Attachment One: Christchurch City Council Submission National Wastewater Environmental Performance Standards (Technical Feedback)

Discussion document: https://www.taumataarowai.govt.nz/assets/Uploads/Wastewater-consultation/Discussion-document-National-wastewater-environmental-performance-standards-FINAL.pdf?vid=3

CONSULTATION QUESTIONS - FINAL

QUESTION	ANSWER
GENERAL	
Do you agree with the areas the first set of standards are proposed to cover?	CCC does not agree with aspects of the standard proposed for the reasons below: 1. Many wastewater contaminants are not included in the standards such as emerging contaminants and heavy metals. This allows the consenting authority to place resource consent conditions on those other contaminants that aren't subject to the Standards. The Standards should set the RMA notification and activity status framework for all contaminants. Leaving consent conditions to consent authorities for all contaminants except the seven listed in the consultation document would effectively subvert the intent of the Water Services Bill and mean that territorial authorities have to follow two consenting pathways. Further clarification is needed here as specified in the feedback further below. 2. Land use consenting has not been included in the proposed wastewater environmental performance standards. For example; Environment Canterbury have introduced planning rules making land use for wastewater treatment, and potentially collection and reticulation non-complying activities, meaning authorities will be able to reject a wastewater discharge application via the land use path. In Canterbury this planning rule has been applied to existing WWTPs which must retrospectively obtain consents. 3. The potential for introducing energy use standards is discussed on Page 6 of the consultation document. Decisions of investment in energy efficiency technologies and operating procedures should remain with the territorial authority operating a WWTP and should not be a matter for the national wastewater environmental performance standards.

	4. The Standards should include air discharges. CCC suggests this take an approach of "No offensive odours beyond the WWTP boundaries". 5. Air discharges from combustion are appropriate to remain a normal resource consent matter. 6. CCC oppose including trade waste standards in the national wastewater environmental performance standards. These are a matter for individual territorial authorities to manage through bylaws and local trade waste agreements. *CCC's 2015 trade waste bylaw (currently under review)* - https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/bylaws/trade-waste-bylaw-2015 7. It is unclear if the standards will permit whether a territorial authority operating a WWTP can voluntarily operate to a higher standard; or offer resource consent conditions that have a higher standard. i.e. No clear direction is provided in the standards regarding territorial authorities electively treating to a higher standard than those set out in the standard. It needs to be clear if this will be permitted or not. 8. No clarity has been given on requirements for resource consent monitoring conditions. This allows the opportunity for consent authorities to introduce conditions which are impractical or that have unreasonable costs. 9. The standards must allow for discharges to ground from WWTPs including maturation or oxidation ponds. i.e. It is reasonable to conclude that a typical WWTP, particularly one with a pond system, will have a discharge to ground. Even with a world class facility it will not be possible to demonstrate zero leakage. As a result, discharge to ground consents are often required for WWTPs, albeit at very low discharge rates. Therefore, the standards need to provide an acceptable leakage rate to ground.
What areas should we prioritise to introduce wastewater standards in future?	CCC recommends prioritising the below for inclusion in the wastewater environmental performance standards: 1. Non-potable reuse

	2. Discharges to air of offensive odours within WWTP sites 3. Discharges to air of water through transpiration and evaporation of water from WWTP sites, including any ponds or wetlands. 4. Land use consents (Refer to reasons above) 5. Support the use of separate stormwater and wastewater systems i.e. not permitting any form of combined SW and WW systems. 6. The standards should expressly state that the operation of wastewater conveyance networks (including but not limited to pipelines and pumps) is a permitted activity. Resource consents, including land use consents, should be required for this infrastructure. 7. The standards should expressly state that the operation of treated wastewater conveyance networks (including but not limited to pipelines and pumps), from the point of treatment to the point of discharge, is a permitted activity. Resource consents for reticulation or conveyance infrastructure should be a permitted activity, including land use, and should NOT be required for this type of infrastructure. 8. The Standards should provide for air discharges from untreated and treated wastewater reticulation, collection and pumping up to the WWTP property boundary a permitted activity.
What topics should we cover in the guidance material to support implementation of the standards?	CCC strongly recommends that the following matters are explicitly included in the Standards rather than the proposed guidance material: 1. Provide definitions of terms (continuous monitoring, minimums, maximums, implementation)

