



Forest & Bird

TE REO O TE TAIAO | Giving Nature a Voice

NPS-FM Clean Water Consultation April 2017
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FURTHER SUBMISSION ON CLEAN WATER DISCUSSION DOCUMENT INCLUDING TO NATIONAL POLICY STATEMENT ON FRESHWATER MANAGEMENT

1. Forest & Bird lodged a submission on the Clean Water Discussion Document, (the Clean Water Package or CWP) including proposed amendments to the National Policy Statement on Freshwater Management (NPS-FM 2014).
2. Submissions have been reopened to comment on the “*Technical Background for 2017 MfE ‘Clean Water’ Swimmability Proposals for Rivers*” prepared by NIWA (the NIWA report). This further submission is lodged in response to the NIWA report.
3. The NIWA report confirms that there are elements of the CWP that are technically sound, such as the overall approach to considering how often a water body exceeds E. coli thresholds. Forest & Bird supports these elements.
4. However, the NIWA report also raises a number of concerns, particularly:
 - a. The NIWA report confirms that the proposed amendments to the NPS-FM 2014 amount to a shifting of the goalposts and an inappropriate downgrading of the test for swimmability.
 - b. The NIWA report advises that 43% of monitoring sites meet the proposed swimmability threshold. This is much less than the 72% of large rivers and lakes that meet the threshold. This confirms our view that the 90% target should apply to all rivers and lakes.
 - c. The NIWA report advises that Clean Water swimming threshold is more permissive than the ‘minimum acceptable state’ for swimming in the NPS 2014”. We are opposed to any downgrading of the swimmability thresholds.
 - d. An effect of the proposed CWP changes is there is now no clearly defined bottom line for E. coli. This is particularly concerning for rivers and lakes that do not meet the threshold of being “large”. We consider that a bottom line for E. coli should be included in the NPS.

5. We also take the opportunity to confirm our support for the development of look up tables for dissolved inorganic nitrogen and dissolved reactive phosphorous.
6. These issues are now considered in turn.

SHIFTING THE GOALPOSTS

7. When it was released, the CWP was criticised for shifting the goalposts for determining “swimmability”. The essence of this criticism was that the threshold for swimmability was being lowered so that the government could be seen to be doing something about the freshwater crisis, when in fact it was doing far less than was required to address the issues facing our fresh water.
8. The Minister, Nick Smith denied this is the case, accusing critics of engaging in “junk science”.¹
9. However, it could not be clearer from the NIWA report that the Clean Water package did attempt to downgrade the swimmability threshold.

The Clean Water swimming threshold is more restrictive than the current secondary contact National Bottom Line in the NPS 2014 (median of 130/100ml versus 1000/100ml) but more permissive than the ‘minimum acceptable state’ for swimming in the NPS 2014;

10. Despite the NIWA report, Dr Smith continues to dispute that the proposed thresholds are an improvement.
11. Dr Smith needs to acknowledge that the Clean Water package did seek to shift the goalposts, rather than continuing to deny the obvious.
12. As set out below Forest & Bird seeks that the E. coli standards are improved i.e. not made more permissive for swimming.

90% GOAL SHOULD APPLY TO ALL RIVERS

13. Forest & Bird’s original submission sought that the 90% target should apply to all rivers and be incorporated into the NPS-FM.
14. The NIWA report confirms the importance of doing so. A key finding of the NIWA report was that only 43% of monitored sites meets the proposed CWP primary contact categories:

Whereas 97% of the 792 sites for which we have data comply with the National Bottom Line for secondary contact (boating/wading) in the current National Policy Statement for Freshwater Management (NPS 2014), the proportion of those sites complying with the proposed Clean Water primary contact categories (i.e., swimming) is 43%. The proposed categories thereby pose an incentive to improve microbiological water quality in rivers;

15. This can be contrasted to the purported 72% of large rivers that meet the CWP swimmability threshold.

¹ <http://www.radionz.co.nz/news/political/325235/water-quality-criticism-based-on-%27junk-science%27-smith>

16. While direct comparisons cannot be made between the 72% of large rivers and lakes and the 43% of monitoring sites that fail to meet the swimmability threshold, the discrepancy is so large that it is clear that there are many monitored sites that fall outside the 90% swimmability target because they are not in large rivers or lakes, however are traditionally of importance and of a low water quality that would require regular monitoring.
17. Nothing is required to improve the E. coli levels in the waterways that fall outside:
 - a. the 90% of large rivers and lakes being swimmable non-regulatory target; and
 - b. proposed Policy A5 of the amended NPS-FM, which also only applies to large rivers and lakes.
18. This simply confirms our view that the 90% of rivers and lakes swimmable target should apply to all rivers and lakes and be incorporated into the NPS.

