
# Inquiry into Drinking Water and Sewerage Retail Services Pricing Reform

# Submission from Food South Australia Inc.

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# Glossary

**BOD (Biochemical Oxygen Demand):** This measurement provides an indication of the total amount of organic matter present in the waste water. Substances including fats and oils, protein and sugars will all contribute to BOD measurements (at varying rates).

**DAF:** Dissolved air flotation plant.

**Dissolved solids (or Total Dissolved Solids – TDS):** The material that is soluble in water. It includes sugars that are byproducts or waste in processing as well as the salts that are either byproducts or more likely the result of neutralization of acids or alkalis used in cleaning processes.

**Flow**: Limits are set on both instantaneous flow and daily flow (depending on the business) with pipe velocities minimized so as to reduce damage to trade waste lines due to surges in flow.

**LRMC:** Long run marginal cost.

**Oil, Fat and Grease**: A measure of the total fatty material present in the waste water. This material is a problem in trade waste lines as it blocks pipes and can lead to a sudden pipe burst and local flooding. A common waste treatment issue visible in any process line working with fatty materials (including dairy).

**pH**: A measure of the hydrogen ions present in a solution, the pH indicates whether a waste stream is acidic or alkaline. Cleaning chemicals (typically mainly either sodium hydroxide or nitric acid) or the acidic byproducts of microbial reactions such as cheese making may increase the pH to 6-10.

**Suspended solids (or Total Suspended Solids – TSS):** The suspended solids generally include components such as fats and protein. Examples include small particles of cheese, coagulated fats and other material that exits factory drains (small enough to pass through strainers).

**Temperature**: Waste exiting a factory needs to be at a suitable temperature for trade waste lines (pipes) to remove it.

**Total Kjeldahl Nitrogen**: A measure of the nitrogen present in the waste stream, determined using the Kjeldahl technique.

**Total phosphorus**: Phosphorus concentration present in the waste stream.

# Background

Food South Australia Incorporated welcomes the opportunity to make this submission to the Essential Services Commission of South Australia (the Commission), in relation to the Inquiry into Drinking Water and Sewerage Retail Services Pricing Reform.

This submission deals specifically with the proposed pricing mechanisms on trade waste and their impacts on food manufacturers. We do not discuss here water supply and usage.

### About Food South Australia

Food South Australia Incorporated is the State's peak industry body, with 275 members that represent SMEs in the food and beverage (F&B) manufacturing sector and in businesses that supply or provide services to the industry.

### The South Australian Food Industry

In 2013-14, South Australian F&B processors injected an estimated revenue of $8 billion to the State's economy[1]. This revenue combines incomes of about 514 businesses employing 17,675 people. The importance of this sector has been recognised by the Australian Government in its Review of South Australian and Victorian Economies[2], which states that food, wine and agriculture represent a critical growth opportunity in South Australia to accelerate the transition from traditional manufacturing.

The Commission emphasised that this ESCOSA Inquiry "is cast in terms of economic efficiency and water security considerations", and not social and environmental policy. However, the economic and social benefits of the F&B industry should be supported and factored in the Government's policies.

# Key Points in this Submission

This submission highlights the following critical issues about the proposed "user pays" pricing for trade waste, as it would impact food manufacturers.

Some introductory remarks follow, to place some context about the environment in which food manufacturers currently operate:

**1)** Sustainable growth is critical to South Australian food manufacturers and the State's economy. Our Food South Australia survey 2013 revealed that the industry was generally optimistic about their future in South Australia. Yet, the industry operates with very tight margins, with an average[3] EBIT[4] of 6% as a percentage of revenue.

Despite the best intentions of both businesses and Government, the industry cannot realise its potential in South Australia if utilities and waste costs continue to increase, negatively impacting on the bottom line. Just over the past month, food businesses have shrunk their presence in the State, signalled by:

[1] Excluding wine and artisanal bakery.
[2] Australian Government. GROWING OPPORTUNITIES: SOUTH AUSTRALIAN AND VICTORIAN COMPARATIVE ADVANTAGES. Report of the Panels for the Reviews of the South Australian and Victorian Economies. April 2014
[3] Weighted average, taking into account the variation between F&B industry segments and their representation in SA.
[4] Earnings before tax.

