Regional Public Health
Better Health For The Greater Wellington Region

31 March 2017

New Zealand Water and Wastes Association Waiora Aotearoa
PO Box 1316
WELLINGTON 6140
nick.walmsley@waternz.org.nz

Dear Nick

Re: Submission on Draft Water New Zealand Good Practice Guide for the Beneficial Use of Organic Waste Products on Land

Thank you for the opportunity to provide a written submission on the Draft Water New Zealand Good Practice Guide for the Beneficial Use of Organic Waste Products on Land, incorporating Volume 1 (The Guide) and Volume 2 (Technical Manual). Our comments are predominantly focussed on Volume 1.

Regional Public Health serves the greater Wellington region, through its three district health boards (DHBs): Capital & Coast, Hutt Valley and Wairarapa and is based at the Hutt Valley District Health Board.

We work with our community to make it a healthier safer place to live. We promote good health, prevent disease, and improve the quality of life for our population, with a particular focus on children, Māori and working with primary care organisations. Our staff includes a range of occupations such as: medical officers of health, public health advisors, health protection officers, public health nurses, and public health analysts. The Ministry of Health requires us to reduce potential health risks by ensuring that public health risks associated with resource management activities are considered.

We are happy to provide further advice or clarification on any of the points raised in our written submission. The contact point for this submission is:

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Kind Regards

Dr Jill McKenzie
Medical Officer of Health

Peter Gush
Service Manager

General statements

Regional Public Health supports the safe, efficient and sustainable use of biowaste (organic waste materials/products) and where possible diversion from landfill.

Regional Public Health supports the intent of the proposed guidelines to provide a more consistent approach to the management of organic waste products to land. We also support the intent of the guide to be a 'living document' with regular review to incorporate current knowledge on the use of organic matter.

It is important that the guidelines should maximise the economic, social and environmental benefits of the disposal of organic waste materials and minimise the risk of negative effects on the environment and public health.

Regional Public Health welcomes the enlargement of the guidelines to cover a range of organic waste from both human and animal sources rather than being confined to treated sewage sludge. Regional Public Health believes it is not clear whether the guidelines are intended to cover only solid organic waste materials, or a wider class of organic waste products. We note that dairy shed effluent is specifically excluded but it is unclear if other non-solid organic waste is also excluded, for example, the discharge of treated wastewater effluent to land. We believe the guidelines would benefit from a more inclusive definition specifying what is covered by the guidelines and what is excluded.

We note in Section 1.1.1, page 1, the intent that animal wastes during a disease outbreak will be controlled under the Biosecurity Act and recycling of the organic waste will stop. We recommend that there is also consideration of how to manage recycled organic waste of human origin during disease outbreaks.

Specific comments on page three questions

Should the word 'waste' be included in the title and descriptive text?

Regional Public Health supports the view that the title refers to organic waste products and notes that use of the word product recognises that many sources of organic waste material can be become a useful product rather than materials that are traditionally disposed of.

Should the proposed 'Type' 1A, 1B etc. be used or revert back to the previous Aa, Ab etc nomenclature used in the 2003 Biosolids Guidelines?

Regional Public Health is comfortable with the proposed grading titles. We recommend that a copy of Table 5.4 Product Pathogen Standards and Table 5.5 Product Contamination Concentration Limits are provided in Section 3.1 to provide clarity on the definition of this revised nomenclature.

Should measurement of emerging organic contaminant limits be mandatory for all biosolids applied to land so that a New Zealand database can be established more quickly, giving a greater ability for evidence based review?

We are unsure if this question is limited to biosolids versus all organic waste materials. While Regional Public Health agrees that measurement of emerging organic contaminant levels is warranted and should be expanded, we do not agree that it should necessarily be mandatory for all organic waste materials applied to land. There will be some classes of organic waste (for example household green waste utilised outside of the home environment) where the presence of emerging contaminants could be expected to be virtually absent. The extent of a mandated testing regime should be informed by a risk assessment, of which biosolids represent a group of materials with higher health risks for reuse.

How useful and relevant are the Guides?

The guide is useful given increasing interest in sustainable practices and reuse of organic wastes and the need to increase awareness of potential health risks which can be managed via appropriate mitigation strategies.

Are there any concerns over the proposed changes?

It will be important that implementation of the guidelines is always accompanied by a risk assessment so potential risks are identified and appropriate mitigation measures are applied to protect human health. This is particularly important for any activities the guidelines recommend as permitted activities (that is application of Type 1A). Provision of a risk assessment template (based on Section 4) as part of the guidelines could support routine incorporation of this approach to application of the guidelines.

