

# Appendix 16B: Assessment against the Freshwater Plan and PNRP Water Quality Standards

## Wellington Region Freshwater Plan Appendix 8 Assessment

After reasonable mixing, the contaminant, either by itself or in combination with other contaminants, is not likely to cause the following effect:

Water quality standard	Compliance (N-No; Y-Yes; MB-maybe; NA-not assessed)				
	Existing	Stage 1A	Stage 1B	Stage 2A	Stage 2B
A8.1 water quality standards established in sections 70 and 107 of the Act.					
1. The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials	N	N	Y	Y	Y
2. Any conspicuous change in the colour or visual clarity.	N	N	MB	MB	Y
3. Any emission of objectionable odour.	Y	Y	Y	Y	Y
4. The rendering of freshwater unsuitable for consumption by farm animals.	Y	Y	Y	Y	Y
5. Any significant adverse effects on aquatic life.	N	N	Y	Y	Y
A8.2 water managed for aquatic ecosystem purposes.					
1. All those effects in 8.1.	N	N	Y	Y	Y
2. The natural temperature of the water shall not be changed by more than 3°C.	Y	Y	Y	Y	Y
3. The following shall not be allowed if they have an adverse effect on aquatic life: a. Any pH change:	N	N	Y	Y	Y

b. Any increase in the deposition of matter on the bed of the water body: c. Any discharge of a contaminant into the water.					
4. The concentration of DO to fall below 80% of saturation concentration.	Y	Y	Y	Y	Y
5. There shall be no undesirable biological growths as a result of any discharge of a contaminant into the water.	N	N	Y	Y	Y
A8.3 water managed for aquatic ecosystem and contact recreation purposes.					
1. All those effects in A8.1.	N	N	MB	MB	Y
2. All those effects in A8.2.	N	N	Y	Y	Y
3. The visual clarity of the water to be so low as to be unsuitable for bathing.	N	N	Y	Y	Y
4. The water to be rendered unsuitable for bathing by the presence of contaminants.	Y	Y	Y	Y	Y
5. The presence of undesirable biological growths as a result of any discharge of a contaminant into the water.	N	N	Y	Y	Y
A8.4 water managed for aquatic ecosystem and fishery purposes.					
1. All those effects in A8.1.	N	N	MB	MB	Y
2. All those effects in A8.2.	N	N	Y	Y	Y
3. The natural temperature of the water - <ul style="list-style-type: none"> <li>• To be changed by more than 3° Celsius; and</li> <li>• To exceed 25° Celsius.</li> </ul>	Y	Y	Y	Y	Y
4. The concentration of DO to fall below 80% of saturation concentration.	Y	Y	Y	Y	Y
5. Fish to be rendered unsuitable for human consumption by the presence of contaminants.	NA	NA	NA	NA	NA
A8.5 water managed for aquatic ecosystem and fish spawning purposes.					

1. All those effects in A8.1.	N	N	MB	MB	Y
2. All those effects in A8.2.	N	N	Y	Y	Y
3. The natural temperature of the water to be changed by more than 3oC. The temperature of the water to adversely affect the spawning of specified fish species (either Brown Trout, <i>Salmo trutta</i> , or Inanga, <i>Galaxias maculatus</i> ) during the spawning season.	Y	Y	Y	Y	Y
4. The concentration of DO to fall below 80% of saturation concentration.	Y	Y	Y	Y	Y
A8.6 water managed for aquatic ecosystems and water supply purposes.					
1. All those effects in A8.1.	N	N	MB	MB	Y
2. All those effects in A8.2.	N	N	Y	Y	Y
3. The pH of surface waters to be outside the range of 6.0 - 9.0 units.	Y	Y	Y	Y	Y
4. The concentration of DO in surface waters to be below 5g/m3.	Y	Y	Y	Y	Y
5. The water is rendered unsuitable for treatment ... for human consumption by the presence of contaminants.	NA	NA	NA	NA	NA – not assessed however most things are treatable.
6. The water is tainted or contaminated so as to make it unpalatable or unsuitable for consumption by humans after treatment ... or unsuitable for irrigation.	Y	Y	Y	Y	Y
A8.7 The natural quality of the water to be altered.	N	N	Y	Y	Y

**PNRP Policy 71 Assessment**

Water quality standard	Compliance				
	Existing	Stage 1A	Stage 1B	Stage 2A	Stage 2B
a. below the discharge point compared to above the discharge point					
i. a decrease in the QMCI of no more than 20%, and	N	N	Y	Y	Y
ii. a change in pH of no more than ±0.5, and	N	N	N	N	Y
iii. a decrease in water clarity of no more than: 33% in River classes 2 to 6, and	N	N	N	N	Uncertain, monitoring proposed.
iv. a change in temperature of no more than: 3°C in any other river, and	Y	Y	Y	Y	Y
b. a 7-day mean minimum DO concentration of no lower than 5mg/L, and	Y	Y	Y	Y	Y
c. a daily minimum DO concentration of no lower than 4mg/L.	Y	Y	Y	Y	Y

**Note:** All water quality standards apply at all flows except (a)(iii) which applies at less than median flows, (a) applies at all times of the year, (b) and (c) apply only between 1 November and 30 April each year.