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Tēnā koutou katoa,

Submission from the Manawatū District Council on the proposed wastewater environmental performance standards

The Manawatū District Council (MDC) thanks the Water Services Authority – Taumata Arowai (the Authority) for the opportunity to provide feedback on the proposed wastewater environmental performance standards ('wastewater standards') under section 138 of the Water Services Act 2021.

Overall, MDC is very supportive of the proposed wastewater environmental performance standards. The proposed standards will increase certainty, significantly reduce consenting costs, speed up the re-consenting process, and improve effluent quality. As a result, council spending will be redirected to improving environmental outcomes. In addition to these benefits, creating consistency, benchmarking, and simplifying conditions will significantly that will provide certainty and consistency across New Zealand.

Our primary concern with the current drafting of the standards is, that by dealing with land and water discharges separately, the proposals do not fit well with a dual discharge regime like MDC operates at the Manawatū Wastewater Treatment Plant. MDC is concerned that if the standards are not amended to provide greater clarity and certainty for dual discharge regimes, MDC may be forced down an RMA reconsenting process rather than benefiting from the proposed standards.

MDC has successfully operated a dual discharge regime at the Manawatū Wastewater Treatment Plant since 2018. MDC has the knowledge and expertise to assist the Water Services Authority to ensure that the standards enable dual discharge out of recognition of the associated cultural and environmental benefits. Our submission provides an alternative methodology for calculating the dilution ratio, that is based on real data rather than assumptions and forecasts for future discharges.

Our other key concern is the exclusions that relate to nitrogen and phosphorus when discharging to a hard bottomed waterway. As outlined below, when periphyton levels are not exceeding the national guidelines, we do not believe there is benefit in excluding these discharges as this runs contrary to the intent of achieving national consistency.

Introduction

The Manawatū District Council (MDC) collects, treats and disposes of wastewater, including domestic, commercial and industrial waste. Council maintains reticulated wastewater systems in Feilding, Awahuri, Cheltenham, Halcombe, Kimbolton, Rongotea, Sanson and Hīmatangi Beach.

The Manawatū Wastewater Treatment Plant in Feilding ('Manawatū WWTP') is dual discharge system. Our 10-year resource consent to discharge treated wastewater from the Manawatū WWTP to the Ōroua River expires in November 2026. For the Manawatū District Council (MDC) to be able to lawfully continue the current discharge in accordance with section 124 of the Resource Management Act 1991 (RMA) it will need to either:

1. Lodge its consent application for the proposal by 24 May 2026 (and have the application accepted as complete by Horizons); or
2. Make its application by 24 August 2026 (and have it accepted as complete) if it obtains the approval of Horizons to continue to operate.

The Wastewater Centralisation Project transports wastewater from the villages of Sanson (including the Royal New Zealand Airforce Base Ohakea), Rongotea and Halcombe to the Manawatū WWTP through a network of pipes and pump stations. Once completed, this project will result in over 100km of waterways being free of any treated wastewater discharge, and enables MDC to treat that wastewater to a higher quality than could be achieved in smaller wastewater treatment plants across the District.

Except for the Awahuri Wastewater Treatment Plant, all other small wastewater treatment plants are operating on existing use rights.

Current issues with Horizons One Plan

The 'One Plan' is the Regional Policy Statement, Regional Plan and Coastal Plan for the Horizons Region.

Policy LF-FW-P14 (sewage discharges) of the Regional Policy Statement states that:

(1) before entering a surface water body all new discharges of treated sewage must:

i. be applied onto or into land, or

ii. flow overland, or

iii. pass through an alternative system that mitigates the adverse effects on the mauri of the receiving water body, and

(2) all existing direct discharges of treated sewage into a surface water body must change to a treatment system described under (1) by the year 2020 or on renewal of an existing consent, whichever is the earlier date.

The discharge of treated wastewater from the Manawatū WWTP to land, or flow overland is therefore required by LF-FW-P14. However, there is no consenting pathway in the One Plan for municipal wastewater treatment plant discharges. Discharges of contaminants to land or water are therefore currently assessed by the One Plan as a discretionary activity in accordance with default discharge rule LF-LW-R38. There is also a gap in that the intensive farming provisions in the One Plan do not capture activities where treated human wastewater is being irrigated to land. MDC also considers that the One Plan policies and rules do not give

adequate recognition to the benefits that the irrigation of treated wastewater to land makes to surface water quality.

Complexity and issues with current consent conditions

Operation and discharges from the Manawatū WWTP are authorised by discharge permits 106948 (now ATH-2013015214.01) and 106950, which commenced on 24 November 2016 and expire in November 2026 and 2051 respectively. Conditions 4 and 35 of discharge permit ATH-2013015214.01 require the establishment of an independent expert Panel ('the Panel') to review data, assess the effects of the Manawatū WWTP on the Ōroua River and provide recommendations relating to monitoring and discharge regime management. In addition, the Panel was tasked with providing an assessment of current attribute state against National Objectives Framework (NOF) attributes in the National Policy Statement – Freshwater Management 2020 ('NPS-FM'). The Stage 2 report from the Panel was issued on 20 December 2024.

With respect to the discharge regime, the Panel agreed that *"the implementation of the land irrigation component has had a significant positive effect on reducing in-river nutrient loads and concentrations and the risk of excessive periphyton growth during the irrigation season."* The Panel recommended (Management recommendation 3) a simplification of the consent conditions, stating that:

> *"Assessment of compliance with conditions is rendered particularly complex due to the complexity and interaction of various consent conditions. Consideration should be given to a simpler condition framework, although the Panel notes this recommendation may only be able to be considered at the time of re-consenting of the Manawatū WWTP. Examples include Condition 21 (which sets different effluent quality standards depending on annual median discharge flow thresholds) and Condition 9 (which sets minimum dilution ratios under various combinations of river flow and effluent storage conditions)."*

MDC views the proposed wastewater performance standards as an opportunity to simplify the re-consenting of the Manawatū WWTP. Providing MDC can demonstrate that discharges will fit within the parameters of the standards, we expect that we will be able to obtain a 35-year consent (an improvement on our current 10-year discharge to water consent), with conditions and reporting requirements that are clear and consistent with other wastewater treatment plants of a similar size and complexity.

General feedback

MDC is generally supportive of the proposed wastewater performance standards. In particular, we support:

- 'End of pipe' monitoring;
- Preventing decision-makers from specifying more stringent limits than those contained in the standards;
- Having limits reflective of receiving environment dilution potential;
- The intent to streamline the consenting process by classifying certain activities, such as bypasses and pump station overflows, as controlled activities;

- The idea of limiting existing use rights to two years, subject to improvements outlined in our submission below;
- 35-year resource consents;
- Use of standards conditions to increase consistency and enable better comparisons to be made across wastewater treatment plants; and
- Grading of biosolids, with corresponding consenting pathways.

Overall, we consider the standards will lead to cost savings by minimising those matters that are subject to regional council discretion. The standards also give wastewater treatment plant operators more clarity and certainty around what treatment standard are required and how performance will be monitored.

However, MDC is concerned that the wastewater performance standards, as currently drafted, will not achieve the level of national consistency nor the projected cost savings and efficiency gains sought.

The rest of this letter focusses on MDC's primary concerns with the proposed standards. Additional matters are included in the attachments to this submission.

