



29 October 2019

Submission to the Ministry for the Environment: Action for Healthy Waterways

The New Zealand College of Public Health Medicine would like to thank the Ministry for the Environment (MfE) for the opportunity to make a submission on Action for Healthy Waterways.

The New Zealand College of Public Health Medicine (the College) is the professional body representing the medical specialty of public health medicine in New Zealand. We have 222 members, all of whom are medical doctors, including 185 fully qualified Public Health Medicine Specialists with the majority of the remainder being registrars training in the specialty of public health medicine.

Public Health Medicine is the branch of medicine concerned with the assessment of population health and health care needs, the development of policy and strategy, health promotion, the control and prevention of disease, and the organisation of services. The NZCPHM partners to achieve health gain and equity for our population, eliminating inequities across socioeconomic and ethnic groups, and promoting environments in which everyone can be healthy.

General responses to the proposals

Declining water quality has become a significant issue in New Zealand, receiving increased public concern and political attention.¹ Over the past three decades dairy farming in New Zealand has become increasingly intensive, while a range of indicators have shown that over the same period, the quality of our freshwater has degraded.^{2, 3, 4, 5} The quality of freshwater is directly connected to public health. In Havelock North, water contaminated with livestock faeces resulted in the world's largest water-borne outbreak of campylobacter infection.⁶ The 2016 outbreak caused 45 hospitalisations and 3 deaths, and cost an estimate \$21 million.^{7, 8} Excessive levels of nitrate pollution, from dairy farms, in drinking water is a direct threat to human health such as being linked to miscarriages in pregnant women.^{9, 10, 11} Long-term consumption of nitrate in drinking water is associated with the risk of several cancers such as thyroid, colorectal, non-Hodgkin's lymphoma, stomach, bladder, breast, and ovarian.^{12, 13, 14, 15, 16, 17, 18, 19}

The College commends the government's acknowledgement that urgent action is required. Overall the proposals in the package are positive, although some need strengthening. The College also supports the intent of having freshwater plans in all regions which follow the National Policy Statement for Freshwater Management (NPS-FM), with the National Environmental Standards (NES) as a critical regulatory tool to measuring and monitoring in the interim, to ensure the NPS is achieving the objectives stated in this package.

The College supports the process that has been followed of engaging with Te Kāhui Wai Māori (KWM), to ensure the voice of tangata whenua and Māori expertise is included in the development

of this proposal. The College fully supports the KWM recommendations to restore the health of our wai (p. 14 of Action for healthy waterways discussion document).

We are concerned about the lack of consideration given in the discussion document, and in the modelling on which it is based, to the current effects of climate change and to the impact this will have on the future. Climate change poses a significant threat to our environmental health and also to global public health.²⁰ The health of our water bodies and ecosystems will have a direct impact on our ability to adapt to and mitigate imminent climate threats, and vice versa. Only proper analysis and planning for climate change mitigation can ensure the health and viability of New Zealand's freshwater for future generations.

Specific points

Waitangi Tribunal on the RMA

The College notes the findings of the Waitangi Tribunal report *Wai 2358 – The Stage 2 Report on the National Freshwater and Geothermal Resources inquiry* (Wai 2358), which found that the Resource Management Act (RMA) “does not provide sufficiently for Māori tino rangatiratanga or kaitiakitanga over bodies of water and equitable access to water for economic purposes and is therefore in breach of te Tiriti o Waitangi”²¹. The College supports the Tribunal's recommendations, including²¹:

- Include Te Mana o te Wai as a matter of national importance,
- The Crown should recognise Māori proprietary rights over freshwater,
- Co-governance between the Crown and Māori must be established for freshwater management,
- Stronger accountability and monitoring of local government and state-owned operators with regard to their Tiriti compliance,
- Greater resourcing/investment to ensure Iwi/hapu participation in freshwater management decision-making.

