Summary of submissions

Kia kaha ake te tiakina o ngā puna wai-inu

Improving the protection of drinking-water sources

Proposed amendments to the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007

Ministry for the Environment
Manatū Mō Te Taiao

Te Kāwanatanga o Aotearoa
New Zealand Government

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Abbreviations and acronyms

HSNO	Hazardous Substances and New Organisms Act 1996
NES-DW	National Environmental Standards for Sources of Human Drinking Water 2007
NES-F	National Environmental Standards for Freshwater 2020
NPF	National Planning Framework
NPS-FM	National Policy Statement for Freshwater Management 2020
NZS 4411:2001	New Zealand Environmental Standard for Drilling of Soil and Rock
RMA	Resource Management Act 1991
Stock Exclusion Regulations	Resource Management (Stock Exclusion) Regulations 2020
SWRMA	Source water risk management area
SWRMP	Source water risk management plan
The Ministry	The Ministry for the Environment
Treaty	The Treaty of Waitangi – Te Tiriti o Waitangi
WSA	Water Services Act 2020

Executive summary

In January 2022, the Ministry for the Environment (the Ministry) began an eight-week public consultation on the Government's proposed amendments to the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 (NES-DW). The amendments are designed to strengthen national direction for protecting source water from contamination.[1]

The Ministry received 2,407 submissions from regional councils and territorial authorities, iwi/Māori, resource user interest groups (including the primary sector), environmental organisations, other agencies, businesses, and individuals.

The submissions set out a range of views about each aspect of the proposed amendments. This report summarises those views.

Themes

The main themes raised through submissions were:

- **There is general support for improved source water protection, but care is needed to ensure the NES-DW is a workable and proportionate response**

  There was support for the objectives and intentions of the proposals, but it will require care if the amendments are to work as intended, and not result in a cumbersome regulatory framework, or a disproportionate response to the problem. There was concern that greater protection for registered water supplies – including new water supplies established in future – would make existing lawful activities vulnerable, and result in potentially unnecessary restrictions. Submitters also noted the importance of a co-ordinated and collaborative approach to protecting source water.

- **There is mixed opinion on the degree of national direction necessary**

  There was strong support for national direction on managing risks to source water to improve clarity and consistency. However, there was also opposition to national direction, in favour of local approaches to local situations. This applied to the delineation of source water risk management areas, and any controls of activities within them.

- **Nitrate contamination of source water is a concern**

  There was concern about the risk from nitrate/nitrogen to source water, and whether the NES-DW addresses this risk strongly enough.

- **There are concerns about the inclusion of small water supplies**

  A common concern among submitters was the potential impact of the amendments on small water suppliers. Submitters questioned the proportionality of the amendments (ie, whether the benefits would outweigh the costs), and whether alternative (or simpler) pathways have been considered for small supplies.

[1] Freshwater that is taken from water bodies, for drinking water purposes.

- **There are cost and resourcing concerns, and guidance, education and support will be necessary**

  The costs and resourcing required to implement an amended NES-DW was a concern for some submitters – from mapping and consenting through to education and compliance. The potential number of currently unregistered water supplies was a concern in terms of the resourcing required through the new regulatory changes. Iwi/Māori were particularly concerned about their ability to engage as water suppliers or resource users in any consenting or plan change processes.

Next steps

The Ministry for the Environment (the Ministry) will consider individual views from each submission and use these to refine the proposed amendments. Upon completion of this work, recommendations will be made to the Associate Minister for the Environment on the amendments to the NES-DW.

Once ministerial decisions are confirmed, Ministry staff will work with the Associate Minister to seek Cabinet approval to instruct the Parliamentary Counsel Office to draft the amendments. When the drafting of an amended NES-DW is completed, Cabinet approval will be sought to notify the regulations in the New Zealand Gazette. Publication in the New Zealand Gazette is anticipated late in 2022.

Introduction

Purpose

The Government proposes to amend the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 (NES-DW). The aim is to strengthen and improve how source water is protected from contamination.

On 10 January 2022, the Ministry for the Environment (the Ministry) invited public feedback on the Government's proposed amendments.

The Ministry has prepared this report, summarising the general views expressed in submissions received during this consultation. The report does not analyse those views, or include every individual view, or make recommendations in response to them. The detailed feedback received through submissions will inform the next phase of policy refinement, as Ministry staff work through the matters raised. Any recommendations in response to the submissions will be made through subsequent policy development and advice to the Government.

Proposed amendments

The current NES-DW was intended to protect source water by providing national direction on how to manage activities that could affect the quality of treated drinking water. To strengthen this national direction, the Government proposes the following amendments to the NES-DW:

- **Proposal 1:** How at-risk source water areas are delineated.
- **Proposal 2:** How activities that pose risks to source water are regulated or managed.
- **Proposal 3:** Protecting all registered water supplies.

These proposals are set out in the consultation document: *Kia kaha ake te tiakina o ngā puna wai-inu / Improving the protection of drinking-water sources: Proposed amendments to the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007*.

Consultation process

The consultation document was released on 10 January 2022. To support public consultation, the following documents were published on the Ministry for the Environment website:

- **Consultation document:** *Kia kaha ake te tiakina o ngā puna wai-inu / Improving the protection of drinking-water sources: Proposed amendments to the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007: Consultation document*
- **Draft interim regulatory impact statement:** *Draft interim Regulatory Impact Statement: proposed amendments to the NES-DW*
- **Cost-benefit analysis:** *Cost-Benefit Analysis of the Proposed Changes to the NES-DW: Marae and Rural Water Supply Case Studies*

- Supporting technical information:
  - *Technical Guidelines for Drinking Water Source Protection Zones*
  - *Drinking Water Source Protection Zones: Delineation methodology and potential impacts of national implementation*
  - *Guidelines for Modelling Source Water Risk Management Areas*.

The Ministry notified the public of the consultation through a variety of means, including posting on social media and on the front page of the Ministry's website. The Ministry also contacted iwi/Māori and key stakeholders directly via email or post.

The consultation document invited feedback from members of the public on the proposal, with 40 targeted questions. Submissions could be made using the online web form, or sent via email or by post. The submission period closed on 6 March 2022. A number of submissions were received after the closing date, and these are included in this report.

To promote awareness of the proposal, and encourage submissions, officials held webinars during the consultation period with water suppliers, the water industry, regional councils, iwi/Māori post-settlement governance entities, and primary sector stakeholders. Webinars presented a summary of the proposals and invited questions on the proposals from attendees.

Next steps

- Ministry staff will continue to refine the proposed amendments, considering the detailed feedback provided through submissions. This may involve further engagement with targeted stakeholders and iwi/Māori.
- In response to submissions, Ministry staff will make recommendations to the Associate Minister on strengthening and improving how the NES-DW protects source water from contamination.
- Once ministerial decisions are confirmed, the Associate Minister will seek Cabinet approval to instruct the Parliamentary Counsel Office to draft the amendments.
- The Associate Minister will seek Cabinet approval to notify an amended NES-DW in the New Zealand Gazette. Publication in the New Zealand Gazette is anticipated late in 2022.

Who we heard from

The Ministry received 2,407 submissions on the Government's proposed amendments to the NES-DW. Some were joint submissions, or on behalf of others. Of all submissions received, 148 were unique (ie, did not use a submission form provided by an organisation).

To group submitters' views together and how different stakeholders may be affected by the amendments, the submitters were placed into categories (table 1). The general views of each submitter category are set out further below.

Table 1: Submitter categories

Submitter category		Number of submissions*
Local government	Regional council	15
	Territorial authority	21 (25)*
Iwi/Māori		9
Resource user group	Primary sector	14 (15)*
	Other	7 (9)*
Environmental organisation		3 (7)*
Form submission		2259
Other agency		6
Other (including individuals)		73

* For joint submissions, the number of organisations that submitted is in brackets.

Local government

Regional councils

Regional councils will be required to implement an amended NES-DW. This includes delineating source water risk management areas (SWRMAs), updating regional plans and operational procedures, and engaging with water suppliers and resource users.

In this report, unitary authorities who perform both regional council and territorial council functions, are categorised as regional councils. Nine regional councils, five unitary authorities, and a representative national body for regional councils and unitary authorities submitted on the NES-DW. The position of regional councils ranged from generally supportive of the proposed amendments, through to concern about the necessity of the NES-DW, and the challenges of its implementation.

Themes

- Many supported the objectives behind the proposed changes. They noted these should be minimum standards, and that regional councils retain the ability to set regional requirements that are more stringent than the NES-DW, where necessary.

- Any amendments must be consistent with other regulations, including integration with the National Policy Statement for Freshwater Management 2020 (NPS-FM), and implementation through the freshwater planning process (RMA part 9A). Regional councils highlighted the potential complexity of this alignment and sought clarity between the functions and role of regional councils under the NES-DW, and under the Water Services Act 2020 (WSA).
- Mapping the SWRMAs for currently registered water supplies will be a large and costly undertaking. Some SWRMAs will require specialist modelling.
- There are challenges relating to the currently unknown number of unregistered water supplies, and the potential resources required to map their SWRMAs.

