

NORTHLAND REGIONAL COUNCIL

Northland Regional Council Discharge and Receiving Water Quality Testing Results: 20210213

Sampling Date 25/02/21

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Determinands	101985	101986	327834
	Lake Manuwai at Surface intake	Lake Manuwai at Bottom (13 m) intake point	Lake Manuwai Weir at Ironbark Road
Ammoniacal Nitrogen (g/m ³ -N)	<0.005 (P)	0.028 (P)	<0.005 (P)
Chlorophyll a (g/m ³)	0.0096 (P)		0.005 (P)
Conductivity at 25 deg C (mS/m @25 deg C)	5.61 (P)	5.67 (P)	6.66 (P)
Dissolved Oxygen (mg/L)	8.9 (P)	9.09 (P)	9.27 (P)
Dissolved Oxygen Percent Saturation (% Sat)	104.4 (P)	105.3 (P)	106.1 (P)
Dissolved Reactive Phosphorus (g/m ³ -P)	0.007 (P)	0.011 (P)	<0.002 (P)
Faecal Coliforms (presumptive) (CFU/100ml)	8.2 (P)		690 (P)
Iron Acid Soluble (g/m ³)	0.076 (P)	0.14 (P)	0.47 (P)
Manganese Acid Soluble (g/m ³)	0.04 (P)	0.083 (P)	0.0086 (P)
Nitrite/nitrate nitrogen (g/m ³ -N)	0.0051 (P)	0.013 (P)	0.011 (P)
pH	6.26 (P)	6.03 (P)	6.33 (P)
Secchi Depth (m)	2.4 (P)		
Temperature (degC)	23.294 (P)	22.663 (P)	22.079 (P)
Total Kjeldahl Nitrogen (g/m ³)	0.252 (P)	0.262 (P)	0.204 (P)
Total Nitrogen (g/m ³ -N)	0.26 (P)	0.28 (P)	0.21 (P)
Total Phosphorus (g/m ³ -P)	0.015 (P)	0.012 (P)	0.011 (P)
Total Suspended Solids (g/m ³)	5 (P)	5.2 (P)	6 (P)

Methods used: Standard Methods for the Examination of Water and Waste Water. APHA, AWWA, WEF, 1998 20th edition

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Ammoniacal Nitrogen	
Conductivity at 25 deg C	In terms of water quality, conductivity is the ability of a water sample to carry an electric current. In essence, this is a measurement of the amount dissolved solids in water; the higher the amount of dissolved solids, the greater current can be carried and therefore the greater the conductivity. In freshwaters, high conductivity may suggest upstream pollution, although "high" is a relative term, as high sediment loads, muddy bottoms and geological features are significant influences. In marine waters, conductivity is not so useful, as the high salt content of seawater means that conductivity will be very high regardless of inputs.
Dissolved Oxygen Percent Saturation	The capacity of water to absorb oxygen gas. Often expressed as a percentage, the amount of oxygen that can dissolve into water will change depending on a number of parameters, the most important being temperature. Dissolved oxygen saturation is inversely proportion to temperature, that is, as temperature increases, water's capacity for oxygen will decrease, and vice versa.
Dissolved Reactive Phosphorus	Any species of phosphorous that will pass through a filter with holes no bigger than 10-20 µm in diameter (10-20 thousandths of a millimetre wide) and then reacts with the chemical compound molybdenum blue. Dissolved reactive phosphorous is typically a measure of biologically available phosphorous, and is perhaps more important in ecological terms than total phosphorous, given that an excess of bio-available nutrients can instigate algal blooms or otherwise unbalance fragile ecosystems.
Nitrite/nitrate nitrogen	
Secchi Depth	
Temperature	Temperature in degrees Celsius
Total Kjeldahl Nitrogen	
Total Nitrogen	Total nitrogen is the sum of nitrate, nitrite, ammoniacal nitrogen and organic nitrogen measured in a given sample.
Total Phosphorus	Total phosphorous is the sum of both dissolved and particulate (non-filterable) phosphorous measured in a given sample.