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Kia ora,

## **SUBMISSION FOR WATER NEW ZEALAND ON PHASE 2 OF THE NETWORK ENVIRONMENTAL PERFORMANCE MEASURES**

### **INTRODUCTION AND OVERVIEW**

Water New Zealand (“Water NZ”) appreciates the opportunity to provide a submission on the discussion document, Drinking Water Network Environmental Performance.

Water NZ is a national not-for-profit organisation which promotes the sustainable management and development of New Zealand’s three waters (drinking water, wastewater and stormwater).

Water NZ is the country's largest water industry body, providing leadership and support in the water sector through advocacy, collaboration and professional development. Its nearly 3,000 members are drawn from all areas of the water management industry including regional councils and territorial authorities, consultants, suppliers, government agencies, academia and scientists.

Since 2008 Water NZ has co-ordinated the National Performance Review. A voluntary performance assessment of New Zealand’s water supply, wastewater and stormwater services. Over that time 56 of the countries 64 municipal water suppliers have participated, and data definitions have been iteratively refined. Many of the performance measures from the review are reflected in the Network Environmental Performance Measures. We are heartened that sector efforts to establish this knowledge base is being further developed as a component of the regulatory framework.

### **APPROACH TO THIS SUBMISSION**

This submission has been prepared by Water New Zealand staff. Its development has been informed by staff knowledge, feedback from participants in relation to the 2021/22 National Performance Review, and comments shared with Water New Zealand by members who are preparing submissions of their own. The submission has been shared with our membership for comment prior to submission.

## **GENERAL COMMENTS ON THE CONSULTATION**

### **Giving effect to Te Mana o te Wai**

We welcome the links drawn between environmental performance and Te Mana o Te Wai in the introduction. This signals a welcome shift from conventional-hard engineered-approaches to a focus on environmental performance, biculturalism and holistic, integrated, whole of system approaches to water.

After the mention of Te Mana o te Wai, mana whakahaere (stewardship), mātauranga Māori (knowledge) and kaitiakitanga (guardianship) in the introduction of the NEPM, none of these important concepts are reflected in the measures themselves. We acknowledge Taumata Arowai is at the beginning of a journey to establish how to give effect to Te Mana o Te Wai, and developing these measures will not happen over night. In the absence of related measures, we encourage Taumata Arowai to articulate the process it intends to follow to incorporate these concepts into its performance framework over time. Water NZ welcome the opportunity to collaborate with Taumata Arowai and the broader sector in this important undertaking.

### **Integration with the Government's wider policy programmes**

We also support efforts to drive to better environmental outcomes by paying heed of and where appropriate, reflecting broader Government reforms, commitments, and recommendations. For example those set by the He Pou a Rangi, the Climate Change Commission, the Resource Management Act, National Policy Statement of Freshwater Management, all of which have relevance for the environmental performance of water services. Achieving aspirations for our water environment will require a cohesive joined-up government approach.

### **Request once, use thrice**

Although holistic monitoring and reporting is paramount, the measures collected by Taumata Arowai must support and not duplicate the information collected by other agencies. Recognising that other agencies will be requesting similar information from water service providers, it is critical that information is able to be shared across agencies, the whole story is being told, requests aren't duplicated and nothing is falling between the gaps.

For example, much of the financial information proposed to be collected under the heading of "economic sustainability" is the sort of information that the economic regulator will look at. The relationship and potential overlap with the economic regulator's reporting is important to acknowledge and will need clarifying once the economic regulator is established. Reporting against the NEPM will allow for good understanding of public and environmental health and safety risks, compliance and any other trends, and help to build a clear picture of how networks are being managed and funded.

Currently there are many overlaps between the Network Environmental Performance Measures and the Non-financial Performance Measure Rules. The overlap and duplication across these two initiatives wastes time and generates confusion, for water suppliers, the public and other stakeholders. We underscore the importance of Taumata Arowai and Department of Internal Affairs working together to repeal water supply and sewerage and the treatment and disposal of sewage performance measures in the Non-financial Performance Measure Rules that are duplicated by the Network Environmental Performance Measures.

## General notes on other performance measures

We note that some of the measures should be normalised to enable meaningful comparisons and interpretation. For example, energy use would more meaningfully be reported as kWh/m<sup>3</sup> than kWh. We encourage Taumata Arowai to include in the published measures a list of such metrics that will be publicly reported on.

The remainder of this submission addresses specific questions posed in the consultation. Where we have not provided comments, we support raw data collection against proposed performance measures.

## INTRODUCTION AND OVERVIEW

### 10. Do you agree with the year two drinking measures and data points for the outcome environmental and public health is protected?