Territorial authorities

The NES-DW affects city and district councils in various ways. They are water suppliers, they perform district planning functions under the RMA including the control of land use, and they are 'resource users' under the RMA (eg, by managing wastewater treatment and disposal, or maintaining local roads).

Submissions were received from 24 territorial authorities, and an infrastructure asset management company owned by six councils.

Themes

- As water suppliers, many are generally supportive of the overall objectives of the proposed amendments.
- As resource users, there were concerns about restrictions in SWRMAs, given the range of activities undertaken by councils that might be affected.
- They sought:
  - clarity about the roles and responsibilities between them and regional councils
  - consistency and alignment with other regulations, potentially including district plans.

Iwi/Māori

Iwi/Māori have an obligation as kaitiaki to preserve, restore and enhance freshwater for the benefit of present and future generations. Some Treaty settlements provide for co-management or co-governance of natural resources. Iwi/Māori are also water suppliers (eg, at marae and papakāinga) and resource users.

Nine iwi/Māori organisations sent submissions (see What we heard from iwi/Māori).

Themes

- The potential cost and regulatory burdens on marae, papakāinga and small rural communities.
- The potential unintended impacts on small water suppliers.
- The need for clear recognition of Treaty settlements and engagement with mana whenua during implementation.

Resource user groups

Resource users are people (landowners, land occupiers and others) who undertake activities regulated by the Resource management Act (RMA). Resource users will need to appropriately manage the adverse effects of their activities on source water. The proposed amendments may result in the need for a resource consent for certain activities, and sometimes, for alternative approaches to be considered. Resource user groups represent the views of many resource users, in this case aligned with different industries.

Primary sector

There were 15 submitters from primary sector groups, including advocacy/advisory groups, dairy, fertiliser and irrigation companies. Two submitters considered the NES-DW unnecessary given other national direction, while others provided feedback to help strengthen the proposed amendments.

Themes

- Overlap or alignment with other regulatory changes currently underway in freshwater management, including freshwater farm plans.
- Concern about the costs of implementation for farmers, in addition to those resulting from other regulatory changes.
- Concern about the impact of these proposals on land use and productive land practices, and the ability of farms to intensify or subdivide.

Other industries

Nine submitters represented other industries: fuel, electricity, minerals and waste management.

Themes

- How the proposed amendments would affect their industry-specific activities.
- Other concerns included retrospective application, alignment with existing national direction, and the requirement to consult with water suppliers before and during the consenting process.

Environmental organisations

There were seven submitters from groups with environmental interests. Five of these submitters provided a joint submission, which was supported by additional organisations.

Themes

- The importance of giving effect to Te Tiriti o Waitangi and Te Mana o te Wai.
- Support for strong controls on activities in SWRMAs, to minimise the risk of source water contamination, with comment that the amendments to the NES-DW do not go far enough.

- Recognition of both synthetic nitrogen fertiliser and livestock urine as a direct and indirect source of contaminants, with more stringent measures necessary to address this (including limiting the application of synthetic nitrogen fertiliser, enacting stocking rate limits, and prohibiting new dairy conversions).
- Support for extending the protections of the NES-DW to everyone's drinking water, including domestic self-supplies.
- Support for extending the size of SWRMAs and controls within them.
- The importance of source-water protection in relation to climate change.

Form submissions

One environmental organisation provided a template for individuals to make submissions. A total of 2,259 individuals used this template. These submissions mainly focused on nitrogen contamination of freshwater (and the potential chronic health impacts from this, as indicated in emerging research on colorectal cancer and nitrates). They requested changes to the proposed amendments to address this.

Other agencies

Submissions were received from two Crown research institutes, a scientific consultancy, a district health board, the new drinking water regulator, and a national industry body for the three waters sector.

Themes

- General support for changes that better protect source water from contamination, with a precautionary approach to protect human health.
- The scientific submissions provided technical advice on mapping SWRMAs, acknowledged the uniqueness of each water source, and the need to evaluate each activity from a risk management perspective.
- The need for alignment with other regulations, including Taumata Arowai's 'Acceptable Solutions', to ensure that drinking water is protected.

Other submitters

This category includes submissions received by individuals, as well as groups not clearly represented by the other categories. There were 73 submissions in this category.

Several submissions in this category included individual submissions supportive of a political party's policy position on the proposed amendments. As a number of these submissions were unique (ie, incorporating the political party's suggested commentary into their own submission), they have been included in this category, rather than as a form submission.

The political party's form submission focused on: nitrogen contamination in freshwater, extending the NES-DW to apply to all supplies, and appropriately resourcing regional councils.

Other submitters' views covered a wide spectrum of issues and positions, from full support (with some more stringent controls), through to disagreement that any additional controls were necessary.

Other categorisations

Water suppliers

Water suppliers have a key role in the amended NES-DW, as they have a duty to provide safe drinking water under the Water Services Act (WSA), and the amendments are intended to strengthen the protection of source water from contamination. Water suppliers will be enabled to undertake certain activities around their intakes and encouraged to engage in RMA processes where activities occur which could affect source water.

Under the WSA, water suppliers must prepare a source water risk management plan (SWRMP). The amended NES-DW is intended to support the development and content of those plans.

Submitters have not been categorised as 'water supplier' for this report, as many water suppliers have more than one role under the RMA. For the purpose of this summary, submitters were only placed in a single category.

The following submitter categories may include water suppliers:

- territorial authorities
- iwi/Māori
- resource users
- other submitters.

Themes

- The need for additional resources, personnel and support to effectively implement the amended NES-DW.
- Potential difficulties during engagement with resource users, including disagreements over effects, and necessary mitigation.
- Some submitters noted that there could be a risk of smaller water suppliers cutting off their water supply to avoid the costs of the additional obligations under the WSA, and the increase in restricted activities due to the NES-DW.

What we heard: Key themes

The key topics raised by submitters on the proposed amendments to the NES-DW are provided below, along with additional matters raised by submitters relating to the entire proposal. Later sections cover feedback on specific amendments.

There is general support for source water protection, but care is needed to ensure the NES-DW is a workable and proportionate response

A majority of submitters supported the objectives and intentions of the proposals. However, many noted the importance of the drafting detail of the amendments. They identified possible areas for more consideration to ensure the amendments work as intended and do not result in an unworkable regulatory environment, or a disproportionate response to the problem.

Some submitters were concerned that the consultation document did not provide sufficient detail for them to provide robust feedback. Some also suggested further research was needed in certain areas (eg, risks from different activities). Several submitters offered to help refine these details, and some requested further engagement as the proposals are refined, to ensure robust outcomes.

Care is needed to ensure alignment across the legislative system

There are various legal requirements and legislative reviews related to source water protection, freshwater management, and drinking water regulation. Many submissions addressed the complexities and interdependencies between different agencies, requirements and reforms.

Comments covered the roles and responsibilities of various agencies, including regional councils, territorial authorities, Taumata Arowai, drinking water suppliers, iwi/Māori, and the Department of Conservation, and the need for a proactive, coordinated and collaborative approach.

There was feedback on the complexity of legislative and regulatory requirements, the potential for overlap, duplication and confusion; and the relationship/priority between them. In particular, linkages with:

- other national direction under the RMA (eg, NPS-FM)
- the WSA
- various Treaty settlement acts
- resource management system reform.

Submitters commented on the importance of including clear definitions for terminology in the NES-DW, particularly to ensure consistency across different pieces of legislation.

> "The proposed changes to the NES-DW when considered alongside the current Three Waters and Resource Management reforms, as well as implementation of the NPS-FM, create many interrelationships and interdependencies between local government, Ministry for the Environment, Taumata Arowai, and proposed water services entities.
>
> These dependencies are necessary and reflect the numerous connections between the management of land and water. However, in practice, these connections will likely produce an extremely complex regulatory regime that will require collaborative use of resources, information and capability across all of the above organisations …
>
> We hope to see expectations and mechanisms to enable collaborative action on land and water management written into the eventual NES-DW and/or related reform legislation. Relying on proximity and goodwill to enable collaboration is not always dependable, particularly during the period in which reforms are bedding in."– Regional council

There is mixed opinion on the degree of national direction necessary

Many submitters supported national direction on managing risks to source water (for both the delineation of SWRMAs, and any control of activities within them), as it improves both clarity and consistency. Conversely, other submitters opposed national direction in favour of applying local approaches to local situations.

In applying national direction, many submitters favoured a risk-based approach to controls, rather than setting blanket requirements. This approach determines the level of protection (ie, via more stringent controls or larger SWRMAs) through demonstratable risk to source water contamination, considering local conditions and regional variation.

Nitrate contamination of source water is a concern

A significant number of submissions referenced the health and environmental risks from nitrate/nitrogen in drinking water supplies, signalling that the proposed amendments must manage and mitigate the risk from this specific contaminant. This was the key focus of a form submission campaign, as well as a number of submissions received from environmental organisations, and individuals.