Unintended consequences of the periphyton exclusion

Horizons Regional Council has 42 wastewater discharges across the region. Of these, 29 are reliant on discharging to a river (69%). Based on the current wording 100% of these river discharges would be excluded from the proposed standards, for the following reasons:

- 18 excluded due to periphyton exclusion for hard-bottomed waterways as nitrogen and phosphorous are priority contaminants in wastewater discharge consenting.
- 10 excluded due to no current flow site (Nine of these would have a population of 500 or less so considered small)
- 1 excluded as it discharges to an ephemeral waterway (Marton)

MDC estimates that based on the current wording of the standards, 72% of all discharges (including discharges to river) in the Horizons Region will be excluded. If the standards were amended to remove the periphyton exclusion, MDC anticipates that this exclusion would reduce to 16%. The remaining 16% of the sites relate to small discharges from schemes that have less than 500 people and are likely to be captured by the small plant standards. If the proposed standards intend to create consistency the exclusion of hard bottomed or rocky rivers need to be removed. MDC does not support the setting of treatment requirements on the basis of a site-specific risk assessment will mean greater variability in requirements and conditions.

Due to the high percentage of sites that will be excluded under the current wording of the standards, the approach to wastewater consenting will continue to be inconsistent. Given that the standards are intended to create consistency, improved ability to benchmark, and reduce consent processing costs, this is a fundamental flaw in the proposed standards.

Decisions sought:

1. MDC recommends that if a discharge to a hard bottomed or rocky waterways is not causing that waterway to drop below the national bottom line for chlorophyll a, then those plants should be included in the discharge to water standard.

Concerns with how the dilution ratio is calculated

Rather than having a dilution ratio based on predicated discharges, plant operators should be able to specify the ratio they will operate under, focussing the standards on actual effects.

The proposed methodology to calculate the dilution ratio does not work well for discharges from small wastewater treatment plants or for dual discharge systems. The proposed methodology for calculating the dilution ratio that is outlined in the discussion document is as follows:

Predicted median discharge rate in 35 years (l/s) = D

Current 7MALF (l/s) = R

Dilution Ratio = (D + R) / D

The seven day mean annual low flow (7MALF) is calculated by having a rolling average over the average daily flow and selecting the lowest value for each year. Once this is calculated the average is taken across all years to determine the 7MALF. Based on an internal assessment for the Oroua River flows are expected to be above the 7MALF 98% of the time. This methodology bases treatment requirements on the worst case scenario and is therefore unnecessarily conservative (lowest likely flow vs future predicted discharge).

Multiple assumptions are required to determine the predicted median discharge volume in 35 years' time and then this assumed value is compared against the calculated 7MALF. This will not create a consistent approach as every operator will make different assumptions. In preparation for future reconsenting for the Manawatū WWTP MDC has predicted what the likely median discharge volume could be in 35 years under different scenarios. As a result of these assessments, there is a 111% variation between the different scenarios. This level of variation will create unnecessary debate with Regional Council experts and consequently increased costs to the ratepayers of the Manawatu district.

Not withstanding the need to make assumptions to determine the dilution ratio this methodology does not account for dual discharges where river discharges can be avoided during low flow conditions.

Linking the dilution ratio to the 7MALF will result in the exclusion of approximately 34.5% of river discharges from treatment plants (and 24% of all discharges) in the Horizons region due to a lack of river monitoring data

There is a lack of detail around how the small wastewater discharges will be managed via the standards. Flow monitoring sites are primarily installed for flood monitoring purposes, and so are generally located on main channels of rivers and streams. As the majority of discharges from small (village) wastewater treatment plants are into tributaries without flow monitoring data, the 7-day MALF cannot be calculated for these receiving environments.

The Manawatū WWTP in Feilding is the only treatment plant in the Manawatū District where the 7-day MALF can be calculated. For other treatment plants to be captured by the wastewater performance standards, they would have to be piped to another receiving environment.

MDC is concerned that unless an alternative methodology for calculating the dilution ratio is developed that does not rely on the 7MALF, the lack of river monitoring data may result in

the exclusion of the majority of discharges from small wastewater treatment plants. This will lead to increased cost and reduced consistency.

The methodology for calculating the dilution ratio assumes that there are no alternative discharge methods and does not take into account the benefits of a dual discharge regime on the receiving environment

MDC has calculated what the maximum predicted median discharge volume for the Manawatū WWTP in Feilding might be in 35 years times based on different scenarios. As there are multiple variables that can influence river discharge volumes there is a degree of conservativeness and uncertainty around these outputs. Notwithstanding this level of uncertainty, the calculated dilution ratio can be within or below the low dilution ratio limits purely based on which modelled output is adopted.

The standards need to be flexible enough to enable treatment plants to operate a dual discharge regime that minimises discharges to water during low-flow periods. If MDC excludes the low flow data for that period of time when discharges from the plant are to land (i.e. over summer), this increases the dilution ratio to fit well within the "low" dilution ratio. This would be to MDC's advantage, as well as resulting in improved environmental and cultural outcomes through encouraging dual discharge regimes and preventing river discharges where possible.

Given the uncertainty around predicting discharge volumes in the future, it is recommended that operators should have to specify the dilution ratio that they are going to operate under and demonstrate that 90% of the days over a five year period are within that range. This would shift the standards to focus on actual effects rather than predicted effects. The significant associated costs of improving effluent quality will motivate operators to stay within the specified dilution ratio, which should prevent the need for compliance intervention.

The standards, as drafted, do not adequately recognise the fact that plant operators have access to continuous data that enables real-time adjustments to be made to the discharge regime

Real-time adjustments to the discharge regime can ensure that a particular dilution ratio is achieved. Adjustments may involve utilising storage and/or alternative discharge options, such as discharges to land.

Enabling Councils to exclude flow data from periods where they are not discharging to water will by default encourage them to go to land where possible, and better acknowledges that discharges to water will coincide with times when river flows will be naturally higher.

MDC wishes to table two alternatives to the calculation of the dilution ratio that are preferred to the current methodology for calculating the dilution ratio for dual discharge systems

Option 1 – live tracking of the dilution ratio (our preferred option)

Plant operators would track achievement of the dilution ratio by undertaking live daily ratio assessments. The methodology for calculating the dilution ratio using the average discharge rate over the day (rather than the predicted median discharge in 35 years) and the average actual flow rate in the receiving environment (rather than the 7MALF). This would give a daily dilution ratio. Given that the proposed standard uses the median predicted volume to predict the dilution ratio, there is an expectation that the dilution ratio might not be achieved all of the time. In line with this, MDC recommends that there should be an exceedance allowance,

ie the 10th percentile over a five year rolling period shall exceed the specified dilution ratio that the operators have specified.

The benefits of this option include:

- Dilution ratio specified
- Control discharge to achieve specified ratio based on flow data.
- Assumptions are not required
- Caters for cyclic weather patterns.
- Encourages operators to prevent or reduce river discharges during low flow conditions to achieve the standard.
- Does not require a 7MALF or an adjusted 7MALF to be calculated.
- Aligns with the current methodology by requiring the specified dilution ratio to be achieved majority of the time (90%)
- Assessment against dilution requirements can be close to continuous as additional calculation are not required.

Option 2 – Calculating the Dilution Ratio using actual data

Proposed alternative methodology for calculating the dilution ratio:

Actual median discharge rate over five years = D1

Current 7MALF (excluding low flow periods when not discharging) = R1

Dilution Ratio = (D1 + R1) / D1

The benefits of this alternative methodology are as follows:

- Accounts for seasonality (basing median on five years of actual data)
- Basis dilution ratio on actual data not predicted or historical data sets
- Adjusts the 7MALF to when an actual discharge is occurring,
- Encourages operators to avoid discharging to waterways during low flow conditions
- Removes uncertainty around predicting median discharge volumes in the future
- Consistent approach as the calculation is not based on assumptions

Regional Councils can publish 7MALF data for specific flow sites but operators would need to calculate the adjusted 7MALF when a dual discharge is used. To prevent this number changing constantly the 7MALF should be re-set every five years.