	2. "Continuous monitoring" needs a definition. i.e. Overflow detection devices shall record the overflow or no overflow status with a gap of no greater than 300 seconds between records. 3. The performance standards should provide overflow response requirements covering the expectations of what should be done and the timeframes required of these tasks; noting that in storm events operational staff may not be able to safely access overflow locations for many hours. 4. The standards need to clarify if an overflow event will include multiple overflows in one catchment and what is the time span in which a series of overflows from a single point are considered a single event? i.e. CCC's overflow consents treat any number of overflows from a single engineered overflow point in a 24-hr period as a single event. This is because engineered overflows often fluctuate on and off throughout a storm event.
Are there particular groups we should work with to develop guidance and if so, who?	Territorial Authorities
How should factors such as climate change, population growth, or consumer complaints be addressed when considering a 35-year consent term?	The application by the territorial authority must address this as best as suits their situation at consent stage.
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.	If there are concerns that microbial contamination can change due to a specific discharge deteriorating, then this is a matter of robust monitoring conditions in resource consents and enforcement by the consent authority. There should not be consideration within a consent duration to changing microbial conditions due to the complexity and cost involved in such a change.

Are the areas for exceptions appropriate to manage the impacts of discharges and do you anticipate implementation challenges?	The following items in the Exceptions on page 22 of the consultation document are of concern to CCC: *discharges to rivers or streams with very low dilution (with a dilution ratio of <10).* The standards must confirm if "dilution" is based on wastewater and receiving water environment volumes, and not a contaminant. *Discharges to a waterbody that has naturally high levels of a particular parameter. This is not intended to capture waterbodies that have existing high levels of a particular parameter due to diffuse discharges that occur through land use such as farming.* The "particular parameters" and their limits must be defined by the Standards. CCC suggest that these may be updated as necessary by Taumata Arowai.
How should the exceptions be further defined to ensure there are no unintended consequences?	The Standards need to clarify if the standard RMA consenting process will apply for "exemption" sites. (As per page 22 of the discussion document).
Are the treatment limits, and monitoring and reporting requirements proportionate to the potential impacts of the different discharge scenarios?	CCC is generally supportive of the treatment limits, and monitoring and reporting requirements for the different discharge scenarios, but propose the following additions: 1. The Standards must clearly state the frequency, sampling location and controls of sampling. 2. Please confirm that dilution, to determine the receiving environment, is based on volume of wastewater. 3. At what distance from the point where the discharge enters the receiving water body is the dilution factor determined? (i.e. 1m,

	20m, 50m, 100m) Can this distance vary for the different receiving environments? 4. Page 24 says “Continuous monitoring will be required for wastewater treatment plants serving populations greater than 10,000”. Clarification is needed for the term “Continuous monitoring” - what is continuously monitored. Is it flow or contaminants or both? The wording in the Standards needs to be clear and measurable with a tangible timeframe. 5. CCC are supportive of flows being reported on a 24hr basis and oppose reporting flows at a higher frequency. 6. Further details are required in the Standards around the expected scope of the third-party compliance auditing. Exactly what must be audited? 7. Council disagrees with annual auditing of process systems as these do not often get changed at such a frequency (yearly). CCC recommend that process systems are only audited on a three-to-five-year basis as these process systems are relatively static and they rarely change year to year. Annual audits would be an unreasonable cost burden particularly for smaller WW operators. 8. The Standards must be clear on what parameters are to be monitored and frequency of reporting. Do the frequencies include reporting or only monitoring? CCC would support annual reporting of results if there are no exceedances or departures from consent conditions. 9. The Standards must accurately state where sampling shall occur and clearly define “discharge point”. i.e. monitoring shall be undertaken between the discharge point, or points, the end of the final treatment step, etc. 10. The discussion document uses BOD5 and cBOD5. For consistency, the Standards should stick to one throughout, noting cBOD5 is a more useful measure of WWTP performance.