There are concerns about inclusion of small water supplies

A common concern among submitters was the potential impact application of the NES-DW may have on small water suppliers, if the provisions apply to all registered water supplies. Submitters questioned the proportionality of this approach (ie, whether the benefits would outweigh the likely costs), and whether an alternative, simpler pathway (or an exemption to these provisions) has been considered for small water supplies. Submitters also noted that small water suppliers would require support and guidance for effective implementation, and to participate in the consenting process.

Costs and resourcing concerns

A prominent concern among submitters was the cost and associated resourcing required to implement the NES-DW, from mapping and consenting through to education and compliance. They frequently cited the potential number of currently unregistered water supplies (currently estimated at 75,000+) and the associated costs to delineate these as a risk to implementation, particularly due to the resourcing capacity of regional councils.

Engagement with iwi/Māori and smaller suppliers was also highlighted as an area where additional resourcing would be required. Some submitters also queried the publication *Cost benefit analysis of the proposed changes to the NES-DW: Marae and rural water supply case studies*, suggesting further research and analysis is required in this area.

Guidance, education and support will be necessary

A common theme in feedback received across the proposals related to the additional guidance, education and support required for successful implementation. Many submitters noted that guidance would be required across a range of areas (such as delineating SWRMAs, which activities to control, and the consenting process). It was also noted that support and education would be important for affected parties, such as small water suppliers and resource users.

Other comments

Compliance, monitoring and enforcement

Both the Havelock North Inquiry and a Ministry review found issues with how the current NES-DW is being implemented. Good monitoring and enforcement are critical to successful outcomes.

Submitters highlighted the importance of an integrated approach between regional councils, territorial authorities, Taumata Arowai and drinking water suppliers in managing source water. They raised resourcing and cost concerns, and suggested similar provisions to the National Environmental Standards for Freshwater 2020 (NES-F) and National Environmental Standards for Plantation Forestry. These would allow regional councils to charge for monitoring permitted activities and take a user-pays approach to resourcing NES-DW enforcement.

Future water supplies

Submitters commented on new water supplies (those yet to be established and registered to support growth, or required to be moved to a different location), including if a water source became unviable or unreliable. Issues included:

- how to incorporate them into the NES-DW regime as they become established (or are removed, if no longer used)
- the relationship of urban growth with increased demand for safe drinking water, and potential linkages with future regional spatial strategies.

Out of scope

Some submitters raised matters that fell beyond the scope of the NES-DW. For example, concerns were raised about:

- water ownership, and the involvement of offshore businesses collecting and selling bottled New Zealand water internationally
- treating drinking water with chlorine and fluoride.

What we heard from iwi/Māori

It is important to capture the views of iwi/Māori as Treaty partners, and as kaitiaki with an obligation to preserve, restore and enhance freshwater for the benefit of present and future generations.

Nine submissions were from submitters who identified as an iwi/Māori organisation. Most submissions were generally supportive of the intent of the amendments to protect source water from contamination. However, four key themes emerged:

Costs and regulatory burdens on marae, papakāinga and rural communities

All submissions acknowledged the costs and regulatory burden that will be placed on marae and papakāinga. Submitters noted the challenges facing marae and Māori rural communities, due to the lack of resources and technical expertise to effectively participate in the process. Many submitters called for central government funding and support for marae.

Unintended impacts on small water supplies

There was concern among some iwi/Māori of a risk that some small water suppliers will stop supplying water due to the increased regulatory burden, which could negatively impact Māori communities.

Clear recognition of Treaty settlements

Submitters highlighted existing Treaty settlement provisions, and the need to ensure they prevail, are appropriately recognised and given effect to when amending and implementing the NES-DW.

Engaging with mana whenua during implementation

Most submissions highlighted the importance of clear direction to councils and water regulators that engagement with mana whenua is a requirement during implementation. Mana whenua hold site-specific knowledge that will be crucial for authorities to understand cultural impacts, and to incorporate mātauranga Māori. However, there were concerns about the capacity and ability of mana whenua to engage with authorities on a whole range of regulations coming into force. Additional support was suggested for Māori groups to access resources and technical expertise, to engage effectively.

What we heard on proposal 1: How at-risk source water areas are delineated

In the proposed amendments, a default methodology for mapping source water risk management areas (SWRMAs) for different types of water bodies (rivers, lakes and aquifers) would be established, based on the time it takes for contaminants to travel to a source water intake and the level of filtration or mixing before reaching the intake. Where this method is used, SWRMAs would be formalised through publication in the New Zealand Gazette and inclusion on the regional council's website.

The proposal includes allowing regional councils to use 'bespoke' delineation where appropriate. However, the default approach would apply until any bespoke approach was formally established. The full RMA Schedule 1 process would be necessary for bespoke SWRMAs, along with Ministerial approval for publication in the New Zealand Gazette.

The consultation sought detailed feedback on both the default and bespoke methodologies, and on challenges for regional councils in mapping SWRMAs.

Mapping to identify at-risk areas

Benefits and risks to delineating areas of risk – Submitters who supported mapping areas based on risk liked the focus on preventative risk management (multi-barrier approach), rather than mitigation. They noted that the narrow, defined approach allowed for targeted regulations.

> "The proposal, in general, brings a regulatory status to current (nonregulatory) technical guidance and narrows the focus of the NES-DW application to a smaller area thereby enabling the regulatory provisions to be appropriately focused towards preventative risk management." – Territorial authority

Counter to this, some submitters were concerned about the loss of productive land, impacts on permitted land uses, and compensation. There was also concern about whether these proposals support the Te Mana o te Wai hierarchy, whether a Māori approach/methodology is required, and what the cost implications for Māori-owned land would be.

> "The unintended consequence of limiting land use through SWRMA 3 process or default protection measures also needs to be considered. Limiting permitted land use due to the location of a water abstraction further limits viable land use areas for our production land. In addition, increased waterway setback areas would be an excessive restriction for [our region's] productive land users." – Regional council

Challenges with data availability and quality – The provision of technical guidance, alongside the consultation document, raised questions among submitters about the availability (or lack) of data required to delineate SWRMAs. Several submitters raised concern about the ability to delineate according to the proposed default method, due to many unknown factors about source

water intakes (eg, local conditions, understanding of aquifers, water flow times). Other comments mentioned the need for information about water supplies as they are registered with Taumata Arowai, to enable regional councils to delineate supplies.

> "Accurate data capture will be the most challenging aspect of the process, both the spatial location, and the attributes recorded against a data point. For example, determining groundwater based on hydrogeological parameters while accounting for uncertainty will take time to ascertain." – Regional council

Default vs bespoke mapping approach – Submitters provided a range of feedback both supportive and opposed to the default technical method for delineating SWRMAs. Although there was support for the provision of a default delineation method, submitters suggested this method should be adaptable to local conditions. Some submitters were concerned that the proposed default method uses a 'one size fits all' approach, with risk not scaled according to population or catchment characteristics.

There was also support for using the bespoke method in most, if not all, circumstances, with many preferring a local approach over a nationally prescribed default method. Due to the complexity of the bespoke process, there was support for interim default measures (including keeping existing source water protections in place or a simplified default method) until a bespoke method could be adopted.

> "The default method is seen as a credible, although a somewhat simplistic approach, for delineating SWRMA to enable sufficient protection to source waters. However, there should perhaps be the ability to refine boundaries over time through experience and as more hydrological and geological information becomes available, perhaps moving to a more bespoke methodology." – Territorial authority

There was feedback on decision-making for complex water bodies (ie, whether regional councils should determine suitability of the default method on a case-by-case basis). Some submitters considered this process should involve others, such as water suppliers and mana whenua, rather than just the regional council.

Delineating water bodies – Submitters also commented on delineation methods for different water body types:

- ***Aquifers –*** The unique features, variability and sensitivity of aquifers was raised, with suggestions recognition and protection could be either through a flexible default method, or a bespoke method for each aquifer. The lack of information and understanding about specific aquifers was highlighted, as well as the issues this could cause. A conservative default method was also suggested to enable protection until a bespoke method could be adopted. However, there were also comments that a conservative default approach may result in the unnecessary restriction of activities. There was also feedback on how aquifers are classified (ie, whether there should be a distinction between aquifers and conjunctive sources[2]).

[2] The term 'conjunctive' relates to situations where both groundwater and hydraulically-connected surface water are drawn into an intake, such as springs or infiltration galleries.

- ***Springs and wetlands*** – Similar to feedback received on aquifers, there was support for an interim default approach, with additional flexibility available where required, or the revision of delineated SWRMAs once additional data becomes available. There was also opposition to the use of an interim default method, in support of a bespoke method for these complex water bodies, noting that a 'one size fits all' approach would not be appropriate.
- ***Lakes*** – Due to the variable characteristics of lakes, some submitters suggested lakes should be delineated using a bespoke method which incorporates these factors. Some submitters commented a bespoke method may only be required for larger lakes, while a default approach which encompasses the entire lake could be used for small lakes. Some submitters commented that the entire lake should only be included in delineation where there is a scientifically proven risk of a contamination event, otherwise, the size of the mapping area could be scaled down as appropriate. However, in contrast to this, other submitters supported the entire lake being included in the SWRMA (with some saying it should also include tributaries/catchments), due to the risk of contaminants entering the lake if it is not covered in its entirety.

