The Secretary
Legislative Council Select Committee - TWT
Legislative Council, Parliament House, HOBART 7000

September 4 2020

SUBMISSION FOR THE INQUIRY INTO TASWATER OPERATIONS

This submission outlines concerns regarding **Terms of Reference (4) the management of sewage treatment including the disposal of the treated waste biosolids.**

Concerns across the community are growing with regards to the management and regulation of sewage treatment and biosolids reuse. There is mistrust within the community and a concern that the components of both biosolids and sewage sludge are not being properly and entirely identified and that management is subsequently deficient. In the case of the proposal for the composting facility at St Leonards there are many concerns about potential risks created from spreading biosolids and associated leachate irrigation in the Distillery Creek and Nth Esk River catchments. Concerns include the contamination from pathogens, heavy metals, plastics and emerging contaminants such as per-and polyfluoroalkyl substances (PFAS) and the impacts on neighbours and TasWater drinking water uptakes.

1. Issues with regulations of sewage sludge treatment, biosolids spreading and leachate irrigation.

The proposal for the composting facility at St Leonards has created a greater public awareness of the management issues of sewage treatment and spreading of biosolids on farmland. The Tasmanian Biosolids Reuse Guidelines 2020 (Environmental Protection Authority, 2020) state that the Environmental Protection Authority (EPA) and Local Government are the regulatory bodies for permitted use, level 1 and level 2 activities under the Environmental Management and Pollution Control Act 1994 (EMPCA). It has become apparent that there have been a number of breaches at facilities around the state despite the requirement of regulation from the above bodies. A community group opposing the St Leonards proposal recently met with the City of Launceston council who stated that they have not and do not regulate or monitor biosolids spreading.

There is also concern about the level of scrutiny with regards to the reuse of leachate wastewater associated with compost facilities. The *Environmental Guidelines for the Use of Recycled Water in Tasmania* (DPIWE, 2002) highlight the responsibility of all suppliers and users of wastewater to implement a planned program for monitoring and collect data of the water quality. This includes recommendations for regular monitoring of soil, groundwater, surface water, flow and wastewater quality (influent and effluent). Again the concern is that despite these guidelines the requirements are not being undertaken with sufficient examination.

Breaches have occurred at the Dulverton Waste Management plant and recently the contamination from the facility on the Plenty River has resulted in significant environmental impact. So it would seem that the current regulatory systems do NOT protect the catchments that these facilities are in. This has increased concerns about the proposal for St Leonards where sewage sludge treatment, biosolids spreading and leachate irrigation is planned for the upper catchments of drinking water uptakes for thousands of people in Launceston.

Does TasWater plan to put in place greater regulatory systems in order to protect catchments that are subjected to sewage sludge treatment, biosolids spreading and leachate irrigation?

Will TasWater increase monitoring and regulating above or at Water Treatment Plants if sewage sludge treatment, biosolids and leachate spreading is approved in the Distillery Creek and Nth Esk River catchments?

2. Issues with PFAS and plastic contamination.

Current science shows increasing evidence of the presence of emerging contaminants in sewage sludge such as per-and polyfluoroalkyl substances (PFAS) and microplastics. There is a growing concern of the explosion of new types of pollutants (University of Melbourne, 2019) and the issues for scientists and regulators when managing the impacts on public health and the environment. There is recognition that the challenges facing the water sector, for example, are significant.

International, national and state policies recognise the high mobility and toxicity of these synthetic chemicals and detail a range of actions endorsed by governments. The *PFAS National Environmental Management Plan 2020* (Heads of EPAs Australia and New Zealand, 2020) (PFAS NEMP 2020), endorsed by the Tasmanian Government, has guiding principles, which suggest quantitative PFAS assessments are undertaken based on appropriate analytical methods. There is specific reference in the PFAS NEMP 2020 to the consideration of monitoring the impacts of soil from reuse of biosolids.

The *PFAS Action Plan for Tasmania* (Environmental Protection Authority, 2019) also identifies specific actions and areas of responsibility for implementing the *Intergovernmental Agreement on a National Framework for responding to PFAS contamination* (Council of Australian Governments, 2020). Actions include the Development of a PFAS Inventory and an Ambient Monitoring Program.

An additional set of concerns regarding PFAS and microplastic contamination includes the inability to detect a significant proportion of these products when testing water quality, the low-level technology available to undertake testing, and the fact that TasWater doesn't currently test for a number of these contaminants (TasWater, pers. Comm. 18 August 2020). Further compounding the issue is that *The Tasmanian Biosolids Reuse Guidelines 2020* (Environmental Protection Authority, 2020) has not prescribed specific contaminant acceptance thresholds due to the fact that guidance values recently reviewed by the Australian Department of Health are potentially subject to modification.

Apparently there are over 1200 tonnes of microplastics deposited on farmland in Australia from biosolids spreading (Mohajerani 2019). Impacts include the toxicity from the plastic itself and the concern that heavy metals are attaching to micropastics and become more mobile. This is becoming a huge problem for scientists and regulators with regards to public health and environmental impacts. In a meeting with the community group representative opposing the St Leonards proposal TasWater claimed that there is no testing for total contained plastic in the sewage sludge.

There are significant gaps between the guiding principles and current management systems of the sewage treatment and the reuse of biosolids.

Is TasWater going to implement greater testing and data collection of emerging contaminants including PFAS and plastics?

Should TasWater be removing contamination at Waste Water Treatment Plants so uncontaminated biosolids can be utilised appropriately?

There are many issues regarding the current management and regulation of sewage sludge treatment, biosolids and leachate irrigation. More satisfactory monitoring of management systems need to be implemented immediately and alternative methods of treatment and reuse must be developed for the future.

Thank you for the opportunity to comment,
Pip Andrewartha

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