TE WAIORA Nelson Marlborough Health

Ministry for the Environment

Improving the protection of drinking-water sources

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Submitter details

- Nelson Marlborough Health (Nelson Marlborough District Health Board) (NMH) is a key organisation involved in the health and wellbeing of the people within Te Tau Ihu. NMH appreciates the opportunity to comment from a public health perspective on the Ministry for the Environment's consultation on Improving the protection of drinking-water sources.
- NMH makes this submission in recognition of its responsibilities to improve, promote and protect the health of people and communities under the New Zealand Public Health and Disability Act 2000 and the Health Act 1956.
- This submission sets out particular matters of interest and concern to NMH.
- Please note that the Public Health Service has been busy working on the COVID response, and as such this submission has been kept brief.

General Comments

- NMH fully supports changes that will result in better source water protection, and improve freshwater and groundwater quality as this will lead to a reduction in the number of preventable waterborne diseases in New Zealand. As stated in the proposals minimising contaminants in our aquifers will reduce the effects of cumulative contamination and emerging contaminants. This can also improve the overall ecosystem's health.
- NMH sees these amendments as supporting Te Mana o te Wai and will also enhance Maori customary activities such as mahinga kai.

Specific Comments

The default method for delineating Source Water Risk Management Areas (SWRMAs)

- ***Q1**. Domestic and international evidence suggests that delineating three at-risk areas is a good approach for protecting sources of drinking water. Do you think this is a good approach for protecting our source waters? What other approach can you think of that could contribute to protecting our drinking water sources? Do you think that three areas (and therefore levels of control) are sufficient to protect our drinking water sources?*

  Yes, NMH supports preventing the contamination of source water, rather than mitigation. Three SWRMAs are appropriate to manage the risk.

- ***Q2**. In your view, is the method to determine each SWRMA, for each type of water body, the best option?*

- *Should other factors be considered in determining size?*
- *What challenges can you foresee in delineating SWRMAs?*
- *Do you have any comments or feedback on the detail contained in the technical guidance materials?*
- *Should SWRMA for all aquifers be bespoke so their unique features, depth and overall vulnerability can be considered?*

A SWRMA's unique features, depth and overall vulnerability will dictate if a bespoke assessment is required e.g. for groundwater bores/wells the characteristics of the soil are paramount e.g. porosity, transmissivity. For SWRMA 1, NMH suggests that bores be assessed to a distance of 30 m, including any features that might allow short circuiting into or through that zone e.g. fault lines.

- ***Q3.*** *For lakes, do you agree that SWRMA 2 should include the entire lake area? – What might be an alternative approach?*

  The size/volume of the lake and its inflow/outflow will have an influence on risk e.g. Lake Taupo vs. a smaller lake.

  Therefore, identify potential contaminants that might flow into the lake, calculate the dilution, settlement and reduction factors.

- ***Q4****. SWRMA 1 for lakes and rivers is proposed to extend 5 metres into land from the river/lake edge. This contrasts with 3 metres setback requirement of the Resource Management (Stock Exclusion) Regulations 2020. SWRMA 1 is proposed to be used as a basis for controlling activities close to source water intakes, and applies to a wide range of activities. Do you think these differing setbacks will cause confusion or result in other challenges?*

  Yes, there could be confusion, there should consistencies in the distances applied. NMH support 5m, but as above the unique characteristics should be considered e.g. riparian planting will (positively) affect microbial hazards

- ***Q5****. There is evidence suggesting that a 10–30-metre radius around source water bores is a preferable way to delineate the area where activities would be heavily restricted (SWRMA 1). However, expert advice suggests a 5-metre radius is the most workable option. – Do you agree that a 5-metre radius around a source water bore gives enough protection? Why or why not? – If not, what alternative would you suggest?*

  The characteristics of the soil and flow paths to the source in this zone are key factors. As suggested in Q2 above a bespoke criteria for SWRMA1 is supported.

