

10th December 2021

Taking responsibility for our waste
Ministry for the Environment
wastelegislation@mfe.govt.nz

Kia ora,

Thank you for the opportunity to comment on: ***Te kawae i te haepapa para Taking responsibility for our waste.***

Our submission addresses the challenge and opportunities the management of organic waste poses for wastewater operators.

4. Do you support the six core principles, or would you make changes?

We support the six core principles. However there are additional opportunities and challenges related to *Priority 5 reduce emissions from organic waste* not mentioned in the consultation which we address below.

The action to “consider bans on disposal of organic material in landfill” needs to consider wastewater sludges which are currently sent to landfill. Water New Zealand estimates this is the disposal route for around 106,000 tonnes a year of wet sludge, roughly one third of all the sludges produced in New Zealand¹. In addition to this are sludges from industrial wastewater treatment and infrequent removal of accumulated sludge from oxidation ponds. Moreover, two of our largest wastewater treatment plants, Mangere and Bromley, currently send their biosolids for land rehabilitation. Alternative disposal means would be needed in medium to long term future for these sludges as well.

Achievable alternative reuse (and/or disposal) options for organic sludges need to be available to all wastewater operators before a ban on wastewater sludge to landfill would be practicable. A high value reuse of nutrients contained in wastewater sludges is to produce agricultural amendments. New Zealand examples include the vermicomposting systems operated by mynoke² in the central north Island, and bio boost fertiliser³ produced in New Plymouth. Barriers to such reuse alternatives are addressed in question eight.

Other opportunities exist for the wastewater sector to assist in reducing organic waste to landfill. Co-digesting organic waste (such as food waste, organic industrial bi-products, and fats oil and grease) in combination with wastewater sludge digestion processes is a proven method for enhancing biogas production from wastewater. There are about 16 municipal

¹ Pg53, 2019-20 National Performance Review, www.waternz.org.nz/NationalPerformanceReview

² <https://www.mynoke.co.nz/>

³ <http://www.bioboost.co.nz/>

sludge digestion facilities in New Zealand, mostly concentrated in large cities and urban centres⁴.

Several full-scale examples of this technology are in operation internationally. For example, Yarra Valley Water operates a food waste to energy facility in Wollert, Melbourne that co-digest sewage and organic waste to produce energy since 2017⁵. A second co-digestion facility at Lilydale facility is about to enter the construction phase to process 50,000 tonnes of food waste.

8. What are the barriers or roadblocks to achieving stage one actions and how can we address them?

Contamination of waste and end-user acceptance are two major barriers to the reuse of wastewater sludges. We discuss how end-user acceptance could be improved in our response to question 28. Current practice is to view biosolids as a disposal problem instead of via the lens of circular economy/product recovery.

Trade waste management (the management of liquid waste from industrial and commercial facilities) is necessary for reducing contamination of sewerage sludge and enabling reuse. Trade waste practices in New Zealand currently vary in their robustness. Improving trade waste practices through the development of trade waste officer training programmes and provides one opportunity to uplift practices. The upskilling would complement tightening trade waste monitoring (data quality and verification)⁵.

Stronger fines and penalties would also assist in the management of trade waste breaches. Local Government New Zealand have suggested amendments to the Local Government Act to enable enforcement of bylaws with fines would assists with this⁶.

Emerging organic contaminants pose additional challenges to the reuse of sludges and recycled water. Such contaminants are introduced through chemicals present in household and personal care products, pharmaceuticals, and agrichemicals. The use and discharge of such products is largely unregulated. ESR is undertaking research⁷ to identify the key emerging organic contaminants currently present in New Zealand. Further investment is needed to advance our understanding of these contaminants, their risks, and how to reduce them.

Providing additional treatment at wastewater treatment facilities can be used as a last resort. (e.g. thermal treatment of PFAS such as biochar pyrolysis). While such treatment

⁴ MfE Wastewater Sector Report (2020),
<https://environment.govt.nz/assets/Publications/Files/wastewater-sector-report.pdf>

⁵ <https://www.yvw.com.au/help-advice/food-waste-energy>

⁶ <https://www.rnz.co.nz/news/in-depth/435111/revealed-the-companies-dumping-contaminants-down-the-drain>

⁷ <https://www.esr.cri.nz/home/about-esr/our-science-in-action/managing-the-risk-of-emerging-organic-contaminants/>

schemes can be effective processes would require significant capital investment and/or involve higher operating costs, leading to an increase in water charges. Risk mitigation via source reduction should be considered in future policies supporting the new Waste Strategy.

28. How else could we improve the regulatory framework for product stewardship?

Develop a consumer accreditation scheme for reusing recovered organic products on soil. The agriculture community needs a robust accreditation process to ensure that recovered organic products will not contaminate soils. This could be achieved through an accreditation scheme based on the Guidelines for Beneficial Use of Organic Materials on Land⁸.

Kind Regards,

Lesley Smith
Insights and sustainability advisor, Water New Zealand
Lesley.smith@waternz.org.nz, 0210761964

⁸ Guidelines for Beneficial Use of Organic Materials on Land
https://www.waternz.org.nz/Article?Action=View&Article_id=1212