- The closure of a significant part of the Arnott's Biscuits operations in Adelaide to consolidate their operations in Sydney and Brisbane.
- The imminent closure of Aldinga Turkeys at McLaren Flat in December, to centralise their operations in NSW.
- The relocation of the processing plant of Huon Aquaculture in Mount Barker to Tasmania.

These closures equate to job losses of about 300 FTEs. Under the proposed full cost recovery model for trade waste services, and considering that 50% of F&B businesses operating in the State have revenues of less than $200,000[5], the SMEs in the F&B sector would experience tougher financial pressures, potentially closing business and shrinking the contribution of the food industry to the SA economy. We cannot reconcile this trade waste approach with the State's aim to see the food industry becoming one of the key sectors that will reactivate manufacturing in South Australia. We need congruent trade waste policies and pricing to support this vision and the growth of the industry – with this intended change in trade waste pricing being a disincentive to grow. Currently the most impacted part of the industry are the SMEs who are growing in staff and production. It is counterintuitive for companies to be penalised for growth.

**2)** The food industry operates in a highly competitive environment. While in other sectors manufacturers may be able to pass any cost increases to consumers, this is not the case in the Australian F&B manufacturing sector. Often, contracts with retailers do not allow for prices increases for periods of time that can vary from 1 to 5 years, depending on negotiations. If manufacturers do increase their prices, their products are at risk of losing shelf-space and being substituted by interstate products or imported product. This competition means that local manufacturers must absorb any sudden increases in costs by eating on their already tight margins.

In view of the above, and although the Commission stated that *"… the Inquiry is to review efficient pricing structures and associated charging arrangements, not whether SA Water's costs are efficient, nor whether SA Water's revenue is appropriate"*[6], it is fair that the industry asks whether SA Water's efficiencies share the same price pressures. IBISWorld estimates that sewerage and drainage services have an average of 12.7% margin (i.e. EBIT as % revenue). For SA Water specifically, revenue **from sewerage and draining services only** is estimated to increase at an annualised 5.7% over the five years through 2013-14, to reach $475.0 million. Trade waste represents about 10% of this revenue[7].

In industry, whenever profits fall, the solution is not an immediate price increase. Instead, an internal review takes place, to understand the reason(s) of low profitability, with remediation for these factors following. The profit fall of SA Water in 2008-2011 is attributed to substantially higher depreciation and interest charges, and costs increased more rapidly than revenue[8].It is logical to ask whether **all** of these factors will be addressed by SA Water, before the new pricing model is established. These questions are pertinent, in view of the Draft Report stating: "*For some matters raised through the Terms of Reference, such as sewerage and trade waste pricing*

[5] Estrada-Flores, S. and Bethell, H. 2014. Mapping of the South Australian Food Industry Sectors and Clustering Rationale. Competitive Foods Initiative. Food South Australai and DMITRE.
[6] Page 3. Draft Inquiry Report.
[7] Allday, A. 2014. Sewerage and Drainage Services in Australia.IBISWorld Industry Report D2812.
[8] Allday, A. 2014. Sewerage and Drainage Services in Australia.IBISWorld Industry Report D2812.

*structures and the removal of rating on abuttal practices, while economic benefits from reform have been identified* ***it has not been possible to fully quantify those benefits at this stage"***[9]. The industry also raises the issue of SA Water having the dual role of setting the limits in trade waste while also being the organisation that profits from non-compliance. There is an inherent conflict of interest in these two responsibilities.

**3)** The manufacturing of safe, high quality food requires intensive cleaning processes, which are not demanded in many other industries. Cleaning, steam production and cooling are in fact the largest items requiring water and most of these operations will lead to water discharges. Therefore, F&B manufacturers are particularly sensitive to increases in usage, supply and trade waste costs. The industry is committed to the environmental and cost benefits of water efficiency. Moreover, food manufacturers constantly pursue waste minimisation, driven by a focus on the reduction of cost of goods and better utilisation of raw and intermediate materials. It is therefore frustrating that F&B manufacturