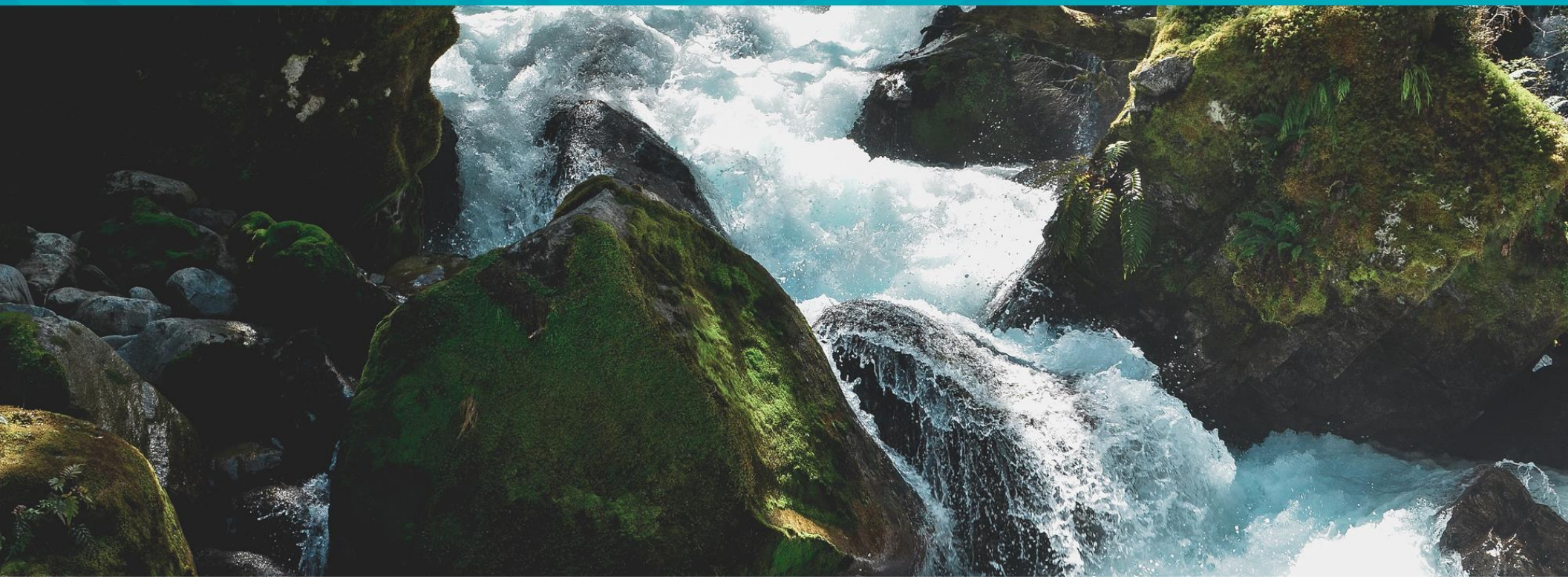
Wastewater Standards Technical Review Group

Feedback and potential proposals – Biosolids standard



New Zealand context

Feedback on New Zealand context

- The technical review group provided feedback on the section of the draft report on the NZ context for beneficial reuse of biosolids. This included some areas where further information could be obtained.
- One area of discussion was existing consents or plans that use (or are based on) the 2003 Water NZ biosolids guidelines or a variant of them. The group suggested contacting the regional council network to identify consents of this nature. Group members were not aware of a large number of existing consents or references in plans to 2003 Water NZ guidelines. In addition to those mentioned in the draft report, the Auckland Unitary Plan references the 2003 guidelines.
- Other information was:
    - New Plymouth District Council has produced Bioboost (a fertilizer biosolid) over a long period in accordance with the 2003 Water NZ guidelines - Bioboost - how it is made;
    - Tokoroa is arguably the biggest producer for beneficial reuse of biosolids in NZ;
    - Taupo has its own farm for development and application – this land is leased off iwi;
    - There was discussion about whether natural processes that convert biosolids to fertiliser might be more acceptable to Māori – for example, worm farming is common in New Zealand and is one way to process biosolids

Feedback on New Zealand context

- There was discussion about whether a standard linking processing of beneficial ruse of biosolids to permitted activity status is necessary. The alternative would be for biosolids to be treated like any other fertiliser.
- The competing issues that were discussed here included:
    - whether there are benefits in a “minimal regulation” approach;
    - whether certainty was preferable across the country, to ensure that all councils take a consistent approach (some may take a risk averse approach and not allow fertiliser based biosolids to be used);
    - whether permitted activity status may be one factor in unlocking reuse of biosolids in the broader horticultural / agricultural sector. This included a broader discussion around the barriers to a viable biosolids market which are regulatory and social licence.
- The group discussed the need for clear definitions of biosolids alongside grading – for example, some regional councils consider biosolids to be fertiliser if it has been sufficiently composted.
- The group discussed the link between biosolids application onto land and registration as a HAIL site, which can affect people's willingness to accept this material. Biosolids that are used as soil conditioners are excluded from HAIL guidance (G5).