Technical feedback – Detailed technical feedback was provided on the proposed default methodology, and on which factors to consider in determining SWRMAs (eg, well depth, travel time, maximum travel distances, interconnectedness between water bodies, and shallow vs deep aquifers). Comment was also provided on the specific technical guidelines and their usability. Some submitters mentioned that aspects of the guidelines may be difficult to follow, or cause confusion.

Mapping approach may be impacted by timeframes – Some regional councils and industry experts thought that there was a lack of time to robustly delineate SWRMAs and this could lead to compromised implementation because people might be forced to defer to simplified methods. These simplified methods could either be too conservative (thus risking being too stringent on resource use), or too lenient (thereby risking drinking water safety).

Alignment with other legislation – Submitters commented on how the provisions in proposal 1 interacted with existing policies. This included alignment with timeframe provisions under the NPS-FM for freshwater farm plans and WSA for SWRMPs, as well as with existing wetland provisions in the NES-F (when mapping complex water bodies); fencing (or stock exclusion) requirements in the Stock Exclusion Regulations; and Drinking Water Standards for New Zealand 2005 (revised 2018) (when considering the bore radius).

> "All Essential Freshwater legislation must link together in order to provide a coherent picture of how water will be protected, enhanced and wherever possible restored to its original health. The consultation document does not demonstrate that link clearly nor does it demonstrate a clear link to the current and upcoming Three Waters Reform legislation."
> – Iwi/Māori group

Cost of mapping – A prominent concern was the cost and associated resourcing required to delineate SWRMAs, regardless of the method used. Many submitters highlighted the likely high costs of the bespoke method, due to the complexity of certain source water intakes and the proposed use of the Schedule 1 RMA process. Costs were also closely related to resourcing concerns (particularly for regional councils) and the availability of technical experts to delineate SWRMAs, as well as the cost impact on small suppliers.

> "The key challenges associated with SWRMA delineation will be time and resources. Some delineations may require specialist modelling; an already constrained resource which will be under significant demand if all regional councils will need to delineate these areas concurrently." – Regional council

Regular review of SWRMAs – Submitters identified the need to review and keep SWRMAs up to date. This included reviewing SWRMAs to account for changing risk profiles (eg, following extreme natural events), to incorporate currently unregistered supplies as they are registered with Taumata Arowai, and to address ongoing changes as new proposed water supplies are established, or old supplies are disestablished.

Default delineation method

Waterbodies can be complex – Submitters raised the importance of well-defined terms (such as river edge or lake edge) to reduce confusion or inconsistencies during implementation. Feedback was also given on complex water bodies (those that don't fit into the definition of a river, lake or aquifer, such as a spring or wetland).

The purpose of each SWRMA needs to be clear – The specific purpose of each SWRMA and what it is trying to achieve must be clear. Some queried the value of SWRMA 3 (where no additional controls were proposed), while others felt the three-zone approach should be the minimum, with the ability to include additional zones.

There needs to be careful consideration of the size of SWRMA – There was feedback on the size of each SWRMA for the various water body types:

- ***SWRMA 1 around bores*** – there was support for flexibility depending on risk, which is influenced by a range of factors including bore construction and bore depth. Flexibility would also be important for feasibility, particularly due to bore location – for example, if the bore is next to a road, or in a built-up area. Some queried why the proposals did not adopt the evidence supporting a larger radius (ie, 10 to 30 metres).
- ***SWRMA 2 in aquifers*** – there was opposition to the maximum distance of 2.5 km for very different reasons: it may not provide sufficient protection, or it is unnecessarily restrictive on land use.
- ***SWRMA 3*** – there were queries about whether the 'catchment' was that of the entire water body, or only upstream of the source water abstraction point, and whether this is practical or necessary.

Surface water body setback considerations – Many commented on the likely confusion, inefficiencies and associated costs, if the SWRMA 1 setback is inconsistent with the 3-metre setback in the Stock Exclusion Regulations. Submitters noted the possible negative impact on the primary sector. There were also calls for clear implementation guidance and direction about how these regulations would interact. Some submitters supported a greater setback distance, or a more risk-based approach.

> "Conflicting requirements under different legislation (such as those proposed in the NES-DW in contrast to the Stock Exclusion Regulations) are inefficient and lead to frustration among the community required to implement them." – Primary sector resource user group

Alternative approaches for small water supplies – Allowance for potential alternative pathways for small supplies were queried, including a simplified default method similar to Taumata Arowai's proposed 'Acceptable Solutions', or a simplified interim method, until a more detailed method could be implemented.

Bespoke delineation method

Support for a bespoke method – There was support for the bespoke method, especially for large or high-risk water supplies, as it provides for the incorporation of local community values and conditions, and enables iwi/Māori involvement. However, a standard methodology was suggested to ensure consistency between regions. Some submitters highlighted the cost and resourcing needed to create, analyse and certify bespoke plans.

Care is needed if existing source water protection zones are retained – A range of submitters (including local government and resource users) supported the retention of pre-existing source water protection zones as a bespoke method, rather than remapping them in accordance with new national direction. This would reduce the administrative cost and workload for regional councils. However, some submitters were concerned about inadequate protection from the existing provisions. Many submitters believed existing provisions should only be kept if the protection is stronger than the national direction, or there should be a review process to ensure consistency and adequate protection.

> "Existing zones/methods should only be retained where they are more stringent than that required by the NES. If they are not as stringent, they should be brought up to the minimum requirement in the NES." – Environmental group

The risk of inconsistency was also a concern among those opposed to retaining pre-existing source water protection zones, with some suggesting that keeping these existing zones counters the purpose of national direction. Some submitters called for national guidance, rather than allowing regional councils to determine whether existing protection should remain, noting the need for guidance material for successful implementation.

> "With the understanding that the proposal seeks to create consistency and limit complications, Council believes that national guidelines that create consistency across all schemes and regions are preferable to retaining a range of locally determined methods." – Territorial authority

Formalising bespoke SWRMAs – Submitters both supported and opposed the inclusion of the Schedule 1 RMA process. Some preferred the process of publication in the New Zealand Gazette as it is less resource intensive and would improve efficiency; however, another submitter supported the notification process, as it provided an opportunity for affected parties to be involved. It was noted that the Schedule 1 requirement may disincentivise the use of a bespoke process, in favour of a default method, which would be a risk if the bespoke method provided better protection.

Mapping by regional councils

There is need for high quality data – The critical role of water supply registration data was highlighted, with calls for a publicly available, centralised database, which could be used by regional councils and water suppliers. However, some submitters were unsure who should be responsible for such a database (ie, regional councils or Taumata Arowai).

Mapping roles and responsibilities – Some submitters sought greater water supplier involvement in the SWRMA mapping process (with some suggesting water suppliers should be responsible for SWRMA mapping and guidelines, rather than regional councils). Another submitter noted that territorial authorities may want a role in SWRMA delineation, due to the possible overlap with other legislation. Some submitters requested central government responsibility for mapping SWRMAs (eg, through Taumata Arowai or the Ministry), rather than regional councils.

> "In practice, there have been challenges in [our region] in defining site-specific [SWRMAs]... Modelling is uncertain and subject to challenge, and without exception water suppliers have sought smaller [SWRMAs] than would be recommended to reduce the potential for affected parties and therefore notification." – Regional council

Costs and resourcing concerns – Submitters highlighted resourcing constraints as a significant challenge for regional councils when mapping SWRMAs, with concerns about a lack of funding, expertise, and resources, particularly given the potentially large number of unknown water supplies. There may be a lack of available technical experts to assist with delineation processes, particularly if several regional councils have many, currently unregistered, water supplies to delineate. There were numerous calls for the provision of appropriately scaled funding and resources (including technical support) for regional councils, to enable effective mapping and implementation.

> "The key challenges associated with SWRMA delineation will be time and resources. Some delineations may require specialist modelling; an already constrained resource which will be under significant demand if all regional councils will need to delineate these areas concurrently." – Regional council

Timeframes for mapping – A common suggestion was to take a staggered approach to mapping (ie, mapping larger supplies first, or mapping water supplies as they register with Taumata Arowai). Uncertainties – including the number of unregistered water supplies, and subsequent funding and resourcing requirements – made it hard to estimate how long regional councils would require to map all water supplies. Mapping consistency would be improved if supplies were mapped together, rather than a staggered approach which could lead to methodology changing over time. However, this could be a significant challenge if there was a large number of newly registered supplies.

> "The scale of the potential mapping of currently unregistered suppliers is seen as a significant resourcing and funding challenge. Also, the two-stage timing for registration could be problematic and would potentially put significant pressure on Councils towards the end of the four-year registration period. It is suggested that a more staggered approach would be preferable both for Councils and Taumata Arowai to resource the data management and mapping of water suppliers." – Territorial authority

Concern was expressed that alignment with the WSA may put smaller unregistered water supplies at risk of source water contamination and so, if possible, the NES-DW implementation should occur as soon as possible. Some submitters also noted there was a need to consider how to update SWRMAs in the future, given changing risk profiles.