E. COLI ATTRIBUTE TABLE

19. The NIWA report indicates that some changes are needed to the E. coli attribute table or the swimmability threshold in the NPS-FM 2014 will be weakened. We support changes to ensure that the E. coli standards are strengthened.
20. Forest & Bird considers that this should be achieved by adopting a 260 E. coli/100ml threshold. If the CWP approach on the MfE website is used, 260 E. coli/100ml should be the 95th percentile test threshold for the blue grade. This is a reduction from 540/100ml in the CWP, which could be retained for the green state.
21. A bottom line should also be reinstated. This is particularly relevant to rivers and lakes that don't fit the 'large' definition. The effect of the removal of the bottom line is that there is no requirement to improve the swimmability in the NPS-FM for lakes and rivers that do not meet the 'large' definition. Forest & Bird does not think this is appropriate and that water quality should be improved in all rivers that are not safe for swimming. This could be achieved, as suggested above, by having the requirement to improve swimmability in Objective A3, to apply to all rivers and lakes.
22. Forest & Bird considers that an E. coli bottom line of an equivalent stringency to the minimum acceptable state from the NPS-FM 2014 would be a 95th percentile of 540 E. coli/100ml.
23. We consider that there should only be one band below the bottom line. This is on the basis that it is either safe to swim in a river or lake, or it is not safe to swim there. Different levels of un-swimmability do not make sense.
24. To be considered safe for swimming, the E. coli levels cannot surpass 540 E. coli per 100 mL more than 5% of the time, and the median must be lower than 130 E. coli per 100 mL.
25. If the collection of samples for a body of water surpasses 540 E. coli per 100 mL more than 5% of the time, or the median of those values is at or above 130 E. coli per 100 mL then the body of water cannot be safe for swimming.
26. The Attribute table in Appendix 2 for human health for recreation with the changes sought by Forest & Bird is set out here in Appendix 1 of this document.

CLARIFICATION OF ORIGINAL SUBMISSION

27. Forest & Bird's original submission supported adopting LAWf recommendations in relation to DIN and DRP that the NPS-FM:
- a. mandatory adoption of a decision support tool based on one developed by LAWf; and
 - b. the development of a multi-variate look-up table for DIN and DRP concentrations.²
28. Reference was also made to research by Professor Russell G. Death, who recommended nitrate levels for ecological health an order of magnitude less than what is considered acceptable in the current NPS-FM 2014.
29. We wish to confirm that nitrate levels by themselves are inadequate and must be supported by the multi-variate look-up table for DIN and DRP concentrations recommended by LAWf. We therefore seek that a multi-variate look-up table for DIN and DRP concentrations be developed and incorporated into the NPS-FM.

CONCLUSION

30. The NIWA report confirms that the change in swimmability thresholds in the CWP is a shifting of the goalposts and a lowering of the swimmability standard. The NIWA report also confirms the need for improvement in the amount of times rivers and lakes are suitable for swimming to apply to all rivers not just those that meet the definition on 'large'.
31. Forest & Bird is opposed to a reduction in the swimmability standard and seeks that a swimmability standard equivalent to that in the NPS-FM 2014 be included. A bottom line for swimmability should also be included in the Attribute table for human health for recreation.

Yours faithfully,



Kevin Hague
Chief Executive/ Kaiwhakahaere Matua

² Logan, Hugh, Chair of the Land and Water Forum. "Requested Advice for the NPS-FM." Letter to Minister for the Environment Hon Dr Nick Smith and Minister for Primary Industries Hon Nathan Guy. 19 Aug. 2016. MS. Wellington, New Zealand. pages 4-5.

Appendix 1: Attribute table in Appendix 2 for Human health for recreation

Value		Human health for recreation	
Freshwater Body Type		Lakes and rivers	
Attribute		<i>Escherichia coli (E. coli)</i>	
Attribute Unit		<i>E. coli</i> /100 ml (number of <i>E. coli</i> per hundred millilitres)	
Attribute State	Median attribute state (<i>E. coli</i>/100ml)	95th percentile attribute state (<i>E. coli</i>/100ml)	Narrative attribute state
A (Blue)	<130	<260	Suitable for primary contact. For at least half the time the estimated risk of Campylobacter infection is less than 1 in 1000. Less than 5 per cent of the time, the estimated risk of Campylobacter infection is more than 1 in 100.
B (Green)	<130	<540	Suitable for primary contact. For at least half of the time the estimated risk of Campylobacter infection is less than 1 in 1000. Less than 5 per cent of the time, the estimated risk of Campylobacter infection is more than 50 in 1000.
National bottom line	130	540	
C (Red)	> 130	>540	Not suitable for primary contact - improvement needed. For more than half of the time the estimated risk of Campylobacter infection is more than 1 in 1000. At least 5 per cent of the time, the estimated risk of Campylobacter infection is more than 50 in 1000.