International Practice

Feedback on international practice

- While headline characteristics of other jurisdictions is outlined in the report, it was difficult to understand the arrangements of other countries (e.g., whether using guidelines or mechanisms similar to standards). Some jurisdictions have had arrangements in place for decades.
- There was considerable discussion of contaminants of emerging concern (particularly, organic chemicals such as microplastics or PFAS). There was agreement this area needs to be covered in discussion document, based on research already conducted by Water NZ (three separate reviews into emerging contaminants, primarily based on the international experience - https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=6733)
- Guidelines can sit outside the standards, which may be an appropriate mechanism to respond to emerging areas such as PFAS in the short term.
- The group discussed the approach the work the Environmental Protection Authority is conducting with its Australian counterpart in relation to PFAS and biosolids. To ensure alignment (and so there is not double regulation by two Crown entities) Taumata Arowai will engage with the EPA ahead of its discussion document.

Review / replacement of Water NZ biosolids guidelines

2024 Water NZ biosolids technical guide

- Lesley Smith (Water NZ) and Rob Tinholt (Watercare) led a discussion on the revised Beneficial Use of Biosolids and Other Organic Materials on Land technical guide.
- The guide has been circulated to key stakeholders for a final round of feedback and the aim is to finalise it before the end of the year.
- The recommendations in the draft report are to implement this technical guide as part of a biosolids standard. There was discussion about how this would occur (covered in subsequent slides).

Case studies feedback biosolids

Feedback on iwi and hapū views relating to reuse of biosolids

- It was acknowledged that iwi and hapū are likely to have a range of views regarding beneficial reuse of biosolids – informed by their respective kawa and tikanga (protocols and practices).
- The use of biosolids that interact with mahinga kai practices would require a process of noa to remove the tapu that human waste carries.
- The mixing of waste is a barrier to potential reuse options. Any waste that includes human waste, will require a higher level of treatment and fewer potential reuse options compared with industrial waste.
- The Rotoiti-East Rotomā case study detailed pre-treatment approaches that removes biosolids at each property. This was seen as a mitigation for the impacts of any overflows that may occur within a network.
- There were strong views about biosolids being transported from one region to another, particularly between different iwi areas.
- Any reuse standard should also ensure that appropriate engagement is undertaken which accounts for at place perspectives.

Feedback on iwi and hapū views relating to reuse of biosolids

- There is a need to differentiate between views on disposal to land versus beneficial reuse of biosolids. Some engagement with iwi has shown an openness to exploring options for reuse.
- Any reuse standard should also ensure that appropriate engagement is undertaken which accounts for at place perspectives.
- Greater commentary on sludge and biosolids in the report would be useful. Agreed additional perspectives from case studies on biosolids would be helpful and this could be raised in future engagement. Biosolids didn't feature heavily in the first round of case study engagement.
- Hastings WWTP was discussed and the setting up of a working group under the Local Government Act. Hastings came without a solution in mind. Trucking sludge was abhorrent and natural process was wanted. Process involved showing iwi that there was living organisms (through microscope) and shifting language to biotransformation. Low loading because of the age of sludge, ahead of discharge to the ocean. Strong legislative backing of the working group means they are still involved and will be involved in future changes to arrangements in Hastings.

Potential proposals for discussion document

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- Taumata Arowai will release a discussion document outlining Government proposals for wastewater environmental performance standards in March.
- These proposals could include a biosolids standard that is based on the revised Water NZ biosolids technical guide. This has been circulated to key stakeholders for a final round of feedback and the aim is to finalise it before the end of the year.
- The proposal will be to implement the core areas of the technical guide as a wastewater environment performance standard. Alongside this, Taumata Arowai would issue its own guidelines about the detail of the standard and how it should be implemented (for example, by manufacturers of fertiliser from biosolids).
- Taumata Arowai will work with Water NZ and its biosolids steering group as part of development of the standard and guidance, to ensure they properly implement the technical guide and reflect the expert evidence and stakeholder feedback received as part of its development.

Potential proposals for discussion document (cont)

- The aspects of the Water NZ that will be implemented through a wastewater standard are:
    - The grading system for processing for biosolids, with links through to activity status (permitted activity for biosolids that has been converted to fertiliser by achieving pathogen and contaminant A1 grade, controlled activity for B1 grade, and discretionary activity for B2 grade);
    - The requirements relating to pathogen and vector attraction treatment;
    - Contaminant grade limits;
    - Exclusion periods for use of products that have not achieved fertiliser (A1) grade;
    - Mass loading requirements based on 200kg / N / ha
    - The restrictions around application of biosolids to certain types of land.

Potential proposals for discussion document (cont)

- Monitoring and reporting arrangements will need to be considered further by Taumata Arowai. This will split into two areas:
    - Firstly, there will need to be monitoring and reporting requirements for manufacturers who process biosolids to meet the grading requirements of the standard. Manufacturers will need to comply with these requirements to achieve the activity status implemented as part of the standard.
    - Secondly, there will need to be monitoring and reporting requirements for people who apply biosolids to land in large quantities, similar to the arrangements in the UK. These will be based on the mass loading requirements and soil testing requirements in the technical guide. Taumata Arowai will explore ways to implement these arrangements through existing frameworks (eg freshwater farm plans).

Potential proposals for discussion document (cont)

- The discussion document will propose that emerging contaminants will be kept under active review by Taumata Arowai.
- The discussion document will propose options for organic contaminants such as microplastics and PFAS:
    - Guidelines released by Taumata Arowai could include advice on contaminant grade limits in areas of potential concern (such as organic contaminants like microplastics or PFAS). These areas could be brought into the standard over time;
    - A second option is that, together with guidelines, particular plants could be required to test for emerging / organic contaminants such as microplastics or PFAS, based on a risk analysis. This would provide a local baseline for quantities of these contaminants that might trigger stricter regulation;
    - <<EPA>>