> "Waiting four years until the end of the Water Services Act deadline means risks go unmanaged needlessly. Beginning the process of mapping supplies as they register allows any issues arising with the mapping process to be refined." – Other agency

Clarification of the interaction between mapped SWRMAs with RMA plans – Submitters queried how SWRMA maps would interact with regional/district plans. Some considered that SWRMAs maps should be included in both regional and district plans, while others suggested keeping them somewhere that was easily updatable and publicly available.

What we heard on proposal 2: How activities that pose risks to source water are regulated or managed

The proposed amendments included improvements for how activities that pose risks to source water are regulated or managed. These included restricting activities in the immediate vicinity of source water intakes (SWRMA 1):

- removing any permitted activity status for high-risk activities within SWRMA 2
- improving bore management, and managing land disturbance over vulnerable aquifers
- ensuring risks to source water are considered for all activities within SWRMAs
- incentivising engagement with water suppliers.

Controlling activities in SWRMA 1

For any person other than the drinking-water supplier, stringent controls would be placed on activities in SWRMA 1, to avoid, or mitigate where necessary, adverse effects on source water.

The proposed activities to which controls would apply are:

- land use including drilling of bores and earthworks over vulnerable aquifers (RMA section 9)
- use of the beds of lakes and rivers (RMA section 13)
- all restrictions on water (RMA section 14)
- discharges, excluding to air (RMA section 15).

Feedback was sought on: the need for national direction to control activities in SWRMA 1; which activities should be more stringently controlled; and which activities should be provided for.

National direction on activities within SWRMA 1

There was support for bottom lines and national consistency in protecting source water through national direction on activity controls in SWRMA 1. While some submitters requested that the NES-DW clearly state which activities are permitted and prohibited, and which require a resource consent, others were concerned about activity-specific rules, given locality-specific considerations across New Zealand.

> “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." – Other agency

There was also opposition to national direction, with a preference for a risk-based approach that considers local conditions and the risk from any given activity. There was concern that national guidelines would result in unworkable situations that were not proportionate to risk. A risk-based approach was largely supported by primary sector resource user groups.

> "While some national direction/s may be required, it is considered that these would be best placed as guidelines rather than a set of nationally imposed standards that will not necessarily be relevant in many different cases around the country. Setting national scale restrictions is entirely inappropriate and will lead to many unworkable situations that cannot be remedied through resource consents, especially if prohibited activity status' are applied." – Primary sector resource user group

Restricting high-risk activities

High-risk activities were identified – The types of activities deemed 'high-risk' varied across submissions, but some frequently cited examples included earthworks (eg, drilling, excavation), using or storing hazardous substances (eg, chemicals, fuel), landfills, offal pits, stormwater or wastewater discharges, livestock grazing, plantation forestry management and direct discharges to water and land. One submitter gave examples of instances of air discharges that had measurable impacts on water quality in their location.

Prohibiting activities – Numerous submitters suggested prohibiting high-risk activities in SWRMA 1. Some submissions also noted livestock grazing or intensive stockholding should be prohibited in SWRMA 1. In contrast, other submitters felt no activities in SWRMA 1 should be prohibited as there could be unintended consequences, and it could unnecessarily affect (and possible restrict) productive land use. This view was particularly evident among resource user groups.

> "Restrictions should apply to industries and trades with a history of poor environmental compliance or that pose a high risk in terms of contaminating land and/or water, regardless of how well managed they are. Restrictions should also cover other water extraction/bores (for uses other than drinking water), as well as temporary activities such as (but not limited to) geotechnical bores for soil foundation assessment, earthworks, and temporary storage of materials/chemicals." – Regional council

Alternative activity statuses – Some submitters provided detailed feedback on alternative activity statuses that may be appropriate for different activities within SWRMA 1.

Controls should consider whether an activity is new or existing – There was general support for restrictions on new activities, but caution as to whether those restrictions should apply to existing activities and land uses (see also Retrospective application to existing activities).

Enabling necessary low-risk activities

Infrastructure management and maintenance needs of water suppliers – Some submitters commented that this should broadly cover all activities relating to the maintenance and management of water supplies, including activities such as discharge of process waters, cleaning and repairing intake infrastructure.

However, other submitters believed that only specific activities relating to drinking water supply maintenance should be permitted, noting that some activities carried out by water suppliers (such as discharges) can still pose a risk to source water.

It was noted that there should be provision for future expansion and upgrade of any existing abstraction point and associated infrastructure.

Pest control operations – Submitters commented that in-stream pest control activities can be important for abstraction point maintenance, as well as for ensuring the ecological health of waterways. However, they noted the need for risk mitigation strategies, as well as interactions with other legislation such as pest control management under the Biosecurity Act 1993, or the Hazardous Substances and New Organisms Act 1996 (HSNO).

Other activities that may need to occur – Submitters identified various activities that occur in SWRMA 1 which should continue to be provided for, including hydroelectric generation, flood management, and structures for access or recreation. Some submitters requested industry-specific exemptions from any national direction, such as for nationally significant infrastructure, quarrying activities, and horticultural activities in areas of highly productive land.

General comments on activities in SWRMA 1

Different risks to groundwater and surface water should be acknowledged – A few submissions noted activity controls could differ for groundwater and surface water, due to the different level of risk and flow pathways to these source types from different activities.

Overlap with controls in other legislation – Some submitters noted the overlap that activity controls in SWRMA 1 may have with other legislation – for example, controls on contaminants through the National Environment Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, or management through Treaty settlements.

Restricting high-risk activities in SWRMA 2

SWRMA 2 is a larger area around the abstraction point, based on the time it takes for water to flow to the source, where activities must be managed to mitigate more medium-term risks.

The proposed amendments consider the highest-risk activities to source water in SWRMA 2 to be direct discharges to water, and land disturbance over vulnerable aquifers (including the drilling of bores and earthworks). As regional councils already have controls, it is proposed that national direction in SWRMA 2 should ensure no regional council permits high-risk activities, and that all consenting actively considers the effects of the activity on source water.

Providing national direction on activities within SWRMA 2

Many submitters supported national direction to allow for consistency, with calls for clear direction on which specific activities are permitted and prohibited, and well-defined terms, such as ‘high-risk’. However, some submitters opposed national direction, or suggested that any national direction should allow for regional flexibility.

> "[We] strongly support national direction. This must be clear and direct about what activities are permitted or prohibited and those that may be carried out subject to resource consent within SWRMA 2. National direction should include the minimum controls, standards or rules that apply to activities and the management of potential contaminant sources."
> – Regional council

Restricting high-risk activities or contaminants

Feedback was sought on which activities to consider for further controls in SWRMA 2. Submitters highlighted a range of activities they considered should not be permitted within SWRMA 2. These included chemical discharge and storage, landfills, wastewater system, stockyards, intensive grazing, stormwater discharge, plantation forestry management, onsite effluent treatment systems, and industrial activities. Submitters called for particular attention regarding cumulative effects from activities and emerging contaminants.

Some called for excluding specific activities from any additional activity controls. These included water takes, rural land-use diffuse discharges, the construction of buildings or structures, and quarrying. Some submitters also raised concern about potential restrictions on agrichemical application in SWRMA 2.

Enabling low-risk activities

Feedback was sought on regional plan provisions that permit certain low-risk activities, and whether these should be allowed to continue.

There were mixed views on permitting activities in SWRMA 2 – Some submitters believed there should be no permitted activity status for new consents, or that this status should be phased out. Others thought permitted activities should be able to continue. Submitters highlighted various permitted activities of concern.

Monitoring requirements and assessment of cumulative effects – Resource consents enable some activities to occur, and submitters were concerned that regional councils may not be requiring effective monitoring. Submitters also highlighted challenges in managing the cumulative effects of activities.

> "In addition to controlling activities, the NES-DW should provide national direction on the minimum requirements for different kinds of activities within SWRMA 2, such as control measures and monitoring. It is currently challenging to place meaningful conditions on resource consents to manage the cumulative impacts of activities." – Regional council

Challenges to consent applications

Feedback was sought on consenting challenges that might occur when consent applications are made within SWRMA 2. Although it is proposed that only a limited range of activities are no longer permitted in SWRMA 2, the delineated area would become an additional consideration for all consenting within those boundaries.

Regulatory controls must be proportional to the issue – Submitters were concerned that the creation of SWRMA 2 could make consenting many activities significantly more challenging, and disproportionate to the risk of an activity. They highlighted small-scale activities, and the risk that small water suppliers who are also resource users might be disproportionately affected if they undertake activities in SWRMA 2.

> "The assessment of the potential effects for even small-scale proposals, such as onsite domestic wastewater discharges, can require in-depth modelling. This is especially the case where there are legacy and/or cumulative effects from persistent contaminants. The preparation of applications in these circumstances is time consuming and costly. Many feel that these costs outweigh the potential risks of their proposal alone and that the costs associated with legacy effects should fall to the community and / or the water supplier." – Regional council

Assessing risk can be challenging – Some submitters identified that risk assessment may be a significant challenge during the consent application process, particularly around cumulative effects of contaminants, or the cumulative risk from many activities in an SWRMA, some of which are unknown.