#### Resource consent compliance

The proposed resource consent measures do not adequately reflect whether water takes are ensuring adequate water is left in water systems to preserve environmental and ecological flows – a key goal for environmental protection.

We recognise the measurement challenges assessing whether this goal has been achieved. Finalising the proposed National Environmental Standard on Ecological Flows and Water levels<sup>1</sup> would be a step forward in addressing this gap.

We recommend Taumata Arowai engage with Ministry for Environment to encourage the completion of this NES, or consider adoption of the National Environmental Standard on Ecological Flows and Water work as part of the Taumata Arowai work plan.

### 11. Do you agree with the year two drinking measures and data points for the outcome services are reliable?

#### System interruptions

We support the introduction of unplanned interruptions as a measure. It is a well-established measure contained within the Non-financial Performance Measure Rules and National Performance Review, and hence should be straightforward for service providers to report.

We note, that some water suppliers consider their to be a direct relationship between planned interruptions, and non-urgent fault attendance times. We suggest there is value in aligning the definition of these measures. The table below illustrates alignment across these measures and suggests changes to definitions in red text to better align definitions.

This also applies to the number of properties that experience an urgent fault for longer than eight hours. While a measure that indicates the number of long duration outages has value, we suggest this could be better aligned with the existing measures, which measure number of interruptions and response times, but not number of affected properties.

If the number of affected properties is deemed important it would make sense to align this with service connections, rather than properties for consistency with other data collection points. To achieve this the interruptions measure could be amended to record total connections affected rather than total events that occurred. If an additional measure was added it would make sense for it to also consider non-urgent fault impacts on properties.

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<sup>1</sup> <https://environment.govt.nz/publications/proposed-national-environmental-standard-on-ecological-flows-and-water-level-discussion-document/2-ecological-flows-and-water-levels-in-the-context-of-environmental-flows-and-the-resource-management-act/#footnote-6>

Interruptions: Measures the number of properties affected by water supply interruptions	Response times: Measures the length of time to attend and resolve faults	Faults for longer than eight hours
<p><b>Planned</b> Total number of planned drinking water network interruptions for maintenance or renewal works, excluding water meter or water restrictor replacements. A network interruption is any event causing a total loss (cessation or outage) of water supply.</p>	<p><b>Median hours to attend/resolve a non-urgent fault</b> A non-urgent fault is any fault that <b>occurs because of planned works</b>. Examples include, reduced pressure of supply, or an aesthetic issue with the water supply if it can be confirmed the water is still safe to drink.</p>	
<p><b>Number of unplanned interruptions</b> <b>The number of unplanned total interruptions to service experienced by properties excluding interruptions caused by third party damage. An unplanned water supply interruption is any event causing a total loss (cessation or outage) of water supply to customers due to an asset failure in the public reticulated network.</b></p>	<p><b>Median hours to attend/resolve an urgent fault</b> An urgent fault is one that directly results in a <b>unplanned</b> complete loss of service for one or more connections. For example, a complete interruption of supply, or provision of water that is not safe or not known to be safe to drink.</p>	<p>Number of properties that experience an urgent fault for longer than eight hours</p> <p><b>Number of unplanned interruptions taking longer than eight hours to resolve</b></p>

12. Do you agree with the year two drinking measures and data points for the outcome resources are used efficiently?

#### Alternative water use

We suggest clarifying that this measure is intended to include all sources of alternative water including stormwater, rainwater, recycled water. Also aligning the measure with the proportion of wastewater reused measure.

For the urban stormwater reuse measure we consider it will be challenging to measure and report on volumes associated with onsite / household level stormwater reuse and an alternative measure may be needed to demonstrate initiatives in this domain.

13. Do you agree with the year two drinking measures and data points for the outcome services are resilient?

#### Disaster response planning and preparedness

We recommend considering whether the proposed measures could be better aligned with the National Resilience Strategy, the proposed Emergency Management Bill and the to the four Rs of emergency management; reduction, readiness, response and recovery.

To avoid duplicate reporting, we recommend Taumata Arowai engage with the National Emergency Management Agency to ensure that the proposed measures meet both agency's needs.

#### Water security

We support the proposed water security performance measures.

An additional performance measure is needed to address future water security. The 2020 National climate change risk assessment for New Zealand identifies potable water supplies (availability and quality) as one of the priority risks. For many water suppliers, climate change and population growth are either already, or likely to affect in the future the ability of water suppliers to maintain existing levels of service into the future.