Water Commission and other comments

The College supports the establishment of an independent national body to oversee freshwater management implementation, as recommended by KWM, the Freshwater Leaders Group (FLG) and also backed by the Wai 2358 report²¹. We agree with the KWM suggestions that the body be named ‘Te Mana o te Wai Commission’, that it should have provision for at least 50% of the appointed Commissioners to be Māori, and that it should be independent of the Crown. In addition, the College calls for a provision that mandates the appointment of at least one Commissioner with considerable public health knowledge and expertise.

The College reiterates the inextricable link between the health of New Zealand's freshwater and the health of its citizens, and urges MfE to mandate the inclusion of public health expertise both to the independent body analysing submissions on this issue and at the regional council level of implementing the NPS-FM.

Te Mana o te Wai

The College supports the Te Mana o te Wai hierarchy of obligations, and the recommendation that the first priority is the health of the water. This aligns with the College's view that public health is

ultimately dependent on environmental determinants such as the quality of freshwater. Human health needs must come next and commercial interests should be the last consideration.

However, we are concerned that the burden of a transition involving a reframing of the obligations may fall on the most vulnerable in society.²² The College urges MfE to give equity greater deliberation to equity throughout the document, particularly in *Section 4 Setting and Clarifying Policy Direction*.

Timeframe and Planning Process

The College agrees with the proposed timeframe, which requires local councils to have new freshwater plans, which are consistent with Te Mana o te Wai and fully give effect to the new NPS-FM, in place no later than 2025. We support a move to make amendments to the RMA in order to enact this process within the next few months.

We note (under section 4.4) that this will require government-appointed freshwater commissioners with specialist skills to form a panel with tangata whenua-nominated representatives and local councillors to consider council plans and make recommendations. We recommend that these panels include public health experts, to ensure a more thorough and holistic analysis of local freshwater plans.

Strengthening the inclusion of Māori Values

We commend MfE for recognising the importance of tangata whenua and Māori values in freshwater management in freshwater planning, and for engaging with KWM on both the prioritisation of obligations under Te Mana o te Wai and the proposals under Section 4.3. We note that engaging with tangata whenua on freshwater policy was a recommendation of Wai 2358 report.²¹

The College agrees with Proposal 1: *to elevate the status of mahinga kai to a compulsory value*. Since a number of hapu / iwi have already identified mahinga kai values and attributes in iwi management plans, regional planning documents and kaupapa Maori assessment frameworks, this is a familiar process that could be easily extended to a compulsory value. We consider that Proposal 2: *Strengthen priority given to tangata whenua freshwater values* is important as a supplementary measure; our view is that the two proposals are not mutually exclusive, and that Proposal 2 could work to complement Proposal 1.

Ecosystem Health – bottom line for nutrient pollution

The College agrees with MfE that preventing the degradation of waterways by limiting nutrient-pollution is a better approach than attempting to restore waterways after degradation has already occurred. We are pleased to see the link made between nitrogen run-off and greenhouse gas-emissions. While the health of our fresh water has an impact on both climate change, ultimately both freshwater and climate have tremendous impact on human health.²⁰

We concur with the Science and Technical Advisory Group's (STAG) remarks that current attributes and bottom lines for nutrient pollution are insufficient. However, we do not consider STAG's new proposed bottom line for nitrogen in rivers to be adequate either. The level, an annual median of 1 mg/L Dissolved Inorganic Nitrogen (DIN), has been hailed as a 'pristine' standard in the media, but

from a public health perspective this standard still holds considerable risk. Research has found statistically significant increased risk to human health of DIN above 3.8 mg/L in drinking water.²³ As a precautionary approach, public health would advise a limit that is considerably lower than this in drinking water. What this means for freshwater is unclear, but a limit less than 1 mg/L seems sensible.

