

Canterbury

District Health Board

Te Poari Hauora o Waitaha

Submission on the Clean Water Package

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SUBMISSION ON THE CLEAN WATER PACKAGE

Name of submitter

1. Canterbury District Health Board (CDHB)

Detail of submission

2. The Canterbury District Health Board appreciates the opportunity to comment on the latest programme of initiatives for freshwater management in New Zealand as set out in the Clean Water Consultation Document.
3. The CDHB is responsible for promoting the reduction of adverse environmental effects on the health of people and communities and to improve, promote and protect their health pursuant to the New Zealand Public Health and Disability Act 2000 and the Health Act 1956. These statutory obligations are the responsibility of the Ministry of Health and, in the Canterbury District, are obligations carried out under contract by Community and Public Health under Crown funding agreements on behalf of the Canterbury District Health Board. The CDHB is actively involved in water issues and has developed a position statement in relation to the Canterbury Water Management Strategy (CWMS).
4. The Ministry of Health requires the CDHB to reduce potential health risks by such means as submissions to ensure the public health significance of potential adverse effects are adequately considered by territorial authorities.
5. The CDHB recognises that the Consultation Document can contribute to the health of people and communities. Freshwater is used for activities such as drinking water, recreational water and mahinga kai. Therefore the quantity and quality of freshwater can directly affect the health of the community. The CDHB position statement states “that the health and wellbeing of current and future generations of Cantabrians should always take priority in water management decisions, particularly where there are competing interests for water uses.”
6. The CDHB believe the presentation of the amendments to the National Policy Statement for Freshwater Management (NPS-FM) has led to some confusion, in particular, the attribute table for Human health for recreation with the attribute

E.coli, does not clearly indicate the level of risk to human health. The current consultation would benefit by referencing the operational Guidelines for Recreational Water Quality 2003 and the New Zealand Guidelines for Cyanobacteria in Recreational Fresh Waters 2009. This lack of clarity has influenced our comments which focus on Part 3 of the Clean Water Consultation - Amending the National Policy Statement for Freshwater Management 2014 (The Policy).

General comments

The CDHB has the following comments and associated recommendations:

7. *Total Emersion and Secondary Contact*

The CDHB support the removal of references to secondary contact (wadeable rivers) in Objective A1 in the Policy and its replacement with 'suitable for swimming'. This is a more realistic reference as to what people 'do' in the lakes and rivers of New Zealand.

8. *Fourth Order Rivers and Lakes greater than 1.5km perimeter*

The current National Policy Statement for Fresh Water Management (NPS-FM) 2014 has attributes which apply to all rivers and lakes. The Policy only covers 4th order rivers, and lakes with a perimeter of greater than 1500m. This excludes recreational sites within the Canterbury region and hence does not provide a true picture of the swimmability of recognized recreational sites.

Recommendation 1: That the Policy applies to all rivers and lakes as currently monitored by Regional Councils and reference to 4th order rivers and lakes with a perimeter of 1500m, is removed.

Economic wellbeing

9. Objective A2, relating to water quality has been amended by adding "then providing for economic wellbeing, including productive economic opportunities within environmental limits". In this objective environmental protection is prioritised ahead of economic well-being however under Objective B1 which relates to water quantity, environment and economic well-being are given equal weight. The

CDHB strongly recommend that water quantity should also have environmental protection prioritised over economic well-being. Economic growth has come at the detriment of our freshwater bodies. This imbalance needs to be addressed.

Recommendation 2: That Objective B1 is amended to read: “**then** providing for economic wellbeing including productive economic opportunities.”

10. CDHB recommend that the Policy is focused on improving the health of freshwater systems in New Zealand and that, economic wellbeing should not take precedence over ensuring environmental restoration and maintenance of degraded water systems.
11. In Canterbury, freshwater management is coordinated through the Canterbury Water Management Strategy (CWMS). This involves local communities collaborating to set freshwater limits such as *E.coli* within their regions. This approach allows for community participation and an appropriate balance between the environmental, economic and health considerations to be established.

Recommendation 3: CDHB support the NPS-FM preamble which states that it is up to communities and Iwi through Councils to determine the pathway and timeframes around fresh water management.