Decisions sought:

2. That the Authority clarify how small wastewater discharges are to be managed via the standards.
3. That the Authority amend the standards to include one or both of the proposed alternative methodologies (live tracking of the dilution ration and/or calculating the dilution ratio using actual data) for the calculation of the dilution ratio.

Centralised processing

MDC recommends that the Authority consider processing those consents subject to the wastewater performance standards at a national level. This would increase consistency and reduce costs. Given the complexities with wastewater consents, regional councils generally rely on consultants with the appropriate expertise when processing these applications. This adds significantly to the cost and time of processing these applications. If a dedicated national team was established with the necessary in-house expertise, this would reduce the need to involve consultants, with significant time and cost savings. Regional councils could still have an opportunity to provide feedback on applications to the centralised processing team.

For clarity, MDC also recommends that the Authority publish a list of those matters that regional councils have discretion over, with corresponding limits for the different receiving environments. This should be a live list that is updated over time as new information and standards become available. This would enable consistency and clarity on requirements that apply across different receiving environments (i.e. low, moderate and high dilution).

MDC also asks that a standard set of conditions be developed, both for consents issued in accordance with the standards, and for those matters that fall within the remit of regional council discretion. Publishing a set of standard conditions would enable national consistency and direct comparisons to be made.

Decision sought:

1. To create consistency and remove the need to duplicate expertise across multiple councils, that wastewater consents be processed by a national team.
2. That the Authority publish standards conditions that must be used on consents issued in accordance with the standards.
3. That the Authority limit the additional controls that a regional council may place on discharges by publishing a list of additional parameters (such as metals) in a table (like that on page 23 of the discussion document).

Attachments

There are three attachments to this submission. Table 1 sets out MDC's submission points and decisions sought. Attachment 2 sets out MDC's responses to the questions contained in the discussion document. The third attachment outlines how MDC is currently operating its dual discharge to minimise discharges to the Ōroua River during low flow periods. The outcome of which is to manage periphyton growth and effects on the aquatic environment downstream of the Manawatū Wastewater Treatment Plant river discharge, to achieve the NPS-Freshwater chlorophyl a requirements.

MDC welcomes further discussions with the Water Services Authority – Taumata Arowai with respect to our submission. In particular, we are keen to share our knowledge and expertise in relation to dual discharge regimes, and work with the Authority in developing robust standards that create consistency and are in line with cultural and environmental outcomes.

Yours sincerely

Helen Worboys, JP

Mayor

Section	Submission point summary statement	Discussion	Decision sought
General feedback about how the wastewater standards will be implemented			
2-year existing use rights	Granting an automatic two-year extension to consents that expire within two years of the wastewater standards coming into effect will create a bottleneck that will result in processing delays. The extension should be two years from the expiry date of the consent.	MDC notes that given that many Councils have wastewater treatment plant consents that will expire in the first two years following implementation of the wastewater standards, the Local Government (Water Services) Bill proposes an automatic two-year extension of these consents. An extension to consent expiry dates is sensible to allow Councils time to demonstrate that they are in line with the proposed standards. However, MDC is concerned that if this two year extension applies from when the Bill commences it will create a bottle neck, with multiple applications being lodged with regional councils at the same time. The could result in resourcing issues at regional councils and potential delays in processing. For example, MDC is preparing to lodge its application to re-consent discharges from the Manawatū Wastewater Treatment Plant in March 2026 (ahead of a November 2026 expiry). This is only approximately 4 months after the standards are scheduled to be confirmed. MDC recommends that to avoid bottlenecks, the expiry date for our consent be extended to November 2028, rather than November 2027.	• That the Authority recommend to the Finance and Expenditure Select Committee who are considering submissions on the Local Government (Water Services) Bill (Government Bill) that the expiry date for wastewater treatment plant consents be staggered by adding two years to their current expiry date, rather than two years from the commencement of the Bill.
	A two-year limit on existing use rights will not be sufficient if an application is notified and/or subject to appeals	MDC is also concerned that the two year extension to expiry dates will be insufficient in the event that an application is publicly notified and subject to appeals. MDC therefore recommends that any application that complies with the standard should be treated as a non-notified, controlled activity. This controlled activity status should also be extended to those matters relating to the discharge that sit outside of the standards.	• That any consent application that meets the standards be treated as a non-notified controlled activity. This status should extend to those matters relating to the discharge that sit outside of the standards.
	Specifying cultural requirements for wastewater treatment plant discharges to water will help to streamline the consenting process	MDC recommends that consideration be given to specifying cultural requirements, for wastewater treatment plant discharges to water, to assist with streamline the consenting process. There should be a consenting pathway for those applications that meet these cultural requirements, to expediate processing. This should not take away the requirement to undertake genuine engagement with iwi and hapū. However, there needs to be flexibility in what form 'approval' from iwi and hapū can take, to avoid substantial delays in processing.	• That the Authority specify cultural requirements for wastewater treatment plant discharges to water, to assist in streamlining consenting requirements.
Benchmarking	Existing discharge consents that comply with the standards should be replaced with the standard conditions for their remaining life.	There are some existing resource consents that have 20+ years before expiry. MDC recommends that where those discharges meet the required standard, the existing consent conditions should be replaced with the standard conditions for consents issued under the standards, without the need to reapply. MDC estimates that if this benchmarking does not occur, the	• That existing discharge consents that comply with the standards have their conditions replaced by the standard conditions, without the need to reapply.

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		standards will apply to less than 21% of wastewater treatment plants, given the number of treatment plants with expired consents that are automatically excluded from the standards. If this change is not made, there will be considerable delays before the standards will apply to all treatment plant discharges. This will impact on the ability to benchmark effectively.	
Calculating the Median Discharge Volume for 35-year consents	Median discharge volumes should be averaged over a period of five to ten years to enable buffering of climate variations between years	The proposal for 35-year resource consents is supported and considered appropriate given the level of investment required. However, MDC considers that the median discharge volume should not be based on a single year, given natural climatic variations between years. For example, discharge volumes vary considerably between in el niño and la niña cycles. MDC is concerned that having one particularly wet year could impact on how our plant fits in the standards. MDC recommends that the median discharge volume be averaged over a period of five to ten years to enable buffering of climate variations between years.	• That median discharge volumes for 35 year consents be averaged over a period of five to ten years to enable buffering of climate variations between years
	The median discharge volume for the consent should be the actual five or ten year median, reviewed and adjusted ten-yearly as need arises	Multiple variables are involved in calculating potential discharge volumes at the end of the consent (i.e. in 35-years time). Rather than basing the consent of forecast median discharge volumes, MDC suggests that the median be based on the actual five or ten year median. A ten year review could be required by conditions of consent that enable the median discharge volumes provided for to be adjusted over time as need arises.	• That rather than forecasting the median discharge volume expected at the end of the consent term, the median discharge volume for consents be based on the actual discharge volume, averaged over a period of five or ten years, and adjusted ten-yearly via a review clause in the consent.
How factors such as climate change should be addressed when considering a 35-year consent term	Factors that have a high level of uncertainty, such as population growth and the impacts of climate change should be managed through review conditions within 35-year consents Forecasting may lead to underdeveloped systems with pressure on capital.	There is too much uncertainty around the effects of climate change due to the multiple variables involved, and the effects will differ in different parts of the country. Rather than taking a conservative approach that tries to anticipate climate change impacts, MDC considers it preferable to work with real data and to use review conditions to make adjustments to the consent, if required. Similarly, there are many factors that contribute to changes in population, which makes forecasting this change over a 35-year period uncertain. MDC recommends that discharge consents specify the maximum median discharge volume that can be managed by the wastewater treatment plant, or the minimum dilution requirement. As wastewater volumes are continually monitored, this provides greater certainty for plant operators as incentivising the work of plant operators to reduce wastewater	• That 35-year consents include review conditions to enable them to be responsive to uncertainty, such as the impacts of climate change.