Challenges with data requirements and availability – Numerous submitters raised concerns about the potential additional information requirements for consent applications, and how easy this information will be to obtain. Submitters noted challenges such as a lack of knowledge of groundwater systems (eg, vulnerable aquifers) and whether an activity would affect it, and the potential lack of availability of information on small supplies and existing activities. Submitters noted it could be both costly and complex if the applicant needs to supply this information (or 'prove' that their activity will not affect any source waters), as well as for the consenting authorities to get the data required to identify all risks.

> "We foresee particular challenges when assessing groundwater related consents, often we will have insufficient data on groundwater movement to assess effects." – Regional council

Clear guidance is necessary – There was a call for clear guidance on the consenting process, for both applicants and decision-makers. This included defining what is 'high-risk', what information a consent application would need to include, how to determine which effects from an activity would be acceptable, and how effects can be mitigated.

> "Land use effects cannot be completely "avoided" and full mitigation of all effects is impracticable. There is no clear guidance as to what an applicant for such a consent would need to show, nor guidance for how a council would be expected to determine which effects were deemed acceptable." – Primary sector resource user group

Disproportionate community impacts – Some submitters noted the impact the consenting process could have on certain communities. They highlighted the potential effects on rural communities (eg, if new consents are required for standard farming/horticultural activities), including a potential for landowners to avoid having registered water supplies on their land.

SWRMA 3 considerations

SWRMA 3 is the entire catchment area for the source water. The proposed amendments did not include any additional restrictions in SWRMA 3, as current requirements under the RMA are considered adequate, although the presence of SWRMA 3 would help clarify if an activity is within a source water catchment. Feedback was sought on whether additional controls on activities in SWRMA 3 were necessary.

Additional controls are unnecessary – Many submitters believed additional controls are unnecessary in SWRMA 3, as the wider catchment is already managed through existing legislation (such as the NPS-FM), and additional regulation through the NES-DW would add unnecessary complexity. Most primary sector resource user groups held this view, as well as some regional councils and territorial authorities. A few submitters queried the need for mapping SWRMA 3 if no additional controls were proposed.

> "Consideration should also be given to whether SWRMA 3 is necessary if consideration of the effects on source water are covered within other instruments, and that additional regulatory controls are not required or add little further value." – Regional council

Additional controls could be used to address persistent contaminants – Some submitters (including environmental groups and some regional councils and territorial authorities) supported additional controls in SWRMA 3 to address wider catchment management of persistent, long-term contaminants. It was suggested current controls under existing instruments were not strong enough to manage the cumulative effects from these contaminants.

> "In SWRMA3, we are particularly concerned about the management of cumulative effects created by contaminants that have a long lifetime in the environment such as nitrogen or PFAS. Farm plans will focus on biodiversity management so currently there would be a gap." – Territorial authority

Some submitters mentioned the risk to SWRMA 3 from unforeseen events, and the potential effects of climate change.

Managing contaminants in SWRMAs

The current NES-DW controls activities that would affect the 'determinands' in drinking water after treatment. 'Determinands' are constituents or properties of water listed in the Drinking Water Standards for New Zealand 2005 (revised 2018), required to be tested. The Havelock North Inquiry highlighted that this does not cover all contaminants that may affect source water.

The proposed amendments change the focus to activities that can pose a risk to source water, depending on proximity to an intake, by releasing 'contaminants'[3] into the environment or creating preferential pathways for contaminants. The NES-DW itself does not identify contaminants of concern.

[3] Contaminants is a term used in and defined by the RMA.

However, the technical basis for delineating SWRMA 2 is to manage microbial contamination. Feedback was sought on whether protections against other contaminants should be required. Numerous submissions were made on managing contaminants within all SWRMAs (ie, across the catchment).

Nitrates

The NES-DW should address nitrate contamination – Nitrate contamination was a key concern among numerous submitters and was the focus of form submissions. Many submitters believed the NES-DW should more strongly address the nitrate contamination risk through specific controls, such as restricting synthetic nitrogen fertiliser and intensive grazing in SWRMAs.

Some submitters mentioned nitrate levels in specific regions, while numerous submissions cited concern about the possible public health impacts (eg, possible increased cancer risk) from high nitrate levels in drinking water.

A number of regional councils and territorial authorities also mentioned nitrates as a contaminant of concern, particularly regarding cumulative effects and the difficulty of controlling nitrate levels through water treatment.

> "The NES first and foremost needs to recognise both synthetic nitrogen fertiliser and livestock urine (particularly from dairy cows) as direct, indirect, or source contaminants and address them as such. This is because if synthetic nitrogen fertiliser is recognised as a contaminant and cow urine is not, then there will be no controls on cow urine as a source of water contamination and therefore no way to address the contamination."
> – Environmental group

The NES-DW is not the appropriate means to address nitrate contamination – An alternative view expressed by some submitters was that the NES-DW is not the most appropriate regulatory tool to address nitrate levels in source water.

> "There are significant concerns and complex management responses necessary to manage N in groundwater, and this NES is the wrong tool to resolve them. Addressing nitrogen management through a very narrow source water supply lens will create potentially insurmountable difficulties." – Regional council

Pesticides and chemicals

Other contaminants are of concern – Numerous submissions raised concerns about the control of specific contaminants entering waterways, and how the NES-DW could address this. Several submissions raised concern around the cumulative effect of emerging, persistent contaminants (such as PFAS or PFOA or arsenic), which are difficult to remove through treatment.

Some submissions also referenced existing legislation for hazardous substances (eg, HSNO, and the Hazardous Activities and Industries List), and how these could be referenced in the NES-DW. The storage, use and disposal of chemicals was also a concern among some submitters. Some submitters also mentioned the need to manage the application of vertebrate toxic agents (eg, cyanide and sodium fluoroacetate) within catchments.

Use of pesticides and herbicides – Several submitters supported the use of pesticides and herbicides (ie, for pest management and agricultural purposes). Some submitters noted that regional plans require adherence to best management practice, and notification of application, to manage the risk to water sources.

Improving land-use controls over aquifers (bores and earthworks)

Groundwater bore management

Groundwater bores (or wells) provide access to groundwater within aquifers, and care is required in their drilling, construction, maintenance, and in ongoing management, to address the potential for aquifer contamination. Feedback was sought on quality standards, addressing existing bores that are unused or of unknown quality, and prohibiting below-ground bore heads.

Robust quality standard for groundwater bores – The support for greater direction on bore management was almost unanimous. The majority of submitters supported an update and retention of the current bore drilling standards as a standalone technical standard (NZS 4411:2001), with stronger direction and use of the standard through the NES-DW.

Submitters highlighted the challenges with NZS 4411:2001. An alternative Australian quality standard was also identified. The alternative view presented by some primary sector resource user groups was there is no benefit in prescribing technical standards for bores which need to remain flexible to adapt and innovate.

> "Poorly designed and constructed bores and disused bores carry a risk of cumulative effects. Therefore, the construction and management of bores should be of a consistent standard. To that end, requiring national adherence to NZS as a minimum is supported by [us]. Whether there should be greater direction in the NES-DW itself would depend on the precise nature of the direction." – Iwi/Māori group

Addressing unused and poor-quality bores based on risk – There was support for the concept of requiring unused bores to be decommissioned, and poor or unknown quality bores to be upgraded, although this should be prioritised based on risk. However, some submitters noted that there are unused bores which are important for use as an emergency supply, so these bores (and whether they are actively maintained) may need to be considered in the definition of an unused bore. Submitters highlighted the challenges with locating bores, data quality, and costs for both councils and bore owners.

Prohibiting below ground bore heads based on risk – There was support for a prohibition of below-ground bore heads, particularly on new installations. For existing bore heads, the challenges and costs associated with upgrade were noted, along with an observation that such bore heads do not pose a greater risk in some circumstances.

> "The Council's view is that the Havelock North Inquiry firmly established the risks associated with below-ground well heads. At a minimum we consider that installation of new below-ground well heads should be prohibited." – Territorial authority

However, some submitters (including some primary sector resource user groups) were opposed to the use of prohibited activity status for below ground bore heads.

> "It is considered that the risk of below ground bore heads has been over-stated to some extent, which has the risk of taking the focus away from other potential more significant risks. As such, a prohibition is seen as an unnecessary step." – Territorial authority

Role of territorial authorities in managing land use to protect water quality – The majority of submitters considered territorial authorities to play an important role in land management that affects water quality. However, some submitters opposed the role of territorial authorities, commenting that regional authorities are best placed to manage land use.

Activities over vulnerable aquifers

Some shallow aquifers are more susceptible to impacts from earthworks, which – like bores – can disturb an aquitard and provide a preferential pathway for contaminants into groundwater. Feedback was sought on ways to identify vulnerable aquifers and control earthworks, and the role of territorial authorities in this.[4]

Determining vulnerability – Many submitters queried how an aquifer would be determined to be 'vulnerable', while some submitters considered that all aquifers are vulnerable by default.