12. Section CA2 (f)(iaaab) places environmental progress at risk by prioritizing economic wellbeing, including productive economic opportunities. The CDHB position statement acknowledges “that water is of major importance for Canterbury’s economic development. However, while economic wellbeing is necessary for good health, social, recreational, cultural and environmental assets such as drinking water quality are also fundamental to health.”

Recommendation 4: That CA2(f)(iaaab) is revoked.

Reference to Groundwater

13. CDHB notes that groundwater systems are not considered in the Policy. As stated in the OECD report on New Zealand's environmental progress, both nitrate and pathogens are considered to be major contaminants in groundwater systems. The quality and quantity of groundwater is extremely important as a source for drinking water supplies in Canterbury and elsewhere throughout the country.
14. There has been deterioration in both the quality and quantity of groundwater used for drinking water supplied in recent years. Some water supplies which have complied with the Drinking Water Standards New Zealand without treatment in the past, now need to be treated due to pathogen contamination. Groundwater quality in Canterbury has also been compromised with elevated nitrate particularly in shallower groundwater. This deterioration places increased cost onto communities in having to improve treatment or drill for deeper bores. Increased levels of contamination also increases the chances of serious disease outbreaks relating to drinking water. CDHB recommend that an attribute table for groundwater is included, to indicate water quality / quantity trends of aquifers especially where land use has changed considerably.

Recommendation 5: That an attribute table is included for groundwater values with a clear definition of groundwater and attributes for nitrate and pathogen trends.

Cyanobacteria

15. The exclusion of an attribute table for cyanobacteria in rivers is of concern in the Canterbury region due to the high number of algae blooms each summer which restrict the use of rivers. We acknowledge that research is on-going but inconclusive in this area, however this should not lead to an omission of reference to the current guidance that is available. The inclusion of the alert level framework for benthic cyanobacteria as detailed in the New Zealand Guidelines for Cyanobacteria in Recreational Fresh Waters 2009 would provide a more comprehensive picture of the suitability of a river for swimming and needs to be considered especially for those rivers where problems occur annually, such as in Canterbury and South Canterbury. Without acknowledgement of benthic

cyanobacteria in the Policy there will be confusion with the proposed use of only *E.coli* to define a recreational site as safe for swimming.

Recommendation 6: That the alert level framework for benthic cyanobacteria as currently detailed in the New Zealand Guidelines for Cyanobacteria, or any other guidelines produced in the future, are referenced in the amended Policy.

Recommendation 7: That the government fund further research, so appropriate management can be applied.

Appendix 2: Attribute Table: Human Health for Recreation

16. The inclusion of human health for recreation values for *E.coli* and planktonic cyanobacteria in attribute tables are seen from a public health perspective as the major driver to delivering the document's target of 90% of our rivers and lakes swimmable by 2040. It is therefore concerning to note that the human health for recreation values for *E.coli* appear to be diluted in comparison to those stated in the Microbiological Water Quality Guidelines 2003. The proposal suggests exposing people to a higher level of risk of infection compared to the NPS-FM 2014.
17. The Microbiological Water Quality Guidelines 2003 use a 95th percentile value of *E.coli* to estimate risk of infection in addition to sanitary surveys and therefore use much lower trigger levels of concern than the proposed attribute table. Allowing an increase in the estimated risk of infection is unacceptable from a public health perspective. We strongly recommend that the attribute table does not require a lesser standard and hence aligns with the Microbiological Guidelines.
18. CDHB note the attribute table for *E.coli* on page 39 of the document does not appear to have a national bottom line. All of the other attribute tables do. We note on page 14 the document states that suitable for immersion means "large lakes and rivers in Attribute State A, B or C of *E.coli* attribute table in appendix 2." This does not seem to have been transferred to the attribute table to indicate a national bottom line. CDHB believe the following attribute states should be defined as: sample A = 95 percentile < 130 *Escherichia coli* per 100ml, sample B = 95 percentile 131-260 *Escherichia coli* per 100ml, and sample C = 95 percentile 261-540 *Escherichia coli* per 100ml.