- ***Q6.*** *While water takes from complex spring systems or wetlands may require a bespoke SWRMA to ensure consideration of any contamination pathways present, a default method is necessary to ensure interim protection. Do you think a default method is practicable in most situations? –*

  Do you think a regional council should determine (on a case-by-case basis) the most applicable default method: for a river, lake or aquifer, or is a different default approach necessary?

  Consistency is preferred by the use of a national model that allows for flexible assessment of the terrain, geography, and special features of different areas.

Regional council mapping of SWRMA

- ***Q10****. Do you think consideration should be given to mapping currently unregistered supplies as they register (but before the four-year deadline provided under the Water Services Act), or do you think that waiting and mapping them all at the same time is a better approach?*

  There are many thousands of unregistered supplies, and the first step would seem to be identify them, then their sources. Bringing those tasks forward will save processing times in the long term.

Bespoke method for delineating SWRMA

- ***Q11.*** *If a regional council has already established local/regional source water protection zones through a consultative process, should there be provision to retain that existing protection zone as a bespoke method without further consultation or consideration against new national direction?*

  Retain existing SPZs, but review them within a defined period (say 3 years) in light of national direction. If any consultation was carried out, it will not have been as inclusive as will occur in future e.g. landowners, Iwi, Public Health staff.

SWRMA 1 controls

- ***Q12****. Do you think national direction on activities within SWRMA 1 is necessary?*
  - *If so, what activities should it address?*
  - *How restrictive should controls be in SWRMA 1, for resource users other than water suppliers?*

- *Are there any activities you believe should be fully prohibited in this area?*
- *Are there any activities you believe should be permitted or specifically provided for or acknowledged in this area?*

NMH agrees with the proposed changes that would restrict activities in the immediate vicinity of source water intake (SWMRA1), while enabling water supplies to undertake intake management. NMH recommends that the protection afforded to each zone is conservative in recognition of one of the principles of Water Safety Planning that protection of source water is paramount.

- ***Q13.*** *For water suppliers, are there any other activities beyond intake maintenance/management that should be provided for?*

Some water suppliers do not own the land that contains their intake, or the catchment feeding it therefore agreements with the landowner should be negotiated.

- ***Q14.*** *In and around freshwater, control of pest species (including aquatic pest species) may be necessary, including through physical control (removal that may include bed disturbance) or chemical control (discharge).*
  - How much of an issue is this in and around abstraction points?
  - How critical is that work?
  - How often is this work mandated by other regulation or requirements?
  - How frequently is this work undertaken by parties other than the drinking-water supplier (or their contractors)?

Chemical control of aquatic pest species should only ever be carried out in/at/around the source if alternative supplies of drinking water are available during the waiting period, and tests results confirm the absence of the chemical before supply is resumed from that source.

SWRMA 2 controls

- ***Q15.*** *Do you think national direction on activities within SWRMA 2 is necessary?*

– If so, what activities should it address?

Yes, national direction provides consistency across the country, this would help to ensure that no regional council permits activities that pose a high-risk to source

water. Differing rules for differing areas potentially to lead to differences in management where some areas accept more risk than others, which could lead to further degradation.

Examples might include persistent chemicals like PFAS/PFOA, nitrate and arsenic that do not breakdown and require specialist treatment to remove.

The consultation document highlights that there may be 75,000 unregistered water supplies yet to be captured by the Water Services Act. Once mapped, their SWRMAs may overlap and guidance will be required on how to handle those situations without unfairly restricting land use activities.

- ***Q18**. The original intent of SWRMA 2 was to manage microbial contamination. However, there are indications that protections against other contaminants may be required. What contaminants do you think should be controlled in SWRMA 2?*

  NMH recommends that this also includes sediment and chemical discharges.

SWRMA 3 controls

- ***Q20**. Do you think any additional controls, other than broad consideration of the effects of the activity on source water, are required in SWRMA 3?*

  Controls on public events within catchments e.g. allowing individual mountain bikers vs. hosting a competition event.

  Plantation forestry, particularly at harvest time and for a period of years after, causes sediment problems for suppliers taking their water from surface catchments. Current controls are inadequate.