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		volumes through I&I reduction and network maintenance to stay within the standards.	
Community Preferences in consenting arrangements for wastewater treatment plants	It should not be mandatory for community feedback to be reflected in the final design of a wastewater treatment plant.	Applicants should consider the preferences of the community when designing and consenting wastewater treatment plants and networks. However, given that different communities of interest have different preferences that may not align, it is unlikely to be possible to develop a final option that is preferred by all. Therefore, it should not be mandatory for the application to be reflective of all community preferences.	• That community preference be a relevant factor to consider when an application is made for a new wastewater treatment plant and the reconsenting of an existing WWTP, but that is not mandatory for these preferences to be reflected in the final design.
Proposed approach for the discharge to water environmental performance standards			
Calculating the Dilution Ratio	Rather than the calculation of the dilution ratio being based on volume, it should be based on the discharge rate and flow, with the units changed to litres per second (l/s or m^3/s))	MDC understand that the proposal is to specify seven categories of receiving environment in the standard, based on dilution and type of receiving environment. In calculating the dilution ratio, the volume is the largest predicted annual median for discharge volume, across the duration of the consent (m^3/day) and the flow is the average of the lowest 7 days average flow across a year (m^3/day). Flow and discharge in the river is typically described as a rate not a volume. Consider changing the wording to (discharge rate + flow) /discharge rate and changing the units to a rate (l/s) if the intent is to calculate how much water is available to dilute a resultant discharge. Rather than an instantaneous dilution calculation the calculation should be based on average values as flow sites are not typically adjacent to discharge points and therefore there is a separation between data points.	• That references to “volume” in the calculation of the dilution ratio be replaced with the discharge rate (expressed in terms of litres per second (l/s)). • The dilution calculation is based on average daily discharge rate and average daily river flow rate
	If the 7MALF is to be retained (note MDC preference is to use actual data to remove inconsistencies) Regional Councils should be required to publish the 7 day mean annual low flow data every five to ten years to give operators more certainty	Regional Councils hold flow information for those waterways that they monitor. MDC is concerned that if operators have to review the dilution ratio every year, this creates a moving target. This is especially relevant where there is a small data set and for those treatment plants with dilution ratios that sit very close to threshold values. Regional councils should be required to publish the 7MALF values every five to ten years to ensure there is a level of confidence for operators.	• That regional councils be required to publish the 7MALF values every five to ten years to provide certainty for wastewater treatment plant operators.
Parameters covered by the discharge to water standards	MDC supports ‘end of pipe’ monitoring for all contaminants covered in the proposed standard as this removes doubt and will simplify enforcement	Council is in general support of the end of pipe effluent standards as they provide greater certainty to operators as the monitoring point is within their realm of control. MDC considers that ‘end of pipe’ monitoring is a step in the right direction to create consistency, transparency and minimise re-consenting costs.	• That all parameters covered by the proposed standards involve ‘at the pipe’ monitoring, including any future parameters.

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		Any parameters added to the proposed standards in the future should also relate to end of pipe standards for consistency with current limits.	
	Pre-wetlands sampling points must be specified so that samples are not affected by E.coli from other natural sources, such as birdlife and wildlife, that enter the discharge from within the wetland	Natural wetlands attract birdlife and wildlife and contribute to biodiversity and environmental objectives. In addition, discharges to wetlands are generally preferred over direct discharges to water from a cultural perspective. The presence of birdlife and wildlife within wetland systems can result in increased E.coli levels. My measuring E.coli levels pre-wetland, the standards will not be penalising plant operators for any E.coli that is introduced from within wetland environments by natural sources.	• Where wetlands are incorporated into a discharge regime, the effluent sampling should be from the inlet and outlet of the wetland so any spikes in E.coli due to natural sources can be excluded.
Contaminants not covered by the proposed discharge to water standard	A separate table should be developed that sets out those parameters that regional councils are able to consider when evaluating those matters that sit outside of the discharge to water standards. These parameters should use the 90% or median trigger threshold, with the dilution approach used to specify end of pipe standards.	MDC recommends having a table that sits outside the proposed standards to get consistency for different discharge options. If the effluent standards are based on the ANZECC guidelines the 90% or 95% threshold should be used to develop an appropriate effluent standard for the different dilution scenarios, The dilution approach should be used to specify end of pipe standards (i.e. if a limit for aluminium is specified for a low dilution environment, the end of pipe limit should be 0.55g/m^3 (55mg/m^3 x 10). This would create a consistent approach by: - identifying the potential additional parameters; and - ensuring if those additional controls are utilised there is consistency in relation to the specified limits. If this does not occur there will be a wide range of limits both at the end of pipe and in the receiving environment and as a result it will be difficult to make comparisons.	• That a second table is developed that sits outside parameters that are in the standards. The second table is to create consistency if additional controls are deemed appropriate. • The second table should provide some guidance for when the additional parameters should be specified.
	The reference to “cumulative effects of contaminants from other sources” within the list of standards that are not covered by the standards appears to contradict the requirement that conditions not require a higher level of treatment than the standards specify	On one hand the standards state that conditions can't require a higher level of treatment for the key parameters but then excludes cumulative effects. Clarity needs to be provided around when this is applicable.	• That the Authority clarify whether the consideration of cumulative effects is relevant to all contaminants, or only those that sit outside the standards.
	A definition is needed for what is meant by “naturally high concentrations” in relation to waterbodies that have naturally high levels of a particular parameter	If the standards do not include a definition of what is meant by “naturally high concentrations” for any particular parameter this term will be interpreted differently by each regional	• That a definition of “naturally high concentrations” be included in the standard that references class D (national bottom line).

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		council. MDC suggests that a suitable solution may be to reference class D (national bottom line).	
	Parameters that are controlled outside of the standard should be referenced via standards for consistency	MDC recommends that a reference table be developed that prescribes where associated standards for those parameters not covered by the standard are derived from. For example, reference could be made to the ANZECC table 3.4.1.	• That a reference table be developed that specifies what standards apply to those parameters that are not controlled via the wastewater performance standard.
Continuous Monitoring	Continuous monitoring for large wastewater treatment plants is supported, but some clarification is needed to ensure consistency	MDC generally supports the proposal to require continuous monitoring for wastewater treatment plants serving populations greater than 10,000 people. Continuous monitoring helps to demonstrate that a treatment plant is on track to achieve compliance. However, some greater specificity is required to ensure consistency. For example, for statistical purposes, the frequency of analysis will need to be specified (i.e. hourly data sets might be required over a 24 hour period). This can then be used to complete the median and 90th percentile assessments. The conditions on page 23 refer to an annual 90th percentile of an annual median. For clarity, this should specify if this relates to a calendar year or a financial year. As the standards are linked to flow, it makes more sense in our opinion to follow the hydrological calendar year, which aligns with the financial year. Clarification on these monitoring requirements should be added to the table to ensure consistency in how regional councils apply the standards. While continuous monitoring is achievable for Nitrogen, ammonia and phosphorous it is not currently possible for cBOD5 and E.coli. Clarification is sought as to what constitutes 'continuous monitoring' for such parameters (e.g. grab samples required at an agreed frequency). In addition, in the event of equipment failure, there needs to be a mechanism to retain compliance while continuous monitoring can be reinstated.	• That the Authority provide greater specificity as to what constitutes 'continuous monitoring' for the different parameters in the standard via commentary added to the table. • To calculate the 90th percentile of an annual median, the standards will need to specify the frequency of analysis as well as that the reference to 'annual' means a financial year (rather than a calendar year). • That the 'continuous monitoring' requirements in the standards include a mechanism to retain compliance in the event of equipment failure which continuous monitoring is being reinstated.
	A central interfacing portal should be developed to proactively share monitoring results	MDC recommends the development of a central interfacing portal where monitoring results and flow information is uploaded automatically. This portal would enable plant operators to notify the regional council of any non-compliances as they arise. While compliance is assessed annually, continuous monitoring increases transparency and allows for live monitoring of risk, removing surprises at the end of the year. Sharing monitoring results via a central interfacing portal will	• That the Authority develop a central interfacing portal that will enable the proactive sharing of information that is relevant to consents.