Recommendation 8: Remove the % of time that the *E.coli* threshold can be exceeded in the *E.coli* table attribute table (page 39 the Policy) and replace with a table with one column using the 95th percentile with the three attribute states – A, B, C and make C the bottom line of 540 *E.coli* per 100ml.

19. A5 page 14 of the Policy uses two attributes for defining the term suitable for immersion. This is based on an *E.coli* threshold (540 *E. coli* on a day) **and** the varying percentage of time (percentage of time below 540) that this threshold can be exceeded. This is confusing and lowers the threshold significantly compared to the Microbiological Guidelines 2003 which require a microbial assessment and sanitary inspection.

Recommendation 9: The Policy should be aligned with the 2003 guidelines which use both a microbiological assessment and a sanitary inspection to grade recreational sites.

20. Supporting documentation on the Ministry for the Environments website states a “second test that ‘swimmable’ rivers/lakes need to comply with a median of less than or equal to 130 *E.coli* per 100ml. This ensures the risk of infection people face when swimming is less than 1 in 1000 at least half the time.” The term ‘1 in 1000 at least half the time’ is confusing regarding the number of people who will become infected. If it is to be used as an explanation then this needs to be clarified. If the second test is to be utilised then it should be incorporated into the body of the Policy rather than as supporting documentation. These parameters do not provide a clear guide for determining improvements.

Recommendation 10: That the term ‘1 in 1000 at least half the time’ is clarified.

Recommendation 11: That the second test is incorporated into the body of the Policy

21. The 'Note' to the *E.coli* Human health table for recreation suggests that this attribute will be based on a minimum of 100 samples over a maximum of 10 years. Currently when grading recreational sites, a rolling dataset of 5 years with 20 samples is taken each year, during the bathing season. Targeting sampling to the bathing season is important to ensure sampling is representative of swimming conditions. Allowing samples to be collected over 10 years' means that any changes or deterioration in quality may be masked.

Recommendation 12: That the sampling for *E.coli* should be during the bathing season and based on the current 2003 Guideline requirements of at least 20 samples over 5 years.

Monitoring Methodologies

22. Appendix 5 refers to the monitoring methodologies for Policy CB1. Although the present Microbiological Guidelines 2003 require the Medical Officer of Health to be informed after the first sample being greater than 540 *E.coli* per 100ml. Community and Public Health/Environment Canterbury protocol is for notification after the second sample rather than the first. Experience has found that this rules out those samples that are due to fluctuating conditions as opposed to persistent problems. For example Canterbury alpine fed rivers are affected by rain in the Alps and frequently sampling after these conditions will result in exceedances of *E.coli*.
23. Appendix 5 also does not mention the need to erect warning signs and is not specific enough on what 'notify the public' is. Wording to the effect as specified in the 2003 guidelines provides clearer guidance.

Recommendation 13: That the Policy is aligned with the 2003 guidelines or alternatively appendix 5 is removed and reference is made to the aforementioned guidelines.

Recommendation 14: If appendix 5 is maintained, clarify what 'notify the public' means and include the requirement for signage as per the 2003 guidelines.

Livestock Exclusion from Waterways

24. CDHB agrees with the proposed exclusion of livestock from waterways, however we support Environment Canterbury's submission point to focus on sensitive waterbodies. The Canterbury Land and Water Regional Plan already address exclusion of stock by this method. We acknowledge that other Regional Councils' should have similar plans in place but a prescriptive approach may not be necessary, instead simply include a required outcome of keeping stock out of waterways.

Recommendation 15: The Policy should focus on stating an outcome for stock in waterways and allow Regional Authorities flexibility in the methods to achieve this.

25. Sheep have not been included in the provision to exclude stock from waterways and although sheep may not stand in water they have still been implicated in the contamination of a source of drinking water in the Canterbury region.

Recommendation 16: That sheep are included in the exclusion of livestock from waterways.

Decision Sought

26. The CDHB seeks that the recommendations made above are accepted.

Conclusion

27. Thank you for the opportunity to submit on the Clean Water Consultation Document.

Person making the submission



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