What benefits and challenges do you anticipate in implementing the proposed approach? Are there particular matters that could be addressed through guidance material?	CCC have identified emerging contaminants as an area of significant concern, and these are not well addressed in the consultation material. CCC believe it more appropriate to deal with the contaminants in the Standards, and NOT in the guidance material, but it may be useful to raise this issue here. 1. The proposed standards do not include treatment limits for heavy metals and other contaminants. At present the Standards are limited to five contaminants and two pathogen species. Other emerging contaminants such as pharmaceuticals, household chemicals, chemicals common in foods (i.e. caffeine), etc, are not covered by the standards and should be included. 2. CCC are concerned that if such contaminants are not included, consenting authorities will roll out a range of consent requirements that are over and above the requirements of these wastewater environmental performance standards. This approach will be applied to contaminants not listed in the standards. 5. This could be addressed by allowing new contaminants to be included in the national standards as those contaminants become nationally significant. 6. If the Standards are changed by Taumata Arowai to manage a new contaminant, then there should be provision in the standards that the resource consent is varied to correspond to the new standard. This will enable Taumata Arowai's management of new contaminants to be standardized in resource consents that have been previously issued. 7. The breadth of sampling for "other contaminants" should be linked to the population serviced with larger WWTPs having to sample for a wider range of contaminants than smaller WWTPs. I.e. It would be unreasonable to burden small WWTPs with testing for a wide suite of contaminants when their discharge will be very small and have a negligible impact. 8. Acceptable limits on such contaminants should vary to suit the assimilative capacity of the receiving environments.

How should we define small plants and what changes to the default standards should apply to them?	CCC support the general definition.
What feedback do you have for managing periphyton in hard bottomed or rocky streams or rivers?	Hard bottom or rocky streams should be added as an additional receiving environment type in the table on page 23 of the discussion document. This would allow tighter limits to be placed on such an environment. The Standards may benefit in considering an upper limit for nitrogen and phosphorus 50m from the point of discharge to avoid cumulative effects for hard or rocky bottom streams and rivers.
What detail should be covered in guidance to support implementing this approach for managing periphyton?	Periphyton correlates directly with nutrient levels. Therefore, getting nutrient levels right is important. It may be helpful to introduce a nutrient quality rule for rivers and streams within the performance Standards, where: An additional option for this type of water course may be to undertake baseline monitoring of the water course for nutrients (no less than monthly for one year) and perform dilution modelling to demonstrate that baseline nitrogen and ammonia levels will not increase by more than 25% (or a limit determined by Taumata Arowai).
DISCHARGE TO LAND	
Are the proposed parameters appropriate to manage the impact of wastewater discharges to land?	In general, CCC supports the proposed parameters on the basis that the following information is further clarified and explicitly defined in the Standards: 1. On page 29 of the discussion document, the proposed Standard states that, "*The hydraulic loading rate for discharges to land not exceeding 5mm/hour or 15mm/ application event"*. The proposed Standards do not set daily or annual limits and does not account for other influencing factors such as heavy rainfall events. This requires further clarification.