We recommend that the wording in Section 6.8, page 23, around when soil should be tested pre application of organic waste materials is clarified as it is difficult to determine this from the text, for example, it appears to read that soil testing (for existing contamination and background E. coli) is only recommended prior to application of Type 1B and 2B materials. A table of recommended soil sampling pre and post application will provide clarity for each type of organic waste material. It will be important to emphasise that although the level of contaminant (chemical or pathogen) accumulation will be captured by post application monitoring, decisions about the appropriateness of the site being utilised for application are necessary prior to commencement. This type of risk assessment can take into consideration the current planned use of the site and consider potential impacts of future use in relation to likely levels of accumulated contaminants. These aspects could be added to the Land Application Site Management Plan and Nutrient Management Plan (Sections 7.2 and 7.3, page 30).

Regional Public Health notes that Section 7.4.4, page 32 states that soil contaminant concentration before organic waste product application is a record that should be kept by Dischargers of Type 1B, 2A and 2B products. We recommend that this guidance is aligned with the final guidance wording from Section 6.8, in particular noting if monitoring is for chemical and bacteriological contamination.

Regional Public Health notes the recommended health warning as part of the labelling requirements (Section 7.5, page 32). The suggested wording is focussed on preventing illness from the legionella micro-organism (ubiquitous in the environment). Given these products carry a potential health risk (albeit small or negligible for Types 1A and 2A) from exposure to human pathogens, we recommend warning labelling as follows:

> *"This product may contain a variety of living micro-organisms, some of which on rare occasions can cause illness in humans. The risk is highest for older people and those with reduced immunity. Please take the following precautions:*
> *1) Avoid opening the bag in enclosed areas;*
> *2) Avoid inhaling the mix;*
> *3) Always wear gloves and wash hands after use and consider use of a face mask;*
> *4) Work with damp or wet mix/soil to reduce the dust potential; and*
> *5) See your doctor if you develop a high fever, chills, breathlessness or cough, vomiting or diarrhoea."*

Section 9.3 Application Strategies, page 38, notes that the method of applying organic waste materials can determine the range of potentially adverse environmental effects. Regional Public Health also notes that the method of application can have direct impacts on potential health risk (for example, via inhalation of aerosolised matter containing pathogens outside the application area). This should also be part of the risk assessment for use of organic waste.

Section 9.6, page 39, recommends background soil testing for E. coli concentrations. It would be useful to clarify if this guidance is intended for all types of organic waste material or only certain types. The section states 'If numbers of E. coli are found to be 100 fold higher than background counts, decisions about further restricted access or land-use should be made on a case-by-case basis after consultation with the local Medical Officer of Health (Health Act, 1956).' Regional Public Health would like to understand the evidence base of this recommended trigger level for notification to the Medical Officer of Health. Although useful to have a numerical trigger level, the risk will also depend on the proposed activities for the site and likely exposure risk.

Regional Public Health recommends that this section 9.6 should be part of consent conditions so that the local authorities are notified (including the consent authority) and the Medical Officer of Health (via the public health unit) is notified regarding the proposed actions to protect public health.

Section 3.5 Health Act 1956, page 62, Volume 2 Technical Manual has been transferred from the 2003 Biosolids Guidelines and states that the 'Medical Officer of Health primary concern is to ensure organic materials management does not create a nuisance'. Part 2 of the Health Act 1956, 'Powers and duties of local authorities' and specifically Section 23, 'General powers and duties of local authorities in respect of public health', notes the role of local authorities in identifying and abatement of nuisances, and in particular:

> *(b) to cause inspection of its district to be regularly made for the purpose of ascertaining if any nuisances, or any conditions likely to be injurious to health or offensive, exist in the district:*

(c) if satisfied that any nuisance, or any condition likely to be injurious to health or offensive, exists in the district, to cause all proper steps to be taken to secure the abatement of the nuisance or the removal of the condition:
(f) to furnish from time to time to the medical officer of health such reports as to diseases, drinking water, and sanitary conditions within its district as the Director-General or the Medical Officer Of Health may require.

The Medical Officer of Health has more of an oversight role of the actions of the local authority and can act on behalf of the local authority if sufficient action is not being undertaken. Regional Public Health recommends that section 3.5 of the technical manual is amended to note that the duties to ensure that the manufacture, distribution or use of these materials does not create a nuisance that could be injurious to health are the responsibility of the local authority. The Medical Officer of Health can take action if the local authority is not adequately protecting public health.

Are the changes to the guidelines able to be aligned with current regional and district plans?

We have no comment on the ability to align with plans and this question is best answered by consenting authorities. It is important that the guidelines are easy to follow and the sections are summarised. Currently we have some concerns that it may be difficult to clearly define a controlled activity status for application of Type 1B by stating "if applied according to the requirements of this Guide". It is suggested that model plan rules are developed to assist with drafting rules for both permitted and controlled activities that would meet the guide requirements. It will be important that that activity status rules provide for both commercial and domestic uses.

Is using the NES for Assessing and Managing Contaminants in Soil to Protect Human Health April 2012, an acceptable means of protecting human health in the urban environment?

Regional Public Health believes that the NES may not adequately cover the use of non-compliant organic waste products in the urban environment, particularly in the residential sector, as the use of non-compliant organic waste products may not be captured unless there is a subdivision or a change of land use.