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		also provide Taumata Arowai with assurance that the correct people are being notified as soon as reasonably practicable. A five or ten-yearly review condition within the consent that is tied to the publishing of the 7 day MALF data would provide an opportunity for plant operators and regional councils to confirm whether discharges still fit within the proposed standards, or have shifted outside the specified categories. If impacts of factors such as population growth or climate change mean that the five/ten year rolling median exceeds the specified median for that discharge option, then the conditions of the consent should be amended to reflect the new discharge class, or a new consent is required. Instead of triggering an enforcement pathway, non-compliance with the median maximum limit would trigger a re-consenting pathway.	
Audit of Compliance by a Third Party	The requirement to engage a third party annually to verify compliance adds unnecessary cost	Given that treatment plant operators have to upload data to demonstrate compliance, it should be possible to automate performance against the standards. The need to demonstrate compliance via an annual audit by a third party adds unnecessary cost given the standards remove uncertainty.	• That the standards be amended to remove the need for an annual audit of compliance by a third party
Discharge to water standards for small wastewater treatment plants	Desludging of oxidation ponds should be required when sludge exceeds a specific ratio of sludge depth to pond depth	Page 25 of the discussion document states that "operational requirements such as regular desludging of oxidation ponds…would be included in the consent for the plant." MDC suggests that standard conditions could be prepared for the desludging of oxidation ponds at small wastewater treatment plants that is based on a certain ratio of sludge depth to pond depth. This will help to standardise this requirement.	• That a standard condition be developed for the desludging of oxidation ponds at small wastewater treatment plants that is based on specific ratio of sludge depth to pond depth
Discharge to Land Environmental Performance Standard			
Rapid Infiltration Basins	Rapid infiltration basins should not be excluded from the standards but be required to meet the river discharge standards as a minimum	MDC recommends that the standards be amended to include provision for rapid infiltration basins. Rapid infiltration is preferable to a direct discharge to a waterway as the treated wastewater passes through soil prior to entering a waterway. Rather than excluding rapid infiltration basins from the standard, the river discharge standards could be used as a minimum requirement for these discharges.	• That rapid infiltration basins be provided for in the standards, with requirements equivalent to the discharge to water requirements.
Use of wetlands / Papatunuku passage	Where wetlands are part of a river discharge system to address cultural concerns, the land based discharge loading rates should apply.	Including nitrogen and phosphorus loading rates might discourage operators from putting cultural mitigation in.	• That the nitrogen and phosphorus loading rates do not apply where wetlands are used as part of a river discharge to address cultural concerns
	Pre-wetlands sampling points must be specified so that samples are not affected by E.coli from other natural sources such as birds and wildlife that enter the discharge from within the wetland	MDC is concerned that the E.coli limits specified in the standard may discourage use of land passage systems (e.g. wetlands) where E.coli limits are exceeded by bird faeces. MDC recommends that a pre-wetlands sampling point be specified	• That sampling points for E.coli be located at the entry point to land application areas, particularly where this is a wetland, not at the outlet.

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		so that samples are not affected by E.coli from other sources that enter the discharge from within the wetland.	
Hydraulic loading rate for discharges to land	The hydraulic loading of 5mm/hr or 15mm/hr application event for irrigation should provide flexibility to apply to wetland cells	MDC supports the hydraulic loading of 5mm/hr or 15mm/application event for irrigation. As there is an applied preference to discharge to land rather than water the hydraulic loading should provide flexibility to apply to wetland cells. This might remove the 5mm/hr limit. There is a range between river discharges and irrigation, to extend the season in which treated wastewater is being applied to land the standards need to encourage multiple land discharge options.	• That the hydraulic loading rate for discharges to land should remain flexible to encourage multiple land discharge options.
Soil Sampling	A balanced approach to soil sampling is necessary to control costs	In most cases treated wastewater is irrigated on land that is owned by the operator. Therefore, changes in soil condition will not impact the general public. MDC recommends that the standard specify the number of soil samples required per hectare, to ensure consistency in approach, rather than the per hectare rate being determined by a "Suitably Qualified Experienced Practitioner, considering the treatment level, plant size and soil capacity." As the soil sampling is repeated every five years, the purpose of this testing is to track general trends. MDC does not consider that the level of confidence for soil sampling justifies the cost that would be incurred in having to commission a "Suitably Qualified Experienced Practitioner" in developing the Management and Operation Plan.	• That the standards specify a per hectare rate for soil monitoring, rather than requiring this rate to be determined by a "Suitably Qualified Experienced Practitioner."
Land discharge monitoring parameters	The E.coli limits for land discharges need to specify a maximum percentile	The table at the bottom of page 29 of the consultation document provides E. coli limits. However, clarification needs to be provided if this is a maximum limit, or a percentile limit. MDC preference is that this is a 90th percentile limit to prevent outliers that are not representative from affecting compliance.	• That the Authority makes the E. coli limits for land classes (table at the bottom of page 29) a 90th percentile limit.
Groundwater monitoring parameters	Groundwater samples should be analysed for total phosphorus not dissolved reactive phosphorus for consistency with the proposed standards	Parameters measured in groundwater samples should correspond to an actual limit that sits within the standards. As the limit in the standard is for total Phosphorus, this is what groundwater samples should be analysed for, rather than dissolved reactive phosphorus, for which these is no specified limit to check against.	• That the monitoring requirements for groundwater samples that are necessary to monitor the impact of discharges to land be amended to refer to total phosphorus as opposed to dissolved reactive phosphorus.
Risk screening to assess suitability of specific types of land for land application	Where there is already a land discharge occurring, actual data should be used rather than relying on a risk-based framework tool for assessing land suitability	Council currently irrigate to land at the Manawatū Wastewater Treatment Plant during the summer months. On average approximately 8,000m^3 is applied per day. Some of the qualitive risk assessment tools out there would predict adverse effects on the receiving environment. However in reality this regime	• That actual monitoring data be relied on for determining land suitability, where such data is available.

