

## Submission on the Clean Water Consultation 2017

from Joe Hay

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I am a consultant freshwater ecologist and a member of the New Zealand Freshwater Sciences Society (NZFSS). However, this is my own personal submission and does not necessarily reflect the views of the NZFSS.

### Swimmability:

I support the Government's goal of making more New Zealand rivers safe for swimming. I commend Government for recognising the desire of New Zealanders to ensure that our rivers are safe for swimming as a bottom line, rather than just "secondary contact".

### *Inclusion of smaller waterways and a national bottom line.*

However, I am concerned that the proposed changes to the NPS-FM appear to apply only to large rivers and lakes (i.e. fourth order rivers or above and lakes larger than 1.5 km in perimeter on average). The new objective (A3) focusing on reducing risk to human health and ensuring water is suitable for immersion more often mentions only large rivers and lakes, and thereby tacitly excludes smaller streams and lakes. Therefore, the attribute categories to protect human health for recreation (including immersion) appear to apply only to large rivers and lakes. However, people also engage in recreational activities (including possible immersion) in contact with water in smaller rivers and lakes. These smaller waterbodies appear to have fallen through the policy cracks with regard to human health. There is no longer a national bottom line applicable to *E. coli* concentrations in these smaller rivers and lakes with the proposed changes, whereas previously at least the "secondary contact" criteria would have applied. There also appears to be no requirement for Councils to categorise the human health risk of contact with these water bodies. This is a concern, because people are likely to continue to engage in recreation in these smaller rivers and lakes, but will not be as well informed of potential health risks.

Managing the water quality of larger rivers does not automatically ensure that tributaries will also be looked after by default, as the maps of water quality for swimming in the discussion document

clearly illustrate. There are a large number of cases where tributaries are categorised as lower quality for swimming than the larger rivers they flow into.

For these reasons I suggest that the new categories of risk to human health from immersion (page 39 of Annex 1 to the discussion document) be extended to also apply to smaller rivers and lakes and that a national bottom line is re-introduced to the attribute table.

### *Inclusion of additional attribute state information on E. coli*

The proposed attribute table for human health and recreation (page 39 of Annex 1 to the discussion document) currently references only the percentage exceedance of 540 *E.coli* per 100ml. Rightly or wrongly this has led many people to conclude that the bar for defining swimmable water has been lowered by the proposed changes.

However, according to information on the MfE website<sup>1</sup> all rivers categorised as swimmable (i.e. Blue, Green, Yellow classes) must also have a median of  $\leq 130$  *E. coli* per 100 ml, in addition to other category specific percentile exceedance criteria. I believe it is important that the human health for recreation attribute table in the NPS-FM should also include the other attribute state information apparently used to categorise suitability of rivers for swimming (i.e. Table 1 from the Water quality for swimming categories in detail page<sup>1</sup>).

Inclusion of the median of  $\leq 130$  *E. coli* per 100 ml criterion in the attribute table, in particular, would more accurately reflect the intended risk profile targets tabulated on the MfE website and would probably go some way toward allaying public perceptions that the level of protection has been reduced with these proposed changes to the NPS-FM.

### *Influence of flow conditions*

I recognise that exceedance of *E.coli* limits for short periods of time should not result in a river being classified as unsuitable for swimming at any time. I am aware that *E.coli* concentrations often increase during high flow events and that this should not mean that a river is classified as unsuitable for swimming at lower flows, if *E.coli* concentrations are usually at safe levels.

I suggest that an additional criterion that could be added to the attribute table for Human health for recreation would be to ensure that *E. coli* levels are consistently low during periods of low to moderate flow, when people are most likely to go swimming. For example, no exceedances of the 130 *E. coli* per 100 ml criterion might be allowed in samples taken at flows below the median flow.

This would help the public make a more informed risk assessment of flow conditions when it is likely to be safe to swim and times when it would be prudent to seek further information before going into the water.

While the MfE website provides useful information on websites that people can check to see if it is safe to swim in their local rivers and lakes (e.g. LAWA), it is not realistic to expect people (particularly

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<sup>1</sup> <http://www.mfe.govt.nz/fresh-water/freshwater-management-reforms/water-quality-swimming-categories-attribute-states-detail>

children) to check these websites every time they intend to go swimming. Furthermore, the *E. coli* monitoring information is not updated in realtime, so conditions may have changed since the last monitoring occasion.

Clearly identifying a flow range which is more likely to be safe for swimming would empower people to decide when it is likely to be safe to swim.

### **Stock exclusion regulation proposal**

I strongly support the Government's initiative to introduce compulsory requirements for stock exclusion from waterways. I also support the extension of these stock exclusion requirements to stock other than just dairy cattle.

However, I suggest the timeframes for break feeding should be more ambitious. Break feeding generally involves the use of temporary and easily moved electric fences. Consequently, it should be relatively easy to adapt the layout of break fences to exclude stock from streams. I suggest the timeframe for this be brought forward to July 2017 to align with regulations to exclude pigs and dairy cows from streams over 1 metre wide.

The same comment applies to dairy support. As discussed in the draft regulatory impact statement for stock exclusion<sup>2</sup>, "dairy support is likely to use a higher proportion of temporary fencing than other farm types, and this is much cheaper than permanent fencing". I would add temporary fencing is also much easier to alter to provide stock exclusion than permanent fencing. Consequently, I suggest that the timeframe for exclusion of dairy support cattle from streams also be brought forward.

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[http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/Appendix%205%20Draft%20RIS%20Stock%20Exclusion\\_0.pdf](http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/Appendix%205%20Draft%20RIS%20Stock%20Exclusion_0.pdf) accessed 22 April 2017