

Submission for Inquiry Into Taswater Operations

I would like the opportunity to present to the members of the Committee the following.

TO R (1) The impact of compliance with regulated bodies.

Comment: The requirement by Taswater to submit an “Annual Environmental Review” (AER) to the Director of EPA is required for level 2 Sewage treatment plants (STP). The EPA are the regulators of level 2 activities, as prescribed by Schedule 2 of the Environmental Management and Pollution Control Act 1994.

During 2018-19 Taswater operated **79** level 2 Sewage treatment plants and **33** level 1 Sewage treatment plants. (Ref: Report on the state of the Tasmanian water and sewerage industry 2018-19)(2.3.1)

This raises concerns, given the EPA are the regulators of level, 2 sized activities. Level 1 sized STP are therefore regulated by the relevant local council, for which the level 1 STP is located. The environmental performance, (or non performance), data of Taswaters Municipal regulated level 1 Sewage treatment plants therefore is not captured, or readily available.

The EPA makes AER’s available to the public upon request, information which impart, allows the community, government and regulators to examine Taswaters environmental performance.

In the “**Report on the state of the Tasmanian Water And Sewerage Industry 2018-19**” issued by the economic regulator.

Page 55 (6.3.6) it states:

“The EPA has determined that reliability of the data provided in the 2018-19 AER is not sufficiently high, and expects the data quality to improve in subsequent reports.”

It can be shown that publicly available data for level 2 Sewage Treatment Plants is “not sufficiently high” but more worryingly it would seem totally absent for Taswaters level 1 sewage treatment plants.

Both level 1 and level 2 sized sewage treatment plants have the potential to cause environmental harm, and therefore should be regulated by the one government agency. Also this would allow the operation of all sewage treatment plants to provide performance data which could be objectively examined by the community, government, and regulators.

TO R (4) The management of Sewage treatment including the disposal of the treated waste biosolids;

Comment: Taswater reported that the proportion of biological waste material “Biosolids” that was reused in 2018-19 was 100.8 per cent of the volume generated. The excess beyond 100 percent indicates some material was drawn from Taswaters already stockpiled biosolids waste material.

Composting of TasWaters “biosolids” increased from **18 per cent** in 2017-18 to **85 per cent** in 2018-19.

(Ref: Report on the state of the Tasmanian water and sewerage industry 2018-19)(6.4)

In December 2016 the EPA and TasWater signed a three-year Memorandum of Understanding on Public Wastewater Management (MoU) aimed at improved regulatory compliance. The MoU expired on the 2 December 2019

A key priority identified by the EPA in the MoU was

“Attaining sustainable, low-cost and efficient state-wide biosolids management practices with a high proportion of biosolids reused. This includes addressing legacy sludge accumulations and reliably meeting an ongoing pre-emptive desludging roster for biosolids will support achievement of these goals”

(Ref: Report on the state of the Tasmanian water and sewerage industry 2018-19)(8.2)

The on farm disposal of Taswaters biosolid waste, and biosolid compost is deemed a level 1 activity (generally speaking based on normal spreading rates of less than 50 tonnes per hectare) and therefore is not regulated by EPA instead is regulated by the municipal council for which the biosolids disposal is taking place. It could be deemed a “permitted use” or a level 1 activity requiring a permit under LUPPA. This depends on the specific local government planning scheme. In both cases the municipal council has the obligation to ensure pollution does not arise as a consequence of on land disposal of TasWaters biological waste.

It would seem that most municipal councils are unaware of their requirement to regulate such activities. Or the Municipal councils do not have the resources to regulate the spreading of Taswaters waste. Therefore it can be shown that the spreading of Taswaters biological waste onto Tasmanian farmland is going largely unregulated.

In a recent meeting with the Launceston City Council senior planning officers, were unaware that Municipal Councils including Launceston Council are the regulating authority for level 1 biosolids disposal activities.

Also Launceston Council planning officers confirmed they were unaware of, and had not inspected any of Taswaters biosolids disposal activities for the Launceston municipality.

Taswater has confirmed that they disposed of Biosolid waste material onto the property of Dunedin at St Leonards (Ltn Municipality) in 2016. This fact was unknown to the Launceston Council, who are the regulators for that activity.