We strongly support the development of future focused performance measures that encourage future modelling of supply and demand, and the development of associated strategies. OFWATs drought resilience metric provides an international example of such a metric<sup>2</sup>.

We recognise that the development of such a measure for use in New Zealand requires the development of a standardised approach, and capacity building amongst the sector. We encourage Taumata Arowai to consider how they could support this development.

#### Water restrictions

The severity of water restrictions can vary significantly. We suggest adding further granularity to this measure to enable the impact on peoples lives to be more meaningfully measured;

- Number of days sprinkler bans were in place
- Number of days outdoor water use is restricted
- Number of days all outdoor water use is banned

Wellington Water found the definition of properties affected by water restrictions outlined in phase one of the measures (and duplicated in the NPR) to be poorly defined, and suggested refining to remove ambiguity.

#### 14. Do you agree with the year two drinking measures and data points for the outcome services are economically sustainable?

Refer to introductory comment on members views on the role of Taumata Arowai in collecting financial information.

Specific comments on each of the proposed performance metrics are below.

#### Expenditure

Councils are required to disclose their capital expenditure in three categories, provided in the data definition (replacing or renewing assets, building new assets to meet additional demand; and improving service levels).

These categories of expenditure provide important context about whether investment in the network over time is adequate to maintain existing service levels. As no additional information is required for councils to report in these categories, we recommend that this breakdown is required, rather than suggested.

#### Cost allocation

Rather than requiring cost allocation as a separate measure, we recommend that each of the other proposed economic sustainability metrics is reported for water and wastewater separately, to facilitate meaningful interpretation of the supplied information.

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<sup>2</sup> <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Drought-resilience-metric.pdf>

We do not believe it is appropriate to collect financial data on stormwater, until such a time as this is bought into the broader Network Environmental Performance Measure suite.

15. Do you think we have missed any drinking water measures or data that will help us assess the five outcomes identified above?

### **Asset value and depreciation**

Information on forecast expenditure is of little value, if there is no context provided to assess whether levels of investment are prudent. To this end, if information on expenditure is retained, we suggest additional measures that include asset value and annual depreciation are added.

### **Backflow**

One NPR participant measure suggested that the following measures related to backflow would be useful;

- Do councils have an active backflow policy
- Number or percentage of connections that have boundary backflow prevention

We suggest considering if this information would support, or, overlap with requirements related to the Drinking Water Quality Assurance Rules.

## **WASTEWATER MEASURES**

20. Do you agree with the proposed phasing of the wastewater measures over three years?

We agree with the phased approach. We suggest changes are made to greenhouse gas emissions phasing, and resource consent compliance information. These are covered in respective sections.

25. Do you agree with the year one wastewater measures and data points for the outcome environmental and public health is protected?

### **Wastewater network connections**

The network environmental performance measures have adopted definitions related to the number of connections to the network, as opposed to number of properties served.

We support this decision, however note that definitions need to be modified appropriately to reflect impacts on multi-dwelling complexes with a single connection (both for water supply and wastewater definitions).

We also note that the adoption of connections, makes assessing service coverage levels slightly more problematic, as Statistics New Zealand data provides the number of properties in a district which is no longer comparable with the network data. As service coverage is an important metric, this should be considered when deciding if properties or connections are more appropriate metrics to collect in the future.

### **Resource consent compliance**

We support efforts to build an understanding of wastewater treatment plant consent compliance. Variations in wastewater treatment plant consents have had well documented negative environmental and economic consequences<sup>3</sup>.

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<sup>3</sup> <https://www.threewaters.govt.nz/assets/Related/Report-1-National-Stocktake-of-Municipal-WWTps.pdf>

Collecting consent compliance conditions provide an important starting point for this work. Foundations for these questions have been laid in the National Stocktake of Municipal wastewater treatment plants.

Given the starting point providing the work, the large number of plants approaching consent renewals, and the significant time and cost savings that could be achieved through standardised consent conditions, we suggest moving the question on consent conditions and discharge monitoring to year 2 to expediate the development of these standards.

#### Wastewater overflows

We support measures on wastewater overflows, however, note that it is challenging to craft a technically robust definition to distinguish between wet weather and dry weather wastewater overflows. This because it is difficult to determine rainfall thresholds and obtain measurements needed to attribute overflows to wet weather. In addition, rain may have occurred in a catchment, but overflow resulted from a power failure.

