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Freshwater submissions
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Submission to “Action for Healthy Waterways - A discussion document on national direction for our essential freshwater”

Thank you for the opportunity to submit on the discussion document. The Health and Disability Services Act 2000 (section 22) provides District Health Boards (DHBs) with an objective “to improve, promote, and protect the health of people and communities”. In order to achieve this and other objectives section 23 of the Act sets out DHB functions that includes: 23(h) to promote the reduction of adverse social and environmental effects on the health of people and communities. The Hawke’s Bay District Health Board (HBDHB) has therefore an interest in promoting proposals that will positively impact on the health of our communities through improvements to the health of waterways.

General comment on process

We strongly support the statement that “The health of our people, our environment, and our economy depends on the health of our freshwater”. The statement recognises the importance of freshwater policy for public health. We note however that public health sector input to the advisory groups has been absent to date.

We recommend that this oversight is addressed by ensuring appropriate experts in human health are part of the independent expert panel considering submissions.

Effective collaboration between public health units, territorial authorities, regional councils and to some extent tangata whenua is already required by national guidelines such as those concerning recreational water quality and implementation of the NES for sources of drinking waters. It is essential that any proposed reforms both support collaboration and are informed by the knowledge and experience public health providers have in working within the current regulatory environment.

In Hawke’s Bay the value of public health participation in environmental planning has been recognized by both Hawke’s Bay Regional Council and Hawke’s Bay District Health Board with a representative of the DHB participating in the TANK1 collaboration process over the last 6 years. More recently, a Drinking Water Joint Working Group of officials from territorial authorities, the regional council, the DHB and the iwi developed draft provisions for the TANK plan change in respect to sources of drinking water.

Participation in such partnerships is not only seen as a priority for the DHB but also gives effect to our obligations under the Treaty of Waitangi.

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We note that a model of health promotion developed by Professor Mason Durie (Te Pae Mahutonga) identifies Waiora (health of the physical environment) as a key strand of public health promotion. Thus there is a clear duty on District Health Boards to promote healthy waterways as a means to promote human health from a Māori perspective.

In this regard the DHB supports the recommendations of Te Kāhui Wai Māori including the proposal for the establishment of a Te Mana o Te Wai Commission. Such a commission would establish a mechanism to give effect to Treaty partnership at the national level and could provide leadership and support for partnerships at the regional level.

Section 1 Overview and Objectives
The DHB supports the Government’s three objectives. The DHB agrees that each of the three objectives is essential. We also agree with the timeframes proposed for objectives one and two.

We are concerned however, that this package does not seek to address water allocation issues. We note that the processes by which fresh water is allocated are intertwined with ecosystem and human health. Over allocation of freshwater resource adversely impacts the life-supporting capacity of waterways and can adversely impact on sources of human drinking water. From a human health perspective there has also been relatively little attention paid to the equity impacts of water allocation. In Hawke’s Bay we continue to observe stark inequities in health outcomes for Māori, Pacific peoples and people in socioeconomically deprived communities. Who gains access to fresh water resources and the economic and cultural benefits they generate impacts on the well-being of communities and particularly those with the greatest levels of disadvantage.

We recommend therefore that water allocation issues remain a high priority focus for reform.

Section 4 Clarifying Policy Direction
The DHB generally supports the proposals to require a holistic view of managing land and water resources from the mountains to the sea. We also support the reframing of Te Mana o te Wai in the National Policy Statement for Freshwater Management (NPS-FM) to recognise the priority framework proposed by Kāhui Wai Māori. We note that human health is dependent firstly on the health of the water but also on the distribution of economic benefits derived from the consumptive uses of water.

The proposed reframing recognises the need to rebalance priorities. However, in establishing a new balance towards the health of waterways it will be important to ensure that the economic impacts/costs regionally are not borne by the most vulnerable. We propose that government consider how a “just transition” can be achieved taking into account the intergenerational costs of inaction, and in consideration of who is currently bearing the cost of freshwater degradation.

4.3 Giving greater effect to Māori values
Both proposals in this section are supported. Mahinga kai values are indicators of freshwater Mauri and contribute directly to human health. The safety of mahinga kai remains a concern for the DHB with a significant outbreak of Paratyphoid occurring in recent years due to consumption of mussels gathered in Napier.

If government proceeds with the proposal to elevate the status of mahinga kai and the proposal to strengthen priority given to tangata whenua freshwater values greater support for local iwi and hapū than has been available to date will be required.

Our experience to date has been that the agency responsible for Food Safety in New Zealand (the Ministry for Primary Industries [MPI]) has demonstrated little capacity to support environmental actions to ensure the safety of mahinga kai at the regional level.