Given the recent ramping up by TasWater of on farm disposal of their biosolid waste material, (18% up to 85% in 1 year) both via direct application but also pre composting prior to application, it could be said that Municipal Councils are unaware of their regulatory responsibility when it comes to the on land disposal by Taswater of its biological waste.

Current environmental law requires TasWater, being the producer of the biological waste, to undertake the treatment, testing and compliance checks of their waste.

In a recent meeting (18 Aug 2020), TasWater officials stated TasWater does not, nor has ever conducted testing for the total contained plastic content of the Biological waste which is being disposed of by Taswater onto farmland around the state.

A Taswater senior laboratory officer was unaware of the fact that methods even exist for assessing total contained plastic contamination of Taswaters Biosolids. Industry standard laboratory testing methods do exist for such a test, and Taswater should be conducting testing for total plastic contamination, as they are required to do so, in order to comply with existing government and environmental legislation and the TBRG 2020. The results/data from the independent testing for total contained plastic contamination should be obtained by authorities prior to granting on land disposal by Taswater of its biosolid waste.

Plastics in all forms including micro and nano forms are known major contaminants of biological waste around the world, yet despite this Taswater has never tested for total contained plastic contamination.

The Tasmanian Biosolids Reuse Guidelines 2020 (TBRG 2020), defines plastic as a physical contaminant (Pg 9 TBRG 2020) Also the TBRG 2020 state that Biosolids must also be free of physical contaminants such as plastics (pg 17 sect 7, TBRG 2020)

Also existing government environmental legislation, encompasses plastics within its definitions as a contaminant/pollutant.

Therefore why is Taswater not testing their biosolid waste for total contained plastic contamination?

And why is existing government legislation not being enforced and applied to Taswater in regards to the requirement for Taswater to test and provide data to authorities on the total contained plastic contamination of its biological waste material?

The lack of enforcement of existing government regulation by the EPA and other agencies on this, is fundamentally flawed given that plastic is by definition in existing legislation a pollutant and also is known worldwide to be intrinsically linked to Biosolids. The result of this is that the environment, farms and gardens are being contaminated by Taswater with environmentally resilient plastics.

The distribution and reprocessing of Taswaters Biosolids.

Taswater is sending all classes of its biological waste to composting sites around the state. At these sites the biological waste is diluted with a carbon source (woodchips) and composted. TBRG 2020 states biosolids are to undergo testing in order to ascertain contaminant classification in order to apply allowable end use. Therefore biosolids must be classified on the basis of analysis of representative samples of the product.

If biosolid waste is calculated as class 2 classification it may be applied to farmland, the normal application rate is 50 tonnes per hectare, this equates to 5 kg per square metre. The dry weight of composted biosolid waste is around 700kg per cubic metre. Therefore the application rate onto farmland is around 7 mm thick assuming a dry product is used.

Once class 2 Biosolid waste is applied to farmland the minimum crop restrictions are as follows. TBRG 2020: page 25 table 10.1. (some of the restrictions).

For crops which may be eaten raw, and where harvested parts are close to the soil surface (e.g. Lettuce), planting must be delayed for 18 months after biosolids application.

For crops which may be eaten raw, and where harvested parts are below the soil surface (e.g. carrots, potatoes), planting must be delayed for 5 years after biosolids application.

*Poultry, pigs and other rooting livestock must **not** be grazed on biosolids application or storage areas as feeding habits of these animals can result in high levels of soil ingestion. **Exclusion** is preferable but a withholding period of at least 3 years applies.*

Turf (instant lawn) grown on land to which biosolids has been applied must not be harvested for 12 months after biosolids application.

The composted biosolid waste material from the Dulverton Composting operation is being sold to the public, by landscaping yards throughout the state. It is being advertised as “organic compost” and also this material is being used to manufacture potting mixes and blended to create other garden products.

Marketing names such as magic mix, and veggie mix, turf topdress, are being given to these products that contain Taswaters biosolids.

It is being used in garden soil blends for the filling of raised vegetable beds and being sold for home garden use for families to grow their home grown vegetables in. As is the trend nowadays people are being more self-sufficient by having a few chickens at home and growing their own fresh fruit and vegetables. I would like to point out the following facts.

1. Taswater being the producer of the biosolid waste is responsible for ensuring the end user is aware of the relevant restrictions which apply to the storage, handling and use of their biosolids and restrictions on land use post application, as per the BSRG 2020. (pg 14, sect 5.1)
2. Only class 1 biosolids are permitted for use for retail sale and use in the home garden. The supplier/retailer is required to provide the following information to the purchaser.