> "To better understand this question, we need a clear definition of what constitutes a 'vulnerable aquifer'. Many Regional Councils may describe aquifers as vulnerable for different reasons. We consider it most appropriate to manage these at a regional level on a specific basis, but national guidance could specify criteria for determining whether an aquifer meets the criteria for vulnerable." – Primary sector resource user group

Addressing aquifer vulnerability – Submitters were split on whether the NES-DW is the right tool to address risk to vulnerable aquifers, with the NPS-FM and regional or district planning documents suggested as alternatives. However, some submitters considered a national environmental standard particularly useful for gaining national consistency and setting minimum requirements for all aquifers. Submitters also noted that the need to protect aquifers applies more widely than just as a drinking/source water. Most submitters agreed that it would be helpful if guidance and education on vulnerable aquifers was provided to support freshwater planning.

Suitability of vulnerable aquifers for source water – Some submitters questioned whether vulnerable aquifers were a suitable drinking water source.

Responsibility for managing vulnerable aquifers – Some submitters suggested that, rather than the NES-DW, other channels (such as regional and district plans) might be more appropriate for identifying and managing activities that pose a risk to vulnerable aquifers. Feedback also mentioned the need to align with the NPS-FM and any other relevant catchment or 'freshwater management unit' plans.

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[4] The Ministry review of the NES-DW (2018) found a low level of implementation by territorial authorities, and a belief that it was a regional council function.

"It is likely that instruments such as a Regional Policy Statement will be more effective at directing regional and district plans to identify and manage activities that pose a risk to vulnerable aquifers than the NES-DW, because it can direct both regional and territorial authorities to have regard to drinking water sources in planning for future land use and managing the associated effects." – Regional council

Considering risks from all activities within SWRMAs

Retrospective application to existing activities

Existing activities can have ongoing effects on source water, but there are challenges in retrospective application, along with RMA limitations in doing so. Feedback was sought on whether retrospective application of the NES-DW may be necessary.

Caution in retrospectively applying the NES-DW is needed – Many submitters considered retrospective applications should focus only on the highest risk activities and provide reasonable timeframes for transition. They identified challenges for various types of activities, and the potential for unintended consequences. This matter was of particular concern for resource user groups.

Submitters acknowledged the benefits of retrospective application (eg, identifying and addressing risks to source water, with a potential reduction in water treatment costs). However, there was substantial concern that these would not outweigh the costs.

Many submitters opposed retrospective application and were concerned about disproportionate costs and stressors on regional councils, resource users, water suppliers and their communities.

For resource users with lawfully established activities, there were concerns about uncertainty, a potential for 'reverse sensitivity'[5] and conflict.

"There is a risk of imposing significant costs on activities with limited value-add if they are required to obtain consent for the sake of a consent and nothing else changes. There is a need to demonstrate that they are causing an unmanaged problem through waste characterisation/ source water monitoring before requiring retrospective application. If the activity is not causing a problem but identifies as a risk how does a retrospective consent help?" – Regional council

Some submitters suggested the NES-DW should only apply to new consent applications, while there was also support for retrospective application of the requirements. Some submitters (including some iwi/Māori groups and environmental organisations) considered it should apply to all activities.

[5] Reverse sensitivity is the vulnerability of an existing lawful activity to a complaint from a newly located activity, which is typically more sensitive.

Matters of discretion when considering effects on source water

To support full and consistent consideration of effects on source water, a set of criteria were proposed to be considered in all consent decisions within SWRMAs. Feedback was sought on the criteria and whether they were necessary, given the recent addition of section 104G to the RMA (which requires consenting authorities to consider risks and effects more broadly on source water for registered water supplies).

General support, but clarity is needed – Most submissions generally supported the proposed list of discretionary criteria, but were wary of the potential administrative burden, and of blanket applications that did not consider the nature and degree of risk. A few submitters wanted additional matters added to the list (eg, the potential for contaminants to accumulate over time).

Many submitters sought further clarity, guidelines for consent authorities, and risk-based application of the criteria, to avoid onerous, expensive and potentially unnecessary evidence-based evaluation.

> "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."
> – Other agency

Proactive response planning

An emergency response plan is a set of written procedures for dealing with emergency or unusual events to minimise the impact of the event and facilitate recovery. For certain activities in source water catchments, such proactive response planning might include minimising the likelihood (or effects of) an activity occurring, and protocols to liaise with a water supplier.

Feedback was sought on:

- whether there would be benefit in requiring proactive emergency response planning for certain activities within SWRMAs that could significantly affect source water in the event of an accident, emergency or natural event (unless such a plan is already required under other legislation, eg, HSNO)
- when this might be useful, as the Ministry review of the NES-DW indicated current requirements relating to Regulation 12[6] appeared not to have been implemented.

Proactive response planning should consider risk – The majority of submitters, across a range of submitter categories, supported a risk-based approach to proactive response planning – that is, only requiring it for high-risk activities, or assessing the requirement so it is proportionate to the risk and scale of an activity.

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[6] Activities with the potential to have a significantly adverse effect on source water quality (eg, due to chemical spillage or unusually heavy rainfall).

> "Only those activities considered to be high risk should be required to undertake response planning. An emphasis on those activities which involve bulk storage of hazardous substances. Every activity has a potential to impact water quality and it would be too onerous to require response planning for all activities and administratively burdensome for the Councils to receive and review these." – Other sector resource user group

While most submitters supported no requirements on low-risk activities, there were some submitters who supported proactive response planning requirements for all activities, or different types of proactive response planning, depending on the risk of the activity. Some submitters also noted that other factors can affect levels of risk – for example, unforeseen events, contaminant type, and distance.

> "All activities should have some level of requirement to notify water suppliers potentially affected by an incident to ensure collective awareness of the risk and if required any actions. This should have a varying scale based on risks and impacts, with stronger controls on those activities that have a higher potential risk/impact to drinking water sources having greater requirements." – Regional council

Clear definitions are needed – Submitters noted it would be important for the amendments to provide guidance and clearly define terms, such as 'high-risk', 'potential contamination event', and 'potential to affect', to ensure clarity and consistency.

Identification of high-risk activities where proactive response planning would be beneficial – Several submitters provided examples of the types of activities that would require proactive response planning. These include landfills, earthworks, underground contaminants storage, offal pits, effluent ponds, dams and wastewater treatment systems. A number of submitters also noted specific events which could risk water supply contamination (such as floods, fires requiring the use of fire-fighting by-products, accidental fuel spillage, and earthquakes). Some submitters also noted that the risk profile may change over time (eg, due to climate change).

Water supplier involvement

The proposed amendments included support for water supplier 'ownership' of the safety of drinking water (aligning with the principles of drinking water safety), through incentivising their involvement in the consent process. This approach would not preclude any other engagement or notification requirements that may apply. Feedback was sought on this idea, on the potential hurdles to success, what support for water suppliers might be necessary, and how these amendments might affect water suppliers' ability to supply water.

Role of the water supplier – Incentivising water suppliers to participate in the consenting process was supported by some submitters, including some who were water suppliers. They noted that access to information about activities and risk will be important for them to carry out their duties of ownership of drinking water safety under the WSA. Many noted that for this to work, small suppliers will need support, in terms of resourcing, expertise and guidance, and on how to understand and interpret their role in the consent process.

Some suggested a role for Taumata Arowai or regional councils to facilitate this engagement. Some noted the need for some guidance or a mechanism (such as an independent dispute process) if the resource user and water supplier cannot agree.

> "The contribution of water suppliers to the understanding of source water risks is critical to the decision-making process and will also enhance the effectiveness of the response to any emergency situation. Water suppliers are obligated under the Water Services Act to undertake Source Water Risk Management and are actively increasing their capacity and capability to be involved in pre-application discussions and consenting processes in this manner." – Territorial authority

In contrast, some submitters (including some primary sector groups) did not entirely support this aspect of the proposal. Some suggested that water suppliers should only be engaged if there is a clear risk of source water contamination, rather than as a blanket requirement. Some regional councils did not support the potential veto ability that water suppliers may gain under this proposal, while others noted that agreement from the water supplier should not negate the need for wider public engagement.

There was also concern about potential resourcing issues in the consenting process, due to the need for written approval. Some submitters also sought clarity about the roles and responsibilities of the water supplier and regulator, and clear definitions for terms such as 'water supplier' and 'resource user'.

> "Only reasonably affected parties should be involved in a consent process, and it is unreasonable for a drinking water supplier to be introduced as a higher status than defined in already proposed legislation. Suggesting that a drinking water supplier's objective would arbitrarily preside over a land-use application would be unacceptable where the NES-F and [freshwater farm plans] have already established the values, objectives and implementation actions for that land and water consideration." – Primary sector resource user group

Impacts on small suppliers – There was concern that small water suppliers might not have the capacity and resources to effectively participate in the consenting process. Some noted there should be support made available for them to participate, while others said the potential cost and regulation burden placed on small water suppliers could discourage them from continuing to supply water.