Groundwater bore management

- ***Q21**. What is your view on how to address issues with bores – should it be enough to amend the NZS 4411:2001 (with reference to that standard in the NES-DW), or should greater direction be given in the NES-DW itself?*

  Greater direction should be given in the NES-DW itself so users do not need to cross-reference a multitude of documents.

- ***Q22.** For existing bores:*
  - *What is your view on requiring unused bores to be decommissioned?*

- *Should bores of poor quality be required to be upgraded or decommissioned? What timeframe might be reasonable to do this?*
- *For many older bores there are no records. What sort of evidence could be used to support the ongoing use of these bores, or demonstrate they pose a low risk to the security of the aquifer?*

  NMH agrees that bores that are unused, of poor quality or unknown construction should be assessed for their risk.

***Q23**. What is your view on prohibiting below-ground bore heads?*

NMH agrees that below ground bore heads should be prohibited and that existing ones be given a timeframe to be converted to above ground (and in the mean-time have in place adequate controls to reduce collection of ground water e.g. pumps

- ***Q24**. Regional councils are responsible for control of the use of land for the purpose of maintenance and enhancement of the quality of water in water bodies (RMA section 30(1)(c)(ii)). Do you think territorial authorities have a role in land management over aquifers, and if so, what is that role?*

  NMH supports the involvement of a regulator to ensure that quality of water in water bodies is maintained and enhanced.

Identifying and managing activities over vulnerable aquifers

- ***Q25.** It is not clear which approach might be best for ensuring risk to vulnerable aquifers is appropriately managed. Do you think that an NES-DW is the right channel for addressing this? If not, what approach might be better?*

  Part 7 of the Local Government Act 2002 covers the assessment of drinking water, wastewater, and sanitary services.

  Reticulation of communities with vulnerable aquifers may be a practicable solution where land use could compromise water quality e.g. vineyards with CCA treated posts and using sprays, all above a shallow groundwater aquifer that supplies community and household drinking water.

- ***Q26**. Would it be helpful if guidance on vulnerable aquifers was provided to support freshwater planning as the NPS-FM is given effect?*

Yes

Retrospective application of the NES-DW to existing activities

- ***Q27.*** *What activities do you believe the NES-DW should retrospectively apply to / not apply to, and why?*

  Protection of the water source is fundamental therefore review:

  - discharge of contaminants in SWRMA 1 & 2
  - existing use rights
  - consents that may impact water quality
  - Bore heads below the ground

Q28. *In your view, what are the key challenges and benefits to retrospective application?*

Affordability of achieving compliance with improved (more restrictive) permits and consents and need to be proportionate to the scale and complexity of the risks.

There may be legal challenges to retrospectively applying of an NES and a budget needs to be set aside to this.

However, from a public health perspective, the long term health benefits of having compliant source water should outweigh the short-term costs.

Criteria when considering effects on source water

- ***Q29.*** *Do you agree with the proposed list of criteria? – Are any additional criteria needed, or clarification?*

  Yes, NMH supports the proposed list.

  One criteria that appears absent is the cumulative effects of contamination. One discharge of a particular contaminant may be considered acceptable in isolation however, many combined discharges may affect the integrity of the source water. Therefore, it is important that consents are not viewed in isolation from other consents, or on a first come basis.

  There is also need to target persistent chemicals e.g. PFAS/PFOA, nitrates, arsenic to ensure that obligations are on the polluter to eliminate or minimise, not the supplier to remove them by expensive treatment.

Proactive response planning

- ***Q30.*** *What types of activity might pose a significant risk to a water supply in an accident, emergency, or other natural event?*

  Breaches of dams, fracture of waste pipes/sewerage systems, sediment from landslides, chemical release from storage compounds (all earthquake related).

  Public events within a catchment that flows directly to source e.g. power boating on a lake, mountain bike races

- ***Q31****. Do you think it is reasonable to require all activities with some potential to affect source water to undertake response planning, or just those with a higher risk (likelihood and consequence)?*

  Yes, NMH agrees that it is reasonable to require all activities with some potential to affect source water to undertake response planning. From a practical point of view that should be proportionate to the scale and complexity of the risks.