To overcome these difficulties, we propose the following measures are replaced:

- Number dry weather wastewater overflows
- Number overflows caused by blockages
- Number overflows caused by plant failures
- Number wet weather overflows from the wastewater network
- Number overflows from combined stormwater and wastewater networks

With the below measures which are attributable to the cause of the overflow:

- Number of overflows caused by blockages
- Number overflows caused by plant failures
- Number of overflows caused by capacity exceedance in the wastewater network
- Number of overflows caused by capacity exceedance in combined stormwater and wastewater networks

#### Trade waste: Trade waste bylaw Individual trade waste consents

Proposed Water Service Entities will not have bylaw making abilities. Revised language is likely to be required to reflect trade waste permits, or instruments, used by the new entities.

26. Do you agree with the year two wastewater measures and data points for the outcome environmental and public health is protected?

#### Fish ingress

We do not agree that this a relevant performance measure for wastewater networks.

#### Environmental monitoring: details of monitoring programmes undertaken to assess environmental impact (contaminants, frequency of samples).

The water quality classes in Schedule 3 of the Resource Management Act may provide a sensible starting point for refining questions on environmental monitoring e.g., temperature, pH change, concentration of dissolved oxygen.

28. Do you agree with the year one wastewater measures and data points for the outcome services are reliable?

Fault attendance and resolution: Median hours to attend to an urgent fault, Median hours to resolve an urgent fault, and Median hours to resolve a non-urgent fault

Both the DIA non-financial performance measure rules, and the National Performance Review have not previously required wastewater faults to be reported as urgent or non-urgent. This will require a definition of urgent and non-urgent to be developed that is relevant for wastewater systems and for councils to reconfigure data collection systems.

Unless it becomes clear in crafting what would distinguish these two categories of faults in developing a definition, we recommend removing the non-urgent and urgent fault categories.

Alternatively, if there is a clear reason to distinguish between urgent and non-urgent faults, we suggest that the distinction is not required to be reported on until 2024. The significant additional effort for councils to reconfigure their systems prior to water service entities formation is unlikely to be warranted.

We additionally suggest if a distinction is made between the time taken to resolve urgent and non-urgent faults, it would also make sense to have a performance measure that requires reporting of median hours to attend a non-urgent fault.

### System interruptions

Unplanned interruptions may also disrupt sewage system operation. For example, emergency works. We suggest two additional performance measure be added for unplanned interruptions:

- Unplanned interruptions caused by wastewater blockages.  
This measure would provide; a check point on the overflow measure because very small overflows that are contained on land are often interpreted as not being overflows, the effectiveness of measures to prevent inappropriate materials entering the sewer, and an indication of the effectiveness of proactive monitoring and maintenance response.
- Unplanned interruptions owing to other causes

### Asset condition

Average age of water pipelines should be amended to average age of wastewater pipelines.

30. Do you agree with the year three wastewater measures and data points for the outcome services are reliable?

### Capacity to accommodate growth

This measure links with proposals for forward planning of infrastructure under the proposed Spatial Planning Act. There may be opportunities to link this performance measure with deliverables associated with the act in the future.

31. Do you agree with the year one wastewater measures and data points for the outcome resources are used efficiently?

### Process emissions

We agree that reporting on greenhouse gas emissions from wastewater treatment is an important performance measures. However, while process emissions are included in the current National Performance Review, most service providers are not able to provide data.

Understanding of process emissions is currently low and this is an emerging area of science. We suggest moving this measure to year 2. We recommend that the definition adopts



accounting guidelines outlined in the *Water New Zealand Good Practice Guide, Carbon accounting guidelines for wastewater treatment: CH<sub>4</sub> and N<sub>2</sub>O*<sup>4</sup> be referenced in definitions.

32. Do you agree with the year two wastewater measures and data points for the outcome resources are used efficiently?

#### Wastewater reuse: Volume of wastewater applied to land

Wastewater is often applied to land as a disposal route. Listing it against wastewater reuse is misleading in this regard. We suggest associating this measure with the wastewater treatment performance measure category instead.

#### Wastewater reuse: Proportion of wastewater beneficially reused

Suggest amending to Volume of wastewater beneficially reused. Proportions may vary year on year based on discharge volumes. This can be overcome by reporting total reuse volume.

33. Do you agree with the year three wastewater measures and data points for the outcome resources are used efficiently?

#### Greenhouse gas emissions

Operational greenhouse gas emissions are commonly reported. While distinguishing water related emissions will be challenging for councils who share buildings etc with other operational areas, these emissions should be straight forward for water service entities to report, and accordingly could be moved to year 2 reporting.

We suggest an additional measure be added on forecast operational and capital emissions be added to years two or three. This aligns with the approach outlined in the industries greenhouse gas reduction roadmap, *Navigating to net zero*<sup>5</sup>.