Excessive nitrate is a threat to human health, thus setting strong limits around nitrogen is critical not only for ecosystem but also public health. The association of nitrates with colorectal cancer is of major concern, given that this cancer is the second most common cause of cancer deaths in New Zealand.¹ One European study estimated that up to 4% of colorectal cancers in the European Union could be attributed to nitrate exposure.²⁴ Applied to New Zealand, this attributable fraction would suggest that nitrate in drinking water may account for about 120 cases of colorectal cancer (out of a total of 3000) and 50 deaths (out of a total of 1200), per year.¹

When setting bottom lines, time lags must also be taken into consideration. Due to changes in land use and dairy intensification in the past few decades, there is a long time-lag for nitrates in soil. This means that nitrate levels will continue to increase in fresh and drinking water long after action is taken to reduce them. This adds another urgent imperative to proceed with a precautionary approach and set a maximum annual median limit considerably lower than 1 mg/L of DIN, in order to protect public health.

Swimming

With regard to proposed management of *E.coli* in rivers and lakes where people go swimming, the College believes that the proposed level of 540 *E.coli* per 100 ml is too high, and leaves a high risk of infection. The use of *E.coli* as a proxy for contamination is also problematic, for instance being insensitive to disease-inducing protozoal infestation with eg *Giardia lamblia*. We recommend that this measure be re-examined by a panel including public health and microbial expertise.

Wetlands

The College notes MfE's acknowledgement of the essential and critical role wetlands play in nature; however, we are disappointed by the lack of acknowledgement of the role of wetlands in mitigating climate change effects. In particular, freshwater inland wetlands are considered to be significant 'carbon sinks', holding nearly ten times more carbon than tidal saltwater site, indicating their importance in regional carbon storage.²⁵ Protection and promotion of wetlands is crucially important to mitigate climate change effects.

The College believes section 5.6 needs to be strengthened, and that wetlands need to be not only protected, but also increased. We recommend adding provisions for:

- adequately identifying the risk to remaining wetlands (both coastal and inland), from sea level rise, flooding and storm surges,
- bottom line quality indicators for wetlands,
- examination of wetlands more thoroughly in the context of climate change mitigation,
- setting targets for wetlands that would maximise their role in climate mitigation and thus human health protection.

Safe drinking water

We note that the current National Environmental Standards (NES) for Sources of Human Drinking Water Regulations²⁶ do not take account of the impact of all activities that can pose a risk of contamination to the water. Specifically, current NES regulations' rules 7 and 8 (which relate to the granting of consents) apply only to water permits or discharge permits and do not explicitly apply to land use. We support the proposal to strengthen these regulations by determining "water risk management areas" and defining the types of activities that must be assessed as potential risks within these areas and those for which consents must be applied. All activities potentially affecting drinking water should be included.

We note that the limitation of the application of the current NES to water sources supplying populations of over 500 has resulted in significant inequity, and that smaller rural communities, who are least able to afford advanced treatment, are not being protected by the regulations. We strongly support the expansion of the scope of the regulations so that they apply to all registered water supplies serving more than 25 people. We suggest that this include any water source which supplies more than 25 people for a period of a minimum of 60 days per calendar year.

We support the development of a new approach to manage specific contaminants that are difficult to remove with conventional treatment process in source waters, and agree that this must include nitrate – nitrogen, as well as emerging contaminants, such as endocrine disrupting chemicals.

We agree that regional councils and territorial authorities should be required to place controls on the development and use of land within source water risk management areas, and to review plan rules for such activities. We recognise that a phase-in period may be required to bring under existing land uses under this control.

As an additional criterion, since the over-allocation of water has impacted negatively on the reliability of drinking water sources in recent years, we suggest that the NES should require councils to consider whether an application for a water take (e.g. for irrigation) is likely to negatively impact on the reliability of a drinking source.

Thank you for the opportunity for the NZCPHM to submit on Action for Health Waterways. We hope our feedback is helpful and are happy to provide further clarification on matter covered in this submission.

Sincerely,

A handwritten signature in dark ink, appearing to read 'FD', with a stylized flourish at the end.

Dr Felicity Dumble, President, NZCPHM

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