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		has made a significant improvement on the receiving environment.	
The Beneficial Reuse of Biosolids Environmental Performance Standard			
Biosolid Classification	The classification of biosolids into grades and the establishment of consenting pathways based on these grades is supported	MDC supports the proposal of having permitted, controlled and restricted discretionary controls to reflect the different grading.	• That the proposed grading of biosolids and the establishment of consenting pathways based on these grades be retained as proposed.
Controls on restricted discretionary activities	Controls on restricted discretionary activities should be limited to: setbacks, application methods, stabilisation requirements, odour, and sludge moisture levels	Controls on restricted discretionary activities should be limited to setbacks, application methods, stabilisation requirements, odour, and sludge moisture levels	• That councils discretion on applications for restricted discretionary consents for the reuse of biosolids be limited to: setbacks, application methods, stabilisation requirements, odour, and sludge moisture levels.
Nitrogen Loading	The 200kg/ha limit should be based on a three year release cycle	To reflect that nitrogen from biosolids is released over time the 200kg/ha should be based on three year release cycle. As a result the application could be 600kg/ha if no additional material is applied to that area. The nitrogen limit specified for biosolids in the standards should be consistent with the limits specified in the *Guidelines for the safe application of biosolids to land in New Zealand*.	• That the nitrogen loading for biosolids be consistent with what is specified in the *Guidelines for the safe application of biosolids to land in New Zealand*. This includes nitrogen loading limits that are based on a three year cycle. A maximum application of 600kg/ha would therefore be allowed if no additional material is applied to that area.
Management of Overflows and Bypasses			
Monitoring of Overflows	Clarification is needed in relation to telemetry installed to monitor overflows, including in relation to timeframes for installation and how often sensors need to be calibrated. The risk assessment should determine the level of monitoring that is required.	These requirements should be standardised for consistency.	• That the standards be amended to provide greater specificity around the requirements that apply to the installation of telemetry units. In particular, the standards should specify how soon telemetry units must be installed at high risk sites and how often the sensors on telemetry units must be calibrated. • The monitoring requirements should be relative to the level of risk associated with the overflow.
Demonstrating engagement has occurred	Operators should not be punished for the unwillingness of a third party to engage	Getting written feedback from some groups can be challenging. While there should be a requirement to take reasonable steps to engage, the approval of the Wastewater Risk Management Plan should not be subject to a third party and demonstrating that the engagement has occurred.	• A lack of third party engagement should not be grounds for a Wastewater Risk Management Plan not being approved.
	Controlled Activity Standards 1 – 4 from the Auckland Unitary Plan for network	MDC is of the opinion that controlled activity standards 1 – 4 from the Auckland Unitary Plan (refer to page 38 of the	• That controlled activity standards 1 – 4 from the Auckland Unitary Plan be

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Examples of Controlled Activity Standards from the Auckland Unitary Plan	overflows are generally appropriate for inclusion in the standards	discussion document) are appropriate to duplicate within the standards for the management of overflows and bypasses. However, MDC considers that the reference to "average" in condition 1 needs greater specificity (e.g. by referring to the rolling five year average).	replicated in the Controlled Activity Standards for network overflows, except that the reference to "average" in condition 1 needs greater specificity (e.g. rolling five year average).
	Controlled Activity Standard 5 from the Auckland Unitary Plan for network overflows should be amended to remove reference to the prevention of dry weather overflows.	The controlled activity standards should not require the wastewater network to be operated in a way that prevents dry weather overflows during normal operation of the network. Providing appropriate controls are in place to minimise overflows, an unforeseen overflow should not result in consent non-compliance.	• That controlled activity standard 5 from the Auckland Unitary Plan be incorporated into the standards, but only after being amended to say: "The network operator must have an operational and maintenance programme in place that minimises unforeseen dry weather overflows to the environment."
Matters of Control	A standard set of conditions for the management of overflows and bypasses should be developed.	The development of a standard set of conditions for the management of overflows and bypasses is necessary to ensure consistency. These conditions should relate to 35 year consents.	• That the Authority publish standard conditions for the management of overflows and bypasses and that these conditions enable 35 year consents to be issued.
Categorising Risk	A matrix should be developed to help determine the appropriate risk level for the management of overflows and bypasses.	This will enable monitoring requirements to be reflective of the level of risk associated.	• That a matrix be developed to categorise the risk associated with overflows and bypasses and that monitoring requirements imposed through conditions on the consent be reflective of this level of risk.
Consistency	Given the importance of creating consistency and the potential limitations of processing a sudden influx in applications, the Water Authority - Taumata Arowai should consider automatically issuing every scheme a network discharge and bypass consent with specified timelines.	This will mean every network operator in New Zealand is working to the same timelines and every network will have identical conditions. This would also address the issue that some regions don't currently authorise these activities to occur.	• Every network should have identical conditions and reporting requirements (including networks that already hold consents) • Reduce time and cost by automatically issuing consents for each network • Create national consistency, not just regional consistency.
Publicly accessible website		A central portal would keep everything in one location and simplify auditing and benchmarking performance. All reporting and notifications can be done through the portal and the portal can automatically send out notifications / alerts	• Create a central national portal for reporting and notifications
Staggering Monitoring	Support the proposal to stagger monitoring due to financial limitations		• Stagger monitoring requirements based on risk
Notification Requirements	Depending on the detail required, in some instances providing a notification with two hours will be difficult	Typically spills occur during adverse conditions and therefore written notification may not be possible. If notification is automated for high risk sites, operators can focus on	• Rather than require high risk notification to be submitted within two hours, all high risk overflow points should have a telemetered

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		minimising the extent of the event and then provide a written response once the event is under control.	sensor to automatically send out notifications when a spill occurs. • The automated notification should be to a central portal to prevent the need for multiple notifications.

Key Consultation Document Questions

General

- *Do you agree with the areas the first set of standards are proposed to cover?*

  Yes

- *What areas should we prioritise to introduce wastewater standards in future?*

  MDC recommends that priority be given to how the standards might better encourage and facilitate (such as by creating permissive consenting pathways) the land-based discharge of treated wastewater. We understand that land discharges are more culturally acceptable than direct discharges to waterways.

  As outlined in Table 1, MDC requests that the current exclusion of rapid infiltration basins be removed from the standards by incorporating them into the river discharge standards, where the indirect discharge is likely to enter waterways.

  MDC also recommends that a secondary standards table to created to enable a consistent approach to managing those parameters that sit outside of the primary standards, with clear identification of where those secondary standards are derived from.

- *What topics should we cover in the guidance material to support implementation of the standards?*

  MDC requests the development of guidelines for monitoring. For example, the guidelines should clearly define where 'end of pipe' monitoring is to be monitored from, particularly in the instance of a wetland, where disinfected wastewater can get contaminated with E.coli from birds and fish.

  Guidance material should be developed for regional councils, including defining when it is appropriate to include additional control measures. If entirely left to the discretion of regional councils, there is likely to be inconsistency in the additional controls that might be imposed on discharge consents.

  It is critical that Taumata Arowai work with consent authorities to develop a set of standard conditions that are to be used for consents that comply with the standards, and for those additional matters that sit outside of the standards (where possible). Consistency in consent conditions is essential to enable performance benchmarking.

- *Are there particular groups we should work with to develop guidance and if so, who?*

  Input from environmental scientists is necessary to allow monitoring, management, and control of emerging contaminants. For instance an emerging contaminant may bio-accumulate and the best form of control could be the

restriction or banning of use of that contaminant which is outside of current scope and control of wastewater operators.

Input is also needed from network operators to understand financial and resource constraints and how current practices fit in with future requirements.

- *How should factors such as climate change, population growth, or consumer complaints be addressed when considering a 35-year consent term?*

  The effects of climate change will differ depending on your location, and therefore a blanket approach is not considered appropriate. As climate has a cyclic pattern, calculations of median discharge volumes should not be based on a single year, but should be averaged over a period of five to ten years to enable buffering between years.

  While applications should provide an indication of forecast volumes over the life of the consent, controls should be based on key parameters such as minimum dilution ratios, loading rates etc.