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3 2018 Health Equity Report, HBDHB. Available at: http://www.ourhealthhb.nz/
Similarly our observation is that resource allocation by regional councils for the assessment of tangata whenua freshwater value attributes has not matched that allocated for measuring and monitoring other freshwater attributes.

We recommend that the duties of both central government and local government agencies in respect to resourcing and technical support for these proposals are clearly established as part of the reform package.

4.4 Amending the Resource Management Act
The DHB supports the proposal to require councils to have new plans in place by 2025. We note that this is an ambitious timeline and understand why government is proposing a more directive approach that speeds up the planning process with the introduction of freshwater hearing panels.

Given the importance of freshwater health for human health we recommend that public health expertise be included in the specialist skills required of freshwater commissioners.

We note that some regional councils are already well down the path of developing new Regional Resource Management plans. We recommend that a process is considered whereby freshwater hearing panels could review such plans and where they judge a plan to be close to giving effect to the new NPS-FM already make recommendations for changes that would align with the NPS-FM rather than completely restarting the review process.

4.6 Major hydro scheme exceptions
The discussion document proposes that water bodies containing six major hydroelectricity schemes should be exempted from plan requirements that would give effect to the NPS-FM. The DHB agrees that maintaining continued operation of these operations is essential for meeting emissions and renewable energy goals. However, we do not agree that these goals can only be maintained by indefinitely exempting these water bodies from achieving target attribute states. There is a danger that such an approach will lead to further deterioration of such water bodies with both catchment wide actions and actions on the part of infrastructure operators being dis-incentivised.

Instead, we recommend that the NPS-FM provide flexibility for achievement of targets in these waterbodies that take into account the longer timeframes that might be required to make improvements. This would enable the establishment of reasonable conditions and timeframes through the re-consenting process while still maintaining incentives for infrastructure operators to seek ways to improve water quality.

Section 5 - Raising the bar on ecosystem health
The DHB supports the proposals to focus on all five components contributing to the health of freshwater ecosystems. In general, we also support the proposed new ecosystem health attributes and the adaptive management approach. We are concerned that councils may respond by developing action plans that focus on non-regulatory actions.

We recommend that councils be required to take regulatory actions such as enforcement of existing rules, or updating policies and rules when non-regulatory actions are not achieving ecosystem health targets.

We note that the proposed points at which regional councils would be required to apply the adaptive management approach do not include any attributes linked explicitly to tangata whenua values.

We recommend that provision is made for the same monitoring and responding approach proposed in the Freshwater Science and Technical Advisory Group report (STAG report) to be applied for tangata whenua defined ecosystem attributes.

5.6 Wetlands
We note that in addition to their critical ecosystem role, wetlands may play an important role in climate change mitigation. Fresh water inland wetlands in particular appear to be very significant carbon sinks4. There may be an argument for setting a national objective to increase wetlands rather than prevent further loss.

4 https://www.nature.com/articles/ncomms13835
5.8 Nutrient pollution
The DHB strongly supports setting a new bottom line for nutrient pollution. We note that the proposed new bottom line of 1mg per litre of dissolved inorganic nitrogen (DIN) is higher than already set in many catchment management plans.

The resulting restrictions on nutrient run-off in catchments exceeding the bottom line would not only reduce adverse impacts on instream values but also help to reduce the risks of nitrate accumulation in ground drinking water sources. In some aquifers nitrate levels already exceed the Maximum Allowable Value (MAV) of 50 mg/L nitrate (or 11.3 mg/L nitrate nitrogen). Even when levels currently remain below the MAV values may continue to increase for some time due to lags in nitrate accumulation. This creates potential for levels to exceed the MAV even if run-off levels are quickly reduced. Setting a new bottom line would however help to reduce the duration and level of any legacy accumulation effects.

While the current NZ MAV is based on studies linking nitrates to methemoglobinemia (“blue baby syndrome”) a recent high quality Danish cohort study of drinking water nitrate exposure⁵ found statistically significant increases in colorectal cancer risks for populations with long term exposure to drinking water above 3.87 mg/L. While evidence continues to gather on the significance of this and other studies, a precautionary approach is warranted. Rather than providing a longer time for impacted areas to make progress towards achieving the new bottom line there is a strong case for government adopting an accelerated approach to the most impacted catchments. This approach would give effect to RMA requirements for land users to consider the impact of current land use on future generations.