	2. The consultation document is unclear about notification requirements and activity status under the RMA. The Council submits that the Standards should specify that applications are to be non-notified and that proposals are to be controlled activities. CCC suggest controlled activity conditions be limited to: o Daily application limits (these may be seasonal, monthly or annual) o Acceptable daily and annual application limits o Acceptable slopes for irrigation o Heavy rainfall cut off and restart conditions. 3. CCC recommends refining the following in Appendix Four: In the proposed framework in Appendix 4, remove the term "field capacity". Including this factor limits discharges to land to what wastewater treatment plants can take up. Which is essentially every land application area within the country during winter. "Full Saturation" may be a more appropriate term as this allows some drainage through the soil when field capacity is exceeded. The use of "Field Capacity" is a term for ensuring that irrigators do not apply more water to a site than plants can transpire, which is a good efficiency approach for irrigating crops, but highly inappropriate for disposing of treated wastewater. As noted in definitions provided at the end of the submission. Refer to attached diagram.
What benefits and challenges do you anticipate in implementing the proposed approach? Are there other particular matters that could be addressed through guidance material?	The proposal for discharge to land standards are essentially stating that all matters pertaining to contaminants not listed in the Standards, of which there are hundreds, are a matter for the consent authority and their usual consenting process. This means Councils will need to seek resource consent for the discharge of contaminants. Ie. Caffeine, ibuprofen, endocrine disruptors, copper, zinc, etc. As a result, there will be no change to the consenting process which appears to undermine the purpose of the Standards.

	CCC recommends that the standards need to include such contaminants and their limits. Where nationally significant contaminants are identified in the future it would be reasonable for Taumata Arowai to add these to the Standards with limits, or to amend existing limits. Refer to previous discussion above. Other matters that the proposed Standards should cover are: o Rainfall data (proposed irrigation limits do not consider local rainfall effects. o Irrigation to saturated ground should be specifically prohibited in the Standards) o Irrigation setbacks for property boundaries and receiving waterbodies are needed. o Suitability of vegetation for a land application area. o This standard does not include infiltration basins. CCC recommends that infiltration basins should be treated as a receiving water body under Section 6.
Are the monitoring and reporting requirements proportionate to the potential impacts of the different discharge scenarios?	CCC are in general agreement with the proposed monitoring and reporting requirements to manage discharges to land, however there is still further clarification required on matters explained above.
BENEFICIAL REUSE OF BIOSOLIDS	
What matters of control or restricted discretion should sit with consenting authorities to manage the reuse of biosolids?	CCC recommends that managing the application of biosolids on land is a matter for control by the national standards and should not be left to the local consent authority. Consent Authorities should have the discretion to introduce planning zones where the application of fertilisers is prohibited or highly restricted to farm operators. In such areas it would be appropriate for the consent authority to have some discretion if the biosolids would have sufficient levels of nutrient to be considered a fertiliser application.

What should the permitted activity standards include?	CCC suggests that the following parameters should be included in the Standards, when considering permitted activity Standards: o Biosolid contaminant limits of: o Nitrogen o Ammonia o Phosphorus o Zinc o Copper o Sodium o Allowable soil accumulation limits. o This could be an accumulation limit in the top 300mm of soil in mg/kg (dry soil) rather than a simple kg/hectare application limit. *Standards must describe the frequency of soil monitoring, dispersion and quantity of sample locations and define standards for sampling methodology.* o Application setbacks from property boundaries and water courses. o Application restrictions, if any, for water protection zones.
How should contaminants of emerging concern in biosolids be addressed in the short-term?	1. CCC have identified emerging contaminants as an area of significant concern, and these are not well addressed in the consultation material. CCC believe it more appropriate to deal with the contaminants in the Standards, and NOT in the guidance material, but it may be useful to raise this issue here 2. CCC are concerned that if such contaminants are not included, consenting authorities will roll out a range of consent requirements that are over and above the requirements of these wastewater environmental performance standards. This approach will be applied to contaminants not listed in the standards. 3. This could be addressed by allowing new contaminants to be included in the national standards as those contaminants become nationally significant. 4. If the standards are changed to manage a new contaminant, then there should be provision in the standards that existing resource consents are varied to correspond to the new standard. This will enable Taumata Arowai's management of new contaminants to be standardized in resource consents that have been previously issued.