Advice the product contains biosolids.

Directions for the safe use and handling of the product in accordance with AS 4454:2012 section 5.2. Including the health warning label as specified. (note AS 4454 is a "voluntary" standard)

And advice for application on areas for vegetables production-specifically leafy vegetables, root and tubers. BSRG 2020 (pg 24 sect 10.1)

3. In accordance with AS 4454-2012 composts, soil conditioners and mulches section 2, general requirements. Any material containing reprocessed biosolids intended for unrestricted use (i.e Class 1 biosolids) must comply with the chemical, physical, organic, and pathogen contaminant requirements.
4. Composting in accordance with AS 4454:2012 does not reduce the potential risk from prions causing bovine spongiform encephalopathy (BSE) and scrapie (animal health Australia 2017) and so to best manage this, biosolids are assumed to potentially contain restricted animal material (RAM).

On a visit to a local landscaping yard, a cubic metre of "Dulverton Organic Compost" was purchased for \$95.00. At no time was I told or offered any information the "organic" compost contained biological waste, nor was I told of any restrictions for the use of the biosolid compost.

The pile in which it was stored did not have signage to state that it contained biosolids. And the various other products which had been manufactured from blending the biosolids compost were also not marked. The bagged biosolids compost and mixtures contained no health warnings or labels as required by regulations.

On getting the "organic" compost home a quick examination revealed significant contamination of plastic, glass, string, used bandaids, rubber of various colours and other detritus. Clearly this would not comply with AS 4454:2012. Clearly this would not pass the required standards for a class 1 biosolid product. So what was the class of the product I had just purchased?

It is frightening to think that with a recommended biosolid application rate on farmland of 5kg per square metre or a layer 7mm thick the restrictions on food crops of up to 5 years applies and the total exclusion of chickens and pigs forever is recommended.

Yet the unsuspecting public can purchase cubic metres of "organic" compost which contains Taswaters biological waste, it being called organic and marketed using names like "vegie mix" or "organic compost" and be taken home by Mums and Dads and put into a garden bed possibly 400mm deep, and immediately plant their vegetables to grow, to feed their family. Also most families aiming for self sufficiency have some chickens in the back yard to provide fresh eggs. Parents and children are unknowingly growing their vegetables in Taswaters biological waste product. Totally unaware of the withholding periods and exclusions surrounding the use of biosolids.

This raises some serious health concerns.

Who is regulating the composting facilities that are composting Taswaters biological waste, in order to confirm class 1 is being segregated from class 2 ?

What systems and recording procedures are in place to ensure only class 1 biosolids are being used to produce the compost for home use, and public sale? Who inspects these systems?

Who is conducting and signing off on the tests that differentiate between Taswaters class 1 and class 2 biological waste? Is testing even taking place?

Should the manufacturing of class 1 biosolids compost which is destined for home gardens be able to be lawfully manufactured on the same site as class 2 biosolids compost, given the risk of cross contamination?

Are people being made aware of the potential health risks of growing vegetables and contamination of home gardens that will occur if class 2 is mixed up with class 1?

Who is inspecting the composting facilities to ascertain if their “organic” biosolids compost is in fact organic?

Are the standards for which classification of class 1 Biosolids strict enough in order to provide the level of safety to the health of the public when class 1 Biosolid compost is being used in the home garden?

Who is regulating farmland that has had biosolids applied to ensure no food crops are not being grown on/in the soil before the correct withholding periods are reached?

As can be shown there many issues and concerns regarding the reuse by Taswater of its biosolids materials. Existing legislation and regulation would appear to be insufficient to protect the environment and the people of Tasmania from a legacy of contamination, both of farmland but also gardens and the food chain.

Currently there exists a situation where Taswaters treatment and classification of its biological waste is carried out mostly by self regulation and compliance. And it can be demonstrated that existing legislation and guidelines are not being complied with.

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Given that plastic which is a fundamental physical contaminant, which can be viewed in Biosolids, Taswater has failed to date to test for, what else does biosolids contain that is not being tested for?

These questions need to be asked, and Taswater needs to provide answers before any more on land disposal of biological "Biosolids" waste continues.

For your consideration, and thankyou for the opportunity to put this forward.

Regards, Alistair Nicholas.