34. Do you agree with the year one wastewater measures and data points for the outcome services are resilient?

#### Critical assets

Yes. Critical infrastructure is well-understood across all infrastructure asset managers, whether public or private. The International Infrastructure Management Manual (IIMM) outlines the process for identifying and managing critical assets.

This process is reflected in council, and other entities, asset management plans. We recommend the criteria in the proposed measures is consistent with the IIMM approach, and consistent with accepted asset management practice.

35. Do you agree with the year two wastewater measures and data points for the outcome services are resilient?

#### Return to service post disaster

We recommend this measure is aligned with the National Resilience Strategy and the Emergency Management Bill. The Emergency Management Bill may propose prescribed/mandated service levels for during and after an event.

All Lifeline Utilities, including water services, have existing service levels and performance measures, including emergency service provision statements, that they report against

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<sup>4</sup> [https://www.waternz.org.nz/Attachment?Action=Download&Attachment\\_id=4872](https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4872)

<sup>5</sup> <https://www.waternz.org.nz/climatechange>

annually and in long-term and asset management plans. To avoid duplicate reporting, we recommend Taumata Arowai review existing water service provider emergency service provision statement and collaborate with the National Emergency Management Agency to ensure proposed measures meet all agencies needs.

36. Do you agree with the year three wastewater measures and data points for the outcome services are resilient?

#### Climate change adaptation

We support the introduction of performance measures on climate adaptation. A written a simple yes/no could be included in year one with more sophisticated measures added over time. We note this is an area where further guidance and capability building is required to develop metrics that will enable progress to be tracked over time.

37. Do you agree with the year two wastewater measures and data points for the outcome services are economically sustainable?

See responses to question 14 on economically sustainable measures for water services. The same comments apply here.

38. Do you think we have missed any wastewater measures or data that will help us assess the five outcomes identified above?

As per response to question 15 - asset value and annual depreciation.

39. How do you think qualitative data can be used to build a richer picture of network environmental performance?

#### Qualitative benchmarking processes

Qualitative data provides important information on underlying processes, and utility specific characteristics that can not be captured in quantitative measures alone. There are several examples of qualitative approaches to understanding water service provision;

- The International Infrastructure Management Manual (IIMM), Asset Management Maturity Index
- WSAA Asset Management Customer Value benchmarking
- LGNZ CouncilMARK Performance Rating
- Water Sensitive Cities Index

It is Water New Zealand's intention to engage with the water sector to assess which forms of qualitative and/or other benchmarking would support the sector as a compliment to the Network Environmental Performance Measures.

#### Emergency management

Emergency management preparedness is reflected in the return to service post disaster measure. However other key components of emergency preparedness are best reflected in qualitative information including;

- Multi agency co-ordination (for example with other lifelines utilities, local CDEM Group, NZ Police, Kiwirail, FENZ, contractors, marae, and others)
- Emergency plans and activation delivery framework
- Involvement in the development of local CDEM Group Plans
- A coordinated and clear hierarchy, clarified roles and responsibilities- and relationships with trained community volunteers with local knowledge and experience.

## Climate change adaptation

There is a need to develop industry specific guidance and associated performance measures. Water New Zealand will welcome collaboration to develop this over time.

41. Do you want to be contacted when targeted consultation on the drafting of the measures and data points begins?

Yes

42. Do you want to be contacted when we begin consultation on the Te Ao Māori measures?

Yes

44. If you want to provide any additional feedback on any aspect of the environmental performance measures, please provide this here.

This year data collected in the 2021/22 National Performance Review was modified to align with the new measures announced in the first phase of water supply related Network Performance Measures. Based on this experience we have the following feedback:

- **Median residential water consumption (Litres/connection/day)**  
This measure would be more accurately called Average residential water consumption (Litres/connection/day). This is because most water suppliers do not have sufficient metering, or data processing to have a median available. Using the word average would allow for either calculated mean or a median consumption.
- **Drinking water abstraction points**  
Suggest clarifying in the definition that emergency backups should be included as a separate abstraction point. Also, clarify that adjacent bores should be counted as individual abstraction points (e.g. two bores next to each other, would count as two abstraction points).
- **Drinking water networks**  
Small supplies such as campgrounds have not always been considered as water networks by suppliers, but are now assessed for compliance under the Water Service Act. Several of the network performance measures, for example median residential water consumption, and water loss are not meaningful for such supplies. Applying a minimum size threshold (for example 100 connections) for data required to be reported at an individual network level is suggested to overcome this.

If you have any questions in relation to this submission please contact Lesley Smith, Acting Technical Manager.

Ngā mihi nui,

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