In relation to preventing nitrate accumulation in ground water, the DHB strongly supports recommendation 15 of the STAG report. The DHB agrees there is an urgent need to address knowledge gaps around groundwater quality along with the other areas identified (ie ecological flows, management of recreational water and toxic cyanobacteria). These are all attributes that have been linked to human health risks (flows being linked to cyanobacteria) and there is an urgent need to identify policy interventions that can further mitigate risks to health.

Section 5.10 – water quality standard for swimming
The DHB agrees that confusion remains as to the standards that should be applied to define suitability for recreation how they should be applied. In our view, the confusion arises more from policy change than the measures themselves although changes to the grading system itself have also contributed.

The proposed changes to the NPS go some way to clarifying matters. The proposed primary contact sites management requirement (Draft NPS-FM 3.18) makes it clear that regional councils are required to monitor and manage risks to human health at these sites during the recreation season. The proposal also clarifies that it is regional councils that have responsibility to inform the public of risks rather than any other agency. We do have some concerns about the apparent reliance on weekly surveillance sampling as the basis for risk assessment. In our experience any risk assessment based on a weekly sample provides a very poor measure by which risk should be assessed over the following 6 days.

For regions with limited laboratory facilities delays in receiving results further diminish the value of the weekly sample.

We recommend that if MfE wishes to include the requirement for primary contact site short term management within the NPS-FM provision is made for more timely measures of risk such as the output from risk models to be used as an alternative or supplementary measure. The Medical Officer of Health could be given authority to review any proposed model and approve it for the purpose of complying with the monitoring requirements.

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We also support the requirements for setting target attribute states and action plan development at sites monitored for human contact attributes. We are unclear as to why the table setting thresholds for action plans (Draft NPS-FM table 23) is based on E.coli 95th percentile attribute bands. The table used to identify current and target attribute states (Draft NPS-FM table 11) defines attribute states or target bands based on four numeric states (exceedances over 540, % exceedances over 260, median concentration, 95th percentile).

In our view this is likely to lead to further confusion and we recommend that if possible a consistent approach should be used.

Our understanding from the NIWA publication “Technical Background for 2017 MfE ‘Clean Water’ Swimmability Proposals for Rivers” is that the four measures approach has some significant advantages in terms of enabling assessment and communication of risk.

In relation to the establishment of target attribute states for Human Contact values (Draft NPS-FM 3.9 (2)) it is unclear why targets must be set above the current state when the current state is already within the highest band.

Section 5.10 of the discussion document proposes that a new study is conducted to update the study conducted between 1998 and 2000 (the Freshwater Microbiological Research Programme) that provides the New Zealand data underpinning all three standards. While we support a new study being undertaken we note that this will not clarify the status of the various standards in the interim.

Section 6: Supporting the delivery of safe drinking water
The HBDHB has considerable experience working with our drinking water partners (Joint Working Group) to implement that current NES for sources of drinking water. Many of the issues were discussed in a joint paper responding to a June 2017 MfE fact paper issued by the Government Inquiry into Havelock North Drinking Water6.

Key limitations of the current NES are summarised below:
1. The standard does not apply to quantity of drinking water sources.
2. Initially, cabinet proposed that the standard could apply to any activity regulated by a regional council including land uses. The current NES regulations rules 7 and 8 concerning granting of consents apply only to water permits or discharge permits and explicitly do not apply to land use. This means that land uses that may significantly increase risks to water sources such as winter grazing are not regulated by the NES.
3. NES regulation 10 applies only to permitted activity rules. This means that activities consented through a controlled activity rule are not subject to any source water protection consideration. We note also that councils must grant consents for applications under controlled activity rules. NES regulation 10 also does not apply to restricted discretionary rules. Potentially restricted discretionary rules could enable a council to decline a consent or impose conditions on the consent if the matter over which the discretion is restricted is included in the NES (section 87A (3) a Resource Management Act 1991).
4. For regulations relating to both consenting decisions and resource plan rules the NES restricts the application of the regulations (7, 8 and 10) to the protection of water sources supplying 501 or more people. The originally proposed NES applied to all registered water supplies of 25 people and above. A regulatory impact assessment issued at the time noted that application of the standard to such communities was estimated to result in a cost of $200 million over 20 years which was a 10 fold increase above the cost when applying only to communities of 501 or more. In hindsight it is clear that the limitation to populations of 501 or more created a significant inequity with smaller rural communities, likely to be least able to afford advanced treatment, not being protected by the NES.
5. As noted in the discussion paper the terms currently used in the NES (upstream or upgradient for ground water sources) are imprecise and subject to council interpretation.