Water supplier involvement

- ***Q32****. Do you agree that resource users should engage with water suppliers in consenting matters, within SWRMA 1 and 2?*

  Yes, NMH agrees that resource users should engage with water suppliers, and the catchment owner if the supplier is not the owner. This should occur early and preferentially in a consenting process.

- ***Q33****. What hurdles do you see in promoting this engagement with water suppliers?*

  Consent applicant or the supplier not wanting to engage. Supplier objecting in principle and not willing to look at reasoned discussion.

- ***Q34****. What support might small water suppliers need to effectively engage in the consent process?*

  Education, training, resources (templates), support, assistance and advocates.

  Most registered community (non-council) suppliers have a committee of volunteers. Some struggle to get a quorum together, and a number in our region have already asked the Council to assist with running their scheme or taking it over entirely.

Those volunteers do not always have technical understanding of water supply principles, treatment or their statutory obligations under the Water Services Act, let alone the Resource Management Act.

The planning and consenting process is seen as complex, intimidating and adversarial- therefore to be avoided, rather than participated in.

Current unregistered suppliers have never had to engage with authorities on water quality and safety issues and will struggle with the process, timelines and duties.

The experience of NMH drinking water staff is that it takes many years and much effort to encourage and support suppliers to adopt new ideas and responsibilities.

General matters relating to managing source-water risks

- ***Q39**. Do you think the protections of the NES-DW should apply to all registered water supplies? If not, what types of supplies should be included, and why?*

  Yes, the protections should apply to all drinking water suppliers.

- ***Q40**. The WSA has a registration timeframe of four years for currently unregistered supplies. Do you agree with aligning application of the NES-DW with the WSA? If not, why? In your view, what are the challenges resulting from including these newly registered supplies within the NES-DW framework?*

  Yes the NES-DW should be aligned with the WSA.

  The WSA requires within its Water Safety Plan (WSP) the new concept of a Source Water Risk Management Plan.

  Currently registered suppliers serving >500 population must produce a WSP by 15th November 2022. The previous Ministry of Health criteria for the content of the plans will not be required by Taumata Arowai (who will also not approve the plans).

  The outcome of this consultation may not be available to those suppliers within that timeframe. Consideration therefore needs to be given as to how to merge the outcomes into those plans to provide national consistency.

  The supplies yet to register will benefit from the longer lead-in period, However, being very small communities and clusters of houses down to two households means they will struggle to produce a meaningful WSP without templates, guidance and assistance.

Other comments

- *Do you have any other comments you wish to make?*

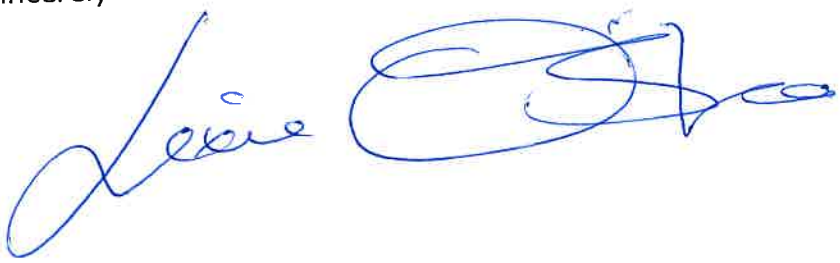
  The NES DW is restricted to freshwater sources.

  - After the Christchurch earthquakes there was need to desalinate seawater as an emergency source of drinking water.
  - Eastern regions of NZ will become hotter and drier (as predicted by NIWA as part of climate change) and surface/groundwater sources will be impacted. Additional and alternative sources will need to be found, such as desalination.
  - Guidance should be considered for the use of potential sources such as this.

Conclusion

- NMH thanks the Ministry for the Environment for the opportunity to comment on the consultation on Improving the protection of drinking-water sources.

Yours sincerely



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