

Appendix H

Table 1 Water Quality Classifications	
Resource	Water Quality Classification
SURFACE WATER	
All Surface Waters (Underlying Classification)	F - managed for fisheries purposes (primary objective being safe consumption of fish)
Pelorus Catchment: Up stream of Pelorus Bridge	F1 - clear water managed for fishery purposes (primary objective being safe consumption of fish) NS - managed in its natural state
Pelorus Catchment: Downstream of Pelorus Bridge	F1 - clear water managed for fishery purposes (primary objective being safe consumption of fish) CR - managed for contact recreation purposes
Rai, Ronga, and Opouri Rivers	F1 - clear water managed for fishery purposes (primary objective being safe consumption of fish)
Kaituna River	F1 - clear water managed for fishery purposes (primary objective being safe consumption of fish)
GROUNDWATER	
All ground water	DW- managed for drinking water quality
COASTAL MARINE	
All coastal water	SG - managed for shell fish gathering

Table 2 Water Quality Standards		
Standard (from RMA Third Schedule, unless marked + in which case from RMA Section 70)	Numeric Interpretation of Standard	
F - WATER MANAGED FOR FISHERY PURPOSES (UNDERLYING CLASS)		
+ Conspicuous oil or grease films, scums or foams, or floatable or suspended materials	Shall not be produced	No numeric interpretation available
+ Colour or visual clarity	Shall not change	Hue shall not be changed by more than 10 points on the Munsell scale
		The natural clarity shall not be conspicuously changed due to sediment or sediment laden discharge originating from the site of a land disturbance operation. There shall be no greater than 33% reduction in the visual clarity of the receiving water as measured by the horizontal sighting of a black disk; and/or There shall be no greater than 15% increase in the turbidity of the receiving water as measured in NTU.

		<p>Measurements are to be made immediately above or upstream of the discharge and below the discharge after reasonable mixing.</p> <p>For a description of the two methods refer to the Ministry for the Environment Water Quality Guidelines No. 2, Guidelines for the Management of Water Colour and Clarity, June 1994.</p> <p>See Chapter 25 Definitions for the definition of Reasonable Mixing.</p>																											
+ Objectionable odour	Shall not be emitted	No numeric interpretation available																											
+ Suitability for consumption by farm animals	Shall not be rendered unsuitable	No numeric interpretation available																											
+ Aquatic life	Shall not be any significant adverse effects	<p>Light Penetration In water deeper than half the euphotic depth, the euphotic depth shall not be changed by more than 10%.</p> <p>In waters shallower than half the euphotic depth, the lighting at the bed shall not be reduced by more than 20%.</p> <p>Ammonia Toxicity The four-day average concentration of total ammonia shall not exceed the following values</p> <table border="1"> <thead> <tr> <th rowspan="2">pH</th> <th colspan="3">Total Ammonia, NH₄-N (g/m³)</th> </tr> <tr> <th>≤15° C</th> <th>20°</th> <th>25°</th> </tr> </thead> <tbody> <tr> <td>7.50</td> <td>1.81</td> <td>1.23</td> <td>0.86</td> </tr> <tr> <td>7.75</td> <td>1.64</td> <td>1.15</td> <td>0.81</td> </tr> <tr> <td>8.00</td> <td>1.09</td> <td>0.76</td> <td>0.54</td> </tr> <tr> <td>8.25</td> <td>0.62</td> <td>0.44</td> <td>0.32</td> </tr> <tr> <td>8.50</td> <td>0.36</td> <td>0.26</td> <td>0.19</td> </tr> </tbody> </table> <p>Note that daily average based on single sample taken noon - 2pm (NZST)</p> <p>Particulate Organic Material The daily average concentration of particulate organic matter shall not exceed 4g/m³</p>	pH	Total Ammonia, NH ₄ -N (g/m ³)			≤15° C	20°	25°	7.50	1.81	1.23	0.86	7.75	1.64	1.15	0.81	8.00	1.09	0.76	0.54	8.25	0.62	0.44	0.32	8.50	0.36	0.26	0.19
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Temperature	<p>Shall not be changed by more than 3°C.</p> <p>Shall not exceed 20°C.</p> <p>(Note that this is more stringent than the 25°C in the RMA Third Schedule)</p>	N/A																											
Dissolved Oxygen	Shall exceed 80% of saturation	N/A																											
Suitability of fish for human consumption	Shall not be rendered unsuitable by the presence of contaminants	No numeric interpretation available																											
F1 - CLEAR WATER MANAGED FOR FISHERY PURPOSES																													
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CR - WATER MANAGED FOR CONTACT RECREATION PURPOSES		
Visual Clarity	Shall not be so low as to be unsuitable for bathing	Horizontal sighting range of 200mm black disk shall exceed 1.6m during low flows.
Contaminants	Shall not render water unsuitable for bathing	Median concentration of enterococci of at least 20 samples taken throughout the bathing season shall not exceed 33 per 100 mL, nor shall any sample exceed 107 enterococci per 100 mL. The bathing season is defined as the period of 1 November 10 to 1 April inclusive.
Biological Growths	Shall be no undesirable growths	Refer Class AE Seasonal maximum cover of stream or river beds by periphyton as filamentous growths or mats (more than 3mm thick) shall not exceed 40%, and the biomass on the bed shall not exceed 100mg chlorophyll a/m ²
NS - WATER MANAGED IN ITS NATURAL STATE		
Natural Quality	Shall not be altered	No numeric interpretation available
SG - WATER MANAGED FOR THE GATHERING OR CULTIVATION OF SHELLFISH FOR HUMAN CONSUMPTION		
Temperature	Shall not be changed by more than 3°C	
Dissolved Oxygen	Shall exceed 80% of saturation	N/A
Suitability of fish for human consumption	Shall not be rendered unsuitable by the presence of contaminants	Median faecal coliform concentration of not less than five samples, taken within any consecutive 30 day period, shall not exceed a Most Probable Number (MPN) of 14 per 100ml (or Colony Forming Units per 100ml), and not more than ten percent of samples taken within any consecutive 30 day period shall exceed and MPN of 43 per 100ml (or 43 Colony Forming Units per 100ml) as a result of any discharge of a contaminant or water. Samples shall not be taken on the same or consecutive days.
DW - WATER MANAGED FOR DRINKING WATER QUALITY		
Contaminates	Shall not render the water unsuitable for human consumption	<ul style="list-style-type: none"> • Faecal coliforms <1 CFU/100 mls of sample • Ammonium <1.5 mg// • Iron <0.2 mg// • Nitrate <50mg//
pH	Shall be within the range 6.5 - 8.5	N/A