Benefits for water supplies and suppliers – A number of submitters commented that an amended NES-DW would significantly improve the protection of source waters and reduce the risk of contamination, resulting in safer drinking water. This would support suppliers who have a duty to provide safe drinking water under the WSA.

Impacts of proposal 2

Proposal 2 seeks to improve the regulation and management of activities that pose risks to source water, through controls on activities and other requirements relating to consenting.

Feedback was sought on how this proposal would affect the current situation. This included any impacts on regional councils (eg, from the NES-DW's new requirements to change plan rules), and whether these outweighed the expected benefits of source water protection.

Costs and resourcing – Many submitters mentioned the significant costs and resources these proposals would require. This included the increased workloads on regional councils, with some submitters noting those less well-resourced will require financial assistance from central government. They also highlighted how the proposed regulatory framework (which would likely

require more resource consents and associated processes, such as engagement), has the potential to cause a significant cost and resource burden on many parties involved (including regional councils, resource users and water suppliers).

Engagement – Some submitters noted that the increased demand for regional councils to engage with key stakeholders to collate and supply important information might be difficult and complex to negotiate. Many submitters supported the proposed engagement of resource users with water suppliers through the consenting process, although some submitters raised concerns about the removal of the need to provide notification of their applications.

Impacts on regions – Submitters outlined how the proposed NES-DW amendments might affect activities in their regions. Some submitters mentioned that the required changes could be made with relatively little impact on regional councils, given the current context of other national direction changes already required. Some also noted that the benefits of these changes far outweighed the impacts on regional councils.

> "Changes to the NES-DW are seen, overall; to have benefits that outweigh the costs of implementation on regulators by standardising approaches and controls across New Zealand. While an overall benefit is seen, the mapping of SWRMAs is a large task especially for rural regions, one that financial support from the Central Government could assist with." – Territorial authority

Impacts on resource users

Feedback was sought on how these amendments might affect resource users' current land use and activities, and how the NES-DW could better align with farm plans.

Support and alignment – Many submitters mentioned the requirement for farm plans to support and align better with the NES-DW to manage risks to water sources. Some submitters noted that farm plans can be directed (by amending the NES-F) to identify drinking water supplies and include site-specific controls to manage risk of contamination to that water source. While some submitters believed that existing instruments (eg, NPS-FM and NES-F) are sufficient to manage the effects of farming on water sources, others did not.

> "We strongly support using the farm planning process, alongside existing regulation that manages discharges that may affect drinking water to ensure a more efficient, holistic and consistent approach to land use controls. This approach could be supported by a more narrowly-focused NES-DW." – Primary sector resource user group

Duplication of regulations – A number of submitters mentioned other existing national direction regulations (ie, NPS-FM, NES-F and Stock Exclusion Regulations) that already seek to manage farming activities, and questioned whether a duplication of existing regulations was necessary. They saw consistency and preventing duplication of work between these instruments as critical for compliance and, ultimately, achieving the desired outcomes of the regulations.

Regulatory burden on the rural sector – Some submitters noted the significant change and burden being placed on the rural sector from the recent introduction of national instruments, and that the NES-DW and WSA are in addition to these.

Effects on land use – Some submitters commented on how these proposals could affect land use (eg, ability of farms to intensify or subdivide, or undertake primary production activities). They noted the subsequent adverse impact this could have on specific agricultural industries, as well as the wellbeing of rural communities.

> "An unintended consequence of the proposed NES is the effect of new drinking water sources on limiting surrounding land use practices. The proposed NES will have the net effect of prioritising drinking water supplies over existing land uses." – Regional council

Impact on other activities – Submitters noted how these provisions may affect a range of other activities, including those relating to wastewater, stormwater, utilities, road maintenance, and sports park management.

What we heard on proposal 3: Protecting all registered water supplies

The current NES-DW protections only apply to activities which could affect a registered water supply that serves no fewer than 501 people for not less than 60 days in the calendar year. Recent changes to the WSA extend its provisions to all water supplies (other than domestic self-supplies) and currently unregistered water supplies must be registered with Taumata Arowai by November 2025.

The proposed amendments would extend coverage of the NES-DW to protect all water supplies, in line with the requirements and timeframes under the WSA. The Department of Internal Affairs estimates there are at least 75,000 currently unregistered supplies.

Feedback was sought on which water supplies the NES-DW protections should apply to, and on aligning timeframes with the WSA.

Water supplies the NES-DW should protect

Concerns about the cost of implementation – Many submitters, both supportive of, and opposed to, proposal 3, raised concerns about the extensive resources and funding required by regional councils, iwi/Māori, and water suppliers to apply the NES-DW to all registered water supplies. They noted the large administrative and technical burden on regional councils, as well as the onus on smaller water suppliers (eg, marae or rural households) to engage in RMA matters. A range of stakeholders expressed this view, including local government, environmental groups, primary sector groups, and iwi/Māori.

Feasibility of including small water supplies – Submitters raised concerns about the feasibility of proposal 3, due to the large number of estimated unregistered water supplies. They queried whether it was achievable to align the completion of SWRMA mapping with WSA timeframes.

Many submitters supported the intent of alignment with the WSA, but others considered it unrealistic, with some suggesting a more realistic mapping timeframe would be seven years or more. This concern led to some submitters suggesting a ‘tiered approach’ (ie, prioritising mapping larger supplies first, and then small, unregistered supplies) or allowing a longer timeframe for mapping newly registered supplies. Feasibility concerns were closely linked with cost and resourcing concerns.

> “The requirement to map SWRMAs and then protect water quality for all drinking water supplies regardless of the number of people supplied is inappropriate and unworkable. MfE has estimated the number of small supplies at more than 75,000. Based on this estimate, there may be 4000-5000 suppliers in our region.” – Regional council

Proportionality and flow-on effects – Numerous submitters, including many regional councils, commented on the need for a risk-based approach for small water supplies, (rather than a 'one size fits all' approach), similar to Taumata Arowai's proposed 'Acceptable Solutions' pathway for small supplies, which is proportionate to scale and complexity.

Submitters noted that, without a proportionate approach, there was a risk that the regulatory burdens would stop some small water suppliers from supplying drinking water. They also commented on the effects on rural communities, such as the potential loss of rural accommodation, or households switching to other sources of drinking water that might be a greater health risk (eg, rainwater or tank water sources).

> "We consider that many small water supplies will become impractical to run, and 'consumers' will switch to potentially less safe or less reliable individual options. This could in turn directly disadvantage many whānau in rural areas, and potentially further exacerbate social and economic inequities experienced by Māori." – Iwi/Māori group

> "Because the NES-DW will only apply to supplies serving more than two households, care needs to be taken to avoid perverse outcomes of legislation that is complicated or expensive to implement at small scales. There is a risk with small supplies that the supply will be abandoned in favour of one-household supplies (possibly with increased risk) to avoid complying with new rules." – Regional council

> "This threshold for applying the new NES-DW controls is not reflective of the risk to source water. The requirements of the NES-DW would pose a management and compliance burden on communities and councils that far exceeds the benefits in our view." – Regional council

Exemptions or alternatives for small supplies – Many submitters (including primary sector groups and regional councils) requested an alternative pathway or exemption for small water supplies. Some suggested a simpler protection option for smaller supplies (such as through freshwater farm plans), or an exemption to the regulations for small supplies, based on the risk to their water supply or population.

While many sought alternatives for small supplies, there was no clear consensus on how a small supply should be defined (ie, suggestions ranged from defining small water supplies as those serving less than 100 people to those serving less than five, or by whether the supplier is paid for their water), although a number of submitters proposed water supplies serving less than 25 people. One submitter requested the current NES-DW provisions (excluding supplies serving less than 500 people) be retained.

> "In terms of including new registered supplies in the NES-DW framework, the issue is not their inclusion, but rather the provisions that apply to them and the implications for other activities." – Territorial authority

Support for inclusion of small supplies – In contrast, a number of submitters (across a range of stakeholders) supported the inclusion of all water supplies. A prominent theme emerging from these submissions was that all New Zealanders have a right to safe drinking water, regardless of where they live.

Some submitters mentioned that small communities are likely more at risk from unsafe drinking water and have fewer resources to mitigate the risk. Some iwi/Māori noted health disparities in some Māori communities due to their water supplies not serving more than 500 people, and therefore not covered by the protections under the current NES-DW.

Some feedback (including a joint submission by several environmental groups) suggested extending proposal 3 to all water supplies, including domestic self-supplies.

> "…we strongly support the principle that 'Everyone deserves safe drinking water, whether from a large or small supply.' ... This should imply that everyone deserves access to safe drinking water whether on a registered or unregistered supply, including those on rural household supplies." – Environment group

Other matters

Inconclusive evidence and effective treatment – Concerns were raised about the lack of evidence to support applying the NES-DW proposals to all water supplies (eg, evidence of a risk to small water supplies in rural areas), and the subsequent need for national direction, and whether the benefits were worth the expected costs.

Additional comments suggested further analysis to determine the scale to which the NES-DW should apply. They queried the inclusion of some small water supplies with an effective treatment scheme in place.