	5. The breadth of sampling for "other contaminants" should be linked to the population serviced with larger WWTPs having to sample for a wider range of contaminants than smaller WWTPs. I.e. It would be unreasonable to burden small WWTPs with testing for a wide suite of contaminants when their discharge will be very small and have a negligible impact. 6. Acceptable limits on such contaminants should vary to suit the assimilative capacity of the receiving environments.
OVERFLOWS AND BYPASSES	
Is the current definition of overflow fit-for-purpose, and if not, what changes do you suggest? *Consultation on proposed wastewater environmental performance standards discussion document, Page 37:* *Instances where untreated or partially treated wastewater (or stormwater contaminated with wastewater) spills, surcharges, discharges or otherwise escapes from a wastewater network to the external environment. This may be due to different causes and may be released via either constructed (engineered) or unconstructed overflow points. Engineered overflow points are designed and intended to act as an emergency relief <u>valve</u> during instances of capacity*	CCC consider that parts of the current definition of overflow, as proposed, are not fit for purpose, because: 1. Engineered overflow points are that are not intended to act as an emergency relief valve during instances of capacity overload in the network are not covered. This includes manhole lids and private gulley traps. It is not clear how the Standards provide a consent solution for these types of overflow point. 2. The term "relief valve" must not be used in the standard. The phrase i*ntended to act as an emergency <u>relief</u> during instances of capacity overload in the network,* is more appropriate. Using the word "valve" will lead to confusion and will likely result in consent authorities requiring some form of valve to be fitted to overflows points even when that would not be appropriate (i.e. weir type overflows) 3. The definition does not advise if the Standards will consider only dry weather or wet weather overflows or both.

overload in the network, whereas unconstructed overflow points are not (but inadvertently perform this function).	
Does the proposed definition of bypasses adequately cover these situations, and if not, what changes do you suggest? Page 37: *Bypasses are discharges where the wastewater is not fully treated due to inlet flow rates exceeding the design capacity of a wastewater treatment plant, and then* *discharged into a receiving environment.*	CCC are not in agreement with the proposed definition, as follows: *A bypass is when discharges of wastewater do not meet resource consent quality conditions due to a portion of the wastewater flow passing through a WWTP not receiving adequate treatment. This may be due to lost treatment capacity through damage or breakdown, or excessive inflows.* *i.e. Bypasses of flows may be needed for reasons other than high inflows and this must be considered by the Standards.*
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?	The standards must set out the requirements of Wastewater Risk Management Plans. CCC anticipate that their existing risk management tools will be transferable or easily adapted to a WW Risk Management Plan. CCC notes that their wastewater systems are, generally, not designed to work in combination with stormwater systems and the two are essentially separate. The Standards must reflect this and must not

	consider combined WW and SW risk management as the national norm.
What should be covered in guidance to support developing wastewater risk management plans?	CCC strongly recommends that the following matters are explicitly included in the Standards rather than the proposed guidance material: 1. The proposed wastewater environmental performance standards provide no information around a common nationwide risk-based assessment process and how this translates to an acceptable discharge frequency for consenting as a discretionary activity. It would be useful to have clarity on this. 2. The Standards must set out the acceptable discharge frequency to the seven receiving environments described in the "Consultation on proposed wastewater environmental performance standards Discussion Document", Section 6. 3. The acceptable discharge frequency should consider the cumulative effect of multiple overflow points into a water course, but only within each territorial authority's boundary. 4. Assessments of any drinking water supply takes downstream of the spill points must be considered. This should be considered in the acceptable overflow frequency. 5. The Risk Assessment process must include the role of hydraulic network modelling in forming the basis of risk management plans 6. The Niwa HIRDS tool for annual rainfall events should be used to determine the mm of rain in a given time that would trigger an allowable overflow condition. i.e. the Standards may set an acceptable overflow trigger as a 1 in 24hr two-year ARI. The Niwa HIRDS tool is then used to determine the site-specific mm of rainfall in 24 hours for a given overflow location. 7. Only registered overflow locations should be permitted to have an acceptable overflow frequency.