6 https://www.dia.govt.nz/Stage-Two-Fact-Papers
Comment on the Proposed Amendments

1. **Provision of direction in setting “source water risk management areas” and application of NES regulations to those areas.**
   
   This amendment is supported. We note that the identification of source protection zones can be technically demanding and methods such as the use of quantitative models for ground water sources require high resolution data sets. We recommend that the proposed drinking water regulator is enabled to support this work and to review and approve such zones. The NES will need to provide for default management or protection areas upgradient or upstream of water sources in the absence of zones developed through more advanced methods where these are not available. The onus should not be on the water supplier to complete this work.

2. **Define the types of activities to be assessed.**
   
   Supported. Providing that all activities potentially affecting drinking water are covered

3. **Expand to cover all registered supplies serving more than 25 people.**
   
   Supported. We note that specified self-supplies (such as marae) should be covered when affected water sources supply more than 25 people for at least 60 days per calendar year.

4. **New approach for contaminants that are challenging for drinking water supplies to remove.**
   
   Supported. We note this should include emerging contaminants such as endocrine disrupting chemicals.

5. **Regional councils and territorial authorities to place appropriate controls on the development and use of land in source water risk management areas.**
   
   Supported. Note the need to bring controlled and restricted discretionary rules into the NES regime. There are also likely to be significant legacy issues with existing land uses potentially needing to be phased out over time.

6. **Regional councils and territorial authorities to review plan rules for activities.**
   
   Supported. See point 5 above.

In addition to the proposed changes we propose the following additional amendment

*The DHB recommends that the NES is amended to include protection of water quantity for sources of human drinking water.*

The over allocation of water sources has impacted on the reliability of drinking water sources in several communities in recent years. The NES should require councils to consider whether an application for a water take (eg for irrigation) is likely to negatively impact on the reliability of a drinking water source.

**Implementation issues**

In the paper submitted to the Government Inquiry a number of implementation issues were described. The most important was the lack of a national database of drinking water sources for registered drinking water supplies. The Director General of Health is required to maintain a national register of drinking water supplies and the Ministry of Health has commissioned the Drinking Water Online system to store data about registered supplies.

However, advice from Ministry officials has been that the system is not intended to support implementation of the NES because this is not a Ministry of Health responsibility. In our view this narrow approach to the functionality of the Drinking Water Online system is a missed opportunity and should be addressed in the current drinking water regulatory reform process.

**Section 7: Stormwater and Wastewater**

The management of both stormwater and wastewater are critical to public health. While we support the proposals to require preparation of risk management plans for both stormwater and wastewater, we would be concerned if there were no process for ensuring these plans are being followed. We support the development of national environmental standards to underpin risk management plans.
Section 8: Improving farm practices

8.2 Restricting further intensification of rural land use
The proposals for managing intensification and impacts are generally supported although the proposals as currently set out may have some unintended consequences. Particularly, rules based on past discharges of nutrients or other contaminants should be avoided as these may have the effect of embedding current adverse practices. Restrictions around land use conversions needs to be based on the carrying capacity of land if possible and land users with low intensity production such as papakāinga based horticulture should not be prevented from increasing production because of the impacts of neighbouring high intensity producers.

We are also concerned about the potential negative impact of restricting increases in commercial vegetable growing. Nutritional guidelines are increasingly promoting greater vegetable consumption and some increase in production may be required to meet demand. Rather than a general requirement for consenting to increase production we propose that consenting requirements could be applied in catchments that are identified as over allocated in terms of nutrient discharge.

We note that creating incentives to convert productive horticultural land to residential use on urban fringes needs to be avoided.

8.4 Action to reduce nitrogen loss
The DHB supports both options 1 and 2 for actions to reduce nitrogen loss in the short term.

8.6 Winter grazing
The DHB supports the establishment of nationally set standards and prohibition of consideration of highly permeable soils, where the contaminants penetrated in the soil is far greater. There are only 5 feedlots in New Zealand and it is not clear why this practice should continue. We recommend establishing a process to phase out feedlots.

Section 9: Support for farmers to improve catchments
The DHB agrees that farmers should be supported to improve water quality and generally agree with the proposals. We do have some concerns that a focus on catchments at highest risk may have the unintended consequence of poor practices being shifted to less impacted catchments. We recommend a proportionate universal approach that supports all farmers but recognise the need to provide greatest focus on the most impacted areas.

Benefits and Cost Assessment
As noted above, relatively little assessment has been done on the benefits or risks to health associated with the proposals. Similarly the impacts in terms of equity of economic and social outcomes has not been clearly assessed. We recommend further work is completed to assist in the assessment of benefits and costs associated with the reforms.

Thank you again for the opportunity to submit. We would welcome any opportunity to speak to this submission.

Please contact:
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Yours sincerely

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