usual, the detection limit achieved is greater than normal.

#2 Due to the nature of sample 1901261/1, it was not possible to filter the usual volume for the Volatile Suspended Solids analysis. As the volume filtered was less than usual, the detection limit achieved is greater than normal.

SUMMARY OF METHODS

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.

Test	Method Description	Default Detection Limit	Sample No
Sample Type: Aqueous			
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45µm membrane filter.	-	1
Total Kjeldahl Digestion	Sulphuric acid digestion with copper sulphate catalyst.	-	1
Total Phosphorus Digestion	Acid persulphate digestion.	-	1
Volatile Suspended Solids	Filtration (GF/C, 1.2 µm). Ashing 550°C, 30 min. Gravimetric. APHA 2540 E 22 nd ed. 2012.	0.5 g/m ³	1
Total Suspended Solids	Filtration of a 2L sample using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5µm), gravimetric determination. APHA 2540 D 22 nd ed. 2012.	0.5 g/m ³	1



Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Total Nitrogen	Calculation: TKN + Nitrate-N + Nitrite-N. Please note: The Default Detection Limit of 0.05 g/m ³ is only attainable when the TKN has been determined using a trace method utilising duplicate analyses. In cases where the Detection Limit for TKN is 0.10 g/m ³ , the Default Detection Limit for Total Nitrogen will be 0.11 g/m ³ .	0.05 g/m ³	1
Total Ammoniacal-N Trace	Phenol/hypochlorite colorimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H 22 nd ed. 2012.	0.005 g/m ³	1
Nitrite-N Trace	Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₃ ⁻ I 22 nd ed. 2012 (modified).	0.0010 g/m ³	1
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - NO ₂ N. In-House.	0.0010 g/m ³	1
Nitrate-N + Nitrite-N Trace	Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I 22 nd ed. 2012 (modified).	0.0010 g/m ³	1
Total Kjeldahl Nitrogen (TKN)	Total Kjeldahl digestion, phenol/hypochlorite colorimetry. Discrete Analyser. APHA 4500-N _{org} D. (modified) 4500 NH ₃ F (modified) 22 nd ed. 2012.	0.10 g/m ³	1
Dissolved Reactive Phosphorus (trace)	Filtered sample. Molybdenum blue colorimetry. Flow injection analyser. APHA 4500-P G 22 nd ed. 2012.	0.0010 g/m ³	1
Total Phosphorus	Total phosphorus digestion, ascorbic acid colorimetry. Discrete Analyser. APHA 4500-P B & E (modified from manual analysis) 22 nd ed. 2012. Also modified to include the use of a reductant to eliminate interference from arsenic present in the sample. NAWASCO, Water & soil Miscellaneous Publication No. 38, 1982.	0.004 g/m ³	1
HBRC Standard River		0.0010 - 0.5 g/m ³	1
Faecal Coliforms and E. coli profile			
Faecal Coliforms	Membrane Filtration, Count on mFC agar, Incubated at 44.5°C for 22 hours, Confirmation. APHA 9222 D, 22 nd ed. 2012.	1 cfu / 100mL	1
Escherichia coli	Membrane filtration, Count on mFC agar, Incubated at 44.5°C for 22 hours, MUG Confirmation. APHA 9222 G, 22 nd ed. 2012.	1 cfu / 100mL	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Samples are held at the laboratory after reporting for a length of time depending on the preservation used and the stability of the analytes being tested. Once the storage period is completed the samples are discarded unless otherwise advised by the client.

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