	8. The Standards must explicitly permit the use of hydraulic network modelling to inform risk management plans.
We understand wastewater risk management plans are already required in some regions – what approaches have worked well and where is there room for improvement?	CCC do not have a response for this question.
How should Wastewater Risk Management Plans interact with the proposed consenting pathways for overflows and bypasses?	Wastewater Risk Management Plans may intersect with the proposed consenting pathway via a requirement of consent condition. These may reflect as a requirement to implement or provide a WRMP but not be subject to the approval of the consenting authority. This would naturally align with the requirements of the Water Services Bill.
Do you support setting all wastewater network overflows as controlled activity?	CCC supports the idea of making all overflows a controlled activity on the basis that performance of the network will be visible and transparent. This will allow for easier ways of reporting and troubleshooting areas for continuous improvement. However, there still needs to be clarity around the parameters that considers an overflow a "controlled" activity. How can overflows that are often uncontrollable or unknown (i.e because of blockages) be seen or consented as a controlled activity?
What matters of control should remain with consenting authorities to reduce the impact and frequency of overflows and bypasses?	Consenting authorities should only have control around reporting and enforcement. Frequencies of discharges and bypasses should be defined by the Standards.
Are there examples of existing approaches to managing overflows that would work well as matters of control?	CCC use a comprehensive hydraulic model of their wastewater collection and conveyance networks predict overflow locations and their overflow frequencies.

	This has been used to determine where overflow monitoring should be deployed for the purposes of overflow consent compliance and initiating overflow responses. The hydraulic model was critical in establishing a resource consent for CCC's network overflows. CCC have been able to use the model and overflow records to identify catchments that exceed the overflow frequency and undertake remedial works and network upgrades to reduce overflows.
What other factors need to be considered when making overflows and bypasses a controlled activity? What matters would be helpful to address through guidance?	CCC strongly recommends that the following matters are explicitly included in the Standards rather than the proposed guidance material: 1. CCC recommends reconsidering the first response timeframe reporting that is required for the three classes of overflows. A two-hour turnaround for reporting on overflows (especially between the hours of 8pm-6am), or during significant storm events is not practical. 2. Similarly, any post event reporting timeframe for overflows of two weeks to the regional council and or community / mana whenua is challenging timeframe especially if there has been a significant storm with multiple overflows. A four-week reporting period is recommended 3. CCC strongly oppose sampling of receiving waters being undertaken after overflows. There is no benefit in doing so and it is an unwarranted burden on the network operator. Risk assessments of overflow points and their receiving environments should set out post-overflow sampling if and where appropriate.
What transition arrangements should apply for scenarios where Regional Councils already have consenting pathways for overflows?	Existing resource consents should be allowed to continue until their natural expiry date. The Standards need to define the path for resolving existing applications. A suggested approach is that consent applicants being

	able to choose to transition to the new standards or continue with existing applications.
What matters should be covered in guidance material to support monitoring and reporting requirements?	CCC strongly recommends that the following matters are explicitly included in the Standards rather than the proposed guidance material: 1. Define what is an acceptable frequency of overflows are for the different receiving environments described in section 6 of the discussion document. 2. Clarify if the acceptable frequency of the overflow is per catchment or per overflow point. 3. Establishing a framework may not work region wide as influences for overflows vary across the country. 4. Clarify what the proposed network performance targets may look like and what reporting would be required. 5. Clarify if there are screening requirements for overflow points. 6. Provide a template of what an overflow report must include (dates, volume, location with map, risks to environment etc) 7. Set out minimum requirements for follow up reporting.
Do you support establishing a framework that determines how overflows are managed based on risk?	CCC supports the development of a framework that uses risk analysis to inform the management of overflow situations.
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?	CCC propose there be no time limit to s.124 of the RMA. The process and timelines of obtaining a resource consent are largely dictated by the consent authority once an application is lodged. There is no good reason to change s.124 and doing so would significantly disadvantage WWTP operators.

Figure 1. Example of land application and definition of land application terms; Field Capacity vs Full Saturation.