

**From:** [james\\_griffin](#)  
**To:** [WaterReformPublicConsultation](#)  
**Subject:** Submission 05173 - James Griffin - I you want primary contact (safe for swimming) as the human health objective in freshwater. End of story.  
**Date:** Tuesday, 4 February 2014 3:27:04 p.m.

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## 1. Huge increase in the amount of nitrogen allowed in rivers

the proposed limit for nitrogen is 10 times higher than current guidelines and so high that when a New Zealand river reaches this 'national bottom line' trigger point it will be higher than the lower Mississippi River, worse even than the Yangtze River at Shanghai, and similar to the levels in the Thames (the worst river in the OECD).

National Objectives Framework	Annual median	95 <sup>th</sup> percentile
A	1mg/L	1.5mg/L
B	1 – 2.4mg/L	1.5 – 3.5mg/L
C	2.4 – 6.9mg/L	3.5 – 9.8mg/L
National bottom line	6.9mg/L	9.8mg/L
D	> 6.9mg/L	>9.8mg/L

The A or excellent band up 1mg/l is twice the current guideline of 0.44, the B band at 1 – 2.4 mg/l is higher than the Yangtze, the C band is higher than the worse river in the OECD the Thames, the next is the national bottom line, and D takes us worse than anywhere we can find data for. See the graph at end.

### Human health secondary contact

- contact recreation (swimming in ya togs) not included now secondary contact is instead (is it safe for you to kayak in?).
- <!--[if !supportLists]--> <!--[endif]-->Cyanobacteria (the stuff that kills dogs if toxic) only planktonic (in water column mainly lakes) included so what is stuck to rocks and kills dogs or kids if they eat – not included

### Biological assessment not included

The most robust measure of the health of rivers is the health of the critters that live in them 24/7. This is known all over the world as the most robust consistent measure, in USA and the EU invertebrate and fish bioassessment the mainstay of river health assessment. Here in NZ we have the MCI using invertebrates used by all regional councils for 20 years well accepted condition bands.

### Dissolved oxygen

Under NOF it will only be measured below wastewater plants (but they will measure continuously there a big improvement) but not other sites. To show how dumb this is, the worst measure oxygen variability in NZ was below a dairy farming catchment in the Manawatu River (Hopelands road) nowhere near a wastewater treatment plant. This measure of oxygen variability (worst in polluted rivers) is the highest found from 570

sites all over world.

### **Sediment**

Under NOF deposited sediment not measured even though there are protocols and we know it is one of the biggest impacts of freshwaters

James Griffin

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