  MDC considers that regular reviews (e.g. 10-yearly) should be built into consent conditions to enable the reassessment of the suitability of the discharge conditions, if the receiving environment has changed (as a result of climate change or other factors), or where consumer feedback. Indicates that changes are needed. The review should include consideration of the likelihood and risk of becoming non-compliant with conditions as a result of climate change, population growth, or other unknowns.

  It is recommended that the assessment is ideally based on a ten year cycle with re-assessments required every ten years. Yes applications should provide an indication of what volumes are expected but the controls should be based on key parameters ie minimum dilution ratios, loading rates etc.

Discharge to Water

- *How should we consider checks and balances to protect against situations where the degree of microbial contamination may change throughout the duration of a consent.*

  A multi barrier approach might be necessary, such as treatment plus disinfection, to minimise this risk. MDC recommends that for larger plants (greater than 10,00 population) disinfection should be mandatory, as this will minimise risks to public health. In addition, for these larger plants, UVT, UVI turbidity, and flow need to be continuously monitored to ensure the UV units are operating within their certified range (i.e. 90th percentile).

  Trend analysis should be required as part of the annual reporting of performance. Corrective actions, if required, should be based on trends and not one-off results.

- *Are the areas for exceptions appropriate to manage the impacts of discharges and do you anticipate implementation challenges?*

  MDC is of the opinion that the standards do not cover dual discharges (i.e. discharges to land and water) and the use of wetlands and land passages very well. Amendments are needed to the standards to better recognise the benefits of a dual discharge regime on the receiving environment, including through developing more enabling consenting pathways.

  MDC is concerned about the number of current exclusions from the standard. Guidance is needed to better ensure consistency in how regional councils are to asses the need for additional control measures, to enable comparisons to be made. Guidance is also needed to assist regional councils and RMA commissioners in determining whether a proposed outcome will meet the intent of the standards.

  As outlined in Table 1, rather than wastewater consents being processed by individual regional councils, MDC encourages the Authority to establish a national team of dedicated processors. An appropriately resourced, centralised processing team will increase consistency, speed up processing times and reduce consenting costs through reduced reliance on consultancy expertise.

- *How should the exceptions be further defined to ensure there are no unintended consequences?*

  In the first instance, some hypothetical 'case studies' could be provided, and updated as the consent processes are completed.

  A list of potential exception controls should be provided with appropriate effluent limits and guidance of when these additional measures are appropriate. This list could be updated over time mitigation should be focused on effluent quality not receiving environment.

- *Are the treatment limits, and monitoring and reporting requirements proportionate to the potential impacts of the different discharge scenarios?*

  MDC considers that the proposed treatment limits are appropriate. If the limits associated with the different dilution scenarios are achieved, MDC expects there to be improvements in environmental outcomes, given the limits are more stringent than is currently required.

  However, MDC recommends that more thought be given as to how real-time data might be used to enable greater flexibility in discharges to achieve dilution ratios. Continuous monitoring enables real-time tracking of risk. As outlined in our submission, if this monitoring data is uploaded to a central interfacing portal, this will increase transparency and enable corrective action to be taken quickly in the

event of a non-compliance. Annual reporting would then be just a summary of performance and any proposed changes.

MDC is concerned that some receiving environments can have 7-day low flows that are significantly less than the average flow. This would necessitate a high degree of treatment for short periods of the year. Similarly, wastewater treatment processes will still need to run, even when dilution fare exceeds the limits published. In the case of MDC, we have zero discharge to the receiving environment at the times when low flow occurs, therefore the impact is nil during this time.

- *What benefits and challenges do you anticipate in implementing the proposed approach? Are there particular matters that could be addressed through guidance material?*

  For discharges that enter a wetland post UV treatment, it may be beneficial to undertake E.coli sampling pre and post point of entry and to analyse these samples to determine the origin (i.e. human sourced or other). Given the cost involved, this sampling, if required, should be low frequency (e.g. quarterly).

- *How should we define small plants and what changes to the default standards should apply to them?*

  Small plants should be defined based on loading rates and the dilution ratio of the receiving environment. However, MDC is concerned that a large proportion of the "small" plants discharge into waterways that do not have a flow site. This makes calculating a dilution ratio, in accordance with the standards, difficult.

- *What feedback do you have for managing periphyton in hard bottomed or rocky streams or rivers?*

  Refer to our draft submission. In summary, approximately 65% of river discharges in the Horizons region are to waterways that would be considered to have a hard bottom. Rather than excluding discharges to hard bottomed or rocky waterways from the nutrient limits in the standards, MDC recommends that an assessment be undertaken as part of the consent application process to determine if the discharge is causing periphyton levels to increase. If this assessment shows that the discharge is causing the periphyton levels to increase so it is class C or lower then the application should be required to have a management strategy to control periphyton. This might be a dual discharge to avoid discharging at certain times of the year. If the assessment shows that the periphyton is below class D (national bottom line) then that should be excluded. In most cases, MDC considers that the standards will be sufficient to manage excessive periphyton growth.

- *What detail should be covered in guidance to support implementing this approach for managing periphyton?*

MDC recommends that the guidance include a matrix that can be used when assessing periphyton growth to determine what class applies (i.e. national bottom line classes A to D).

Standard inspection procedures or tests would be beneficial.

Discharge to Land

- *Are the proposed parameters appropriate to manage the impact of wastewater discharges to land?*

  MDC thinks the proposed parameters are appropriate. Ongoing monitoring of bores within land application areas should assist in evaluating the risk of contamination and should be prioritised over modelled outputs.

- *What benefits and challenges do you anticipate in implementing the proposed approach? Are there other particular matters that could be addressed through guidance material?*

  Providing the majority of wastewater treatment plants are captured by the standards, the standards will enable a more consistent approach.

  Standard monitoring procedures will be useful to minimise the risk of contamination of groundwater. Challenges will relate to long-term soil health. As well as monitoring requirements, there should be a trigger for when additional mitigation may be required.

  A further challenge will be ensuring all regional plans are updated in a timely manger to reflect the changes. To accelerate this process standardised rules need to be drafted and Regional Councils required to amend there plans to reflect the rules prior to a specified date.

- *Are the monitoring and reporting requirements proportionate to the potential impacts of the different discharge scenarios?*

  Where there are monitoring requirements, there should be a corresponding limit/trigger to undertake further action. If this is not the case the monitoring has limited relevance and enforcing change becomes difficult.

  Groundwater and aquifers should be monitored for nutrients.

Beneficial Reuse of Biosolids

- *What matters of control or restricted discretion should sit with consenting authorities to manage the reuse of biosolids?*

A register of sites where biosolids has been deposited needs to be maintained. Additional control should only apply for restricted discretionary activities.

- *What should the permitted activity standards include?*

  Requirements around keeping records. Notification requirements to demonstrate biosolid classification

- How should contaminants of emerging concern in biosolids be addressed in the short-term?

  One option is to provide guidance to support implementation of the standards, including advice on contaminants of potential concern – such as organic contaminants like microplastics or PFAS. These areas could be brought into the standard over time, as research continues and there is greater capacity in the New Zealand market to test for contaminants of emerging concern.

  MDC has sought price information for the contaminants included in the proposed biosolid standards, including emerging contaminants of concern. The following contaminants are able to be tested in NZ for a reasonable cost:

    - E. coli
    - Campylobacter
    - Salmonella
    - human adenovirus
    - helminth ova
    - VAR
    - Arsenic
    - Cadmium
    - Chromium
    - Copper
    - Lead
    - Mercury
    - Nickel
    - Zinc

  The following tests are able to be completed in NZ, but come at the significant cost:

    - Musks – Tonalide
    - Musks – Galaxolid
    - PFOS+PFHxS (µg/kg)[6]

- PFOA (µg/kg)[6]

For the full suite of NZ based tests, the price for one off testing was $4051.45 (exclusive GST).

Testing capacity and capability must become available in NZ before the standards will achieve their identified benefits.

The following tests are only able to be taken in Belgium:

- Nonylphenol and ethoxylates (NP/NPE)
- Phthalate (DEHP)
- Linear alkylbenzene sulphonates (LAS).

It would not be reasonable to include these thresholds in AA standards unless testing becomes readily available in NZ.

The cost to dispose of sludge to landfill is likely to be greater than the cost of verification testing, providing the frequency of testing is not too high (e.g. every five years). Testing is worthwhile to ensure the discharge does not result in any long-term environmental damage to the receiving environment.

Overflows and Bypasses

- Is the current definition of overflow fit-for-purpose, and if not, what changes do you suggest?

  Yes, the current definition is fit-for-purpose.

- Does the proposed definition of bypasses adequately cover these situations, and if not, what changes do you suggest?

  MDC agrees that the proposed definition is adequate.

- *How should Wastewater Risk Management Plans relate to existing risk management planning tools, and if the Local Government (Water Services) Bill proceeds, stormwater risk management plans?*

  As far as MDC is aware, there is little or no evidence that quantifies the environmental impacts of overflows and bypasses. In wet weather events the discharged wastewater is generally diluted by a factor of 4 or more, and discharged when high dilution is available in receiving waters. This has the cumulative effect of minimising risk. However a dry weather overflow or bypass will pose a significantly higher risk.

  This is a opportunity to create consistency by providing detailed templates and clear expectations for each section. While there is some overlap between water, stormwater and wastewater the management plans should be kept separate.

- *What should be covered in guidance to support developing wastewater risk management plans?*

  MDC recommends that the guidance include:

  - Minimum storage requirements to minimise overflows and bypasses. If these are not provided the risk of an unauthorised discharge occurring will decrease significantly.

  - Detail around what is required in each chapter, similar to the water safety plans

  - A standardised risk identification checklist to identifier the multiple barriers to reduce risk (Swiss Cheese model)

- *We understand wastewater risk management plans are already required in some regions – what approaches have worked well and where is there room for improvement?*

  The intent of the Manawatū WWTP river and land discharge consents was that the land discharge should be prioritised over a river discharge to mitigate cultural and environmental concerns. Unintentionally however, the complexity of the land discharge requirements as set out in our resource consent, prioritise the river discharge. This significantly reduces the potential irrigation season. The unintentional outcome has arisen as the individual discharges have been assessed in isolation, rather than through the lens of a dual system. For example ponding and soil moisture restrictions limit Councils ability to irrigate, especially during the cooler months of the year. These limits were to prevent seepage from the site. However, any seepage would be negligible in comparison to the alternative of discharging directly to the river. For this reason, Council encourages the Water Services Authority – Taumata Arowai to keep the standards simple and focus on key points of concern and consider the alternatives in relation to the overarching objective.

  As the Land Application Management Plan (LAMP) was developed on the back of the authorisation it is far more complex than required. Keeping LAMPs simple, puts a focus on the key mitigating factors and ensures these matters are not lost in the noise and reduce the risk of unintentional conflicting the overarching objective.

- *How should Wastewater Risk Management Plans interact with the proposed consenting pathways for overflows and bypasses?*

  Consenting is all about minimising environmental risk. Therefore, if there is a minimum storage requirement, the Risk Management Plan will include this (and other methods) to demonstrate clearly how the risk of overflows is to be manged.

  Wastewater Risk Management Plans will help to demonstrate that appropriate steps are in place to minimise risk.

MDC notes that most regional Councils do not have sufficient in-house expertise to approve these plans. Therefore, we recommend that they be approved by a specialised technical team.

- *Do you support setting all wastewater network overflows as controlled activity?*

  Yes. This triggers reporting and transparency. Part of this is becoming aware of what is happening so plans can be put in place to reduce risk.

- *What matters of control should remain with consenting authorities to reduce the impact and frequency of overflows and bypasses?*

  This is a major issue across the country and therefore it is important that standardisation occurs. Required information should be uploaded to a central portal. This allows national decisions to be made and blanket approaches to be rolled out. If Regional Councils are responsible for managing overflows every Council will have a different approach. The consenting authority should be notified so the clean up can be independently assessed but the management and approval of plans should be done on a national scale.

- *Are there examples of existing approaches to managing overflows that would work well as matters of control?*

  Where sufficient storage, preventive maintenance, inspection and timely capital investments have been made, the amount and effects of overflows and bypasses are greatly reduced. The management of overflows requires a proper auditing system to ensure alarms and stand by pumps are working at the designed set points.

- *What other factors need to be considered when making overflows and bypasses a controlled activity? What matters would be helpful to address through guidance?*

  Record keeping and the need to have a detailed incident report so that the cause of the incident can be clearly identified.

- *What transition arrangements should apply for scenarios where Regional Councils already have consenting pathways for overflows?*

  Regional Councils have contrasting approaches, from controlled to prohibited. To create a consistent approach regional Councils should be provided six months to replace their current wastewater rules and policies with a standardised set.

  While this is occurring, operators should be required to prepare their wastewater management plans. The Operational Management Plans will identify each point where overflows /bypasses can occur. This information will be used to generate unique codes so records for each site can be maintained.

  Aspirational targets like in the Auckland case should be left at 2040, and the management plans outline how this target will be achieved

- *What matters should be covered in guidance material to support monitoring and reporting requirements?*

  MDC recommends that the Authority develop best practice guidance material. This should include a standard decision making process, to determine that the optimal solution to minimising overflows and bypasses can be achieved.

- *Do you support establishing a framework that determines how overflows are managed based on risk?*

  Yes

Arrangements for wastewater treatment plants operating on section 124, Resource Management Act 1991

- *How long should wastewater treatment plants be able to operate under section 124 of the RMA once wastewater standards have been set?*

  The duration in which a plant can operate under s124 is dependent on whether the consent is required to be notified, whether decisions are appealed, and if applications are going to be assessed at a regional level, or as part of a National specialised unit. Due to limited resources and expertise at a regional level, wastewater discharge consents are drawn out, costly exercises, as multiple consultants are required on both sides.

  The proposal to extend expiry dates from two years from when the standards become operative needs to be reconsidered. If this occurs, this will likely result in a bottle-neck. MDC's submission suggests that the extension to existing use rights, for those consents that expire within two years of the standards becoming operational, should be added to the current consent expiry date, to enable processing of these consents to be more staggered.

  Consideration should also be given to including a transitional period between when a consent is granted, to when the new conditions must be met (e.g. five years).

Attachment 3 – the Manawatū District Council's Management of Periphyton Risk

Manawatū District Council have successfully managed the periphyton risk downstream of the discharge through utilising alternative discharge methods during high risk periods (Jan – March inclusive). Despite two outliers, the maximum percentage of samples exceeding the Class B standards was 6%. None of the concentrations exceeded the national bottom line. Given that the national bottom line is an approved standard the exclusion should only apply to sites that can't demonstrate they can achieve this requirement.

Since irrigation commenced, the majority of the elevated Chlorophyll a concentrations occur during April and May when restrictions on land irrigation forced Council to discharge to the Ōroua River while the river flows are still low. If these restrictions were removed, periphyton water class downstream of the Manawatu WWTP would be expected to increase to Class A as the discharge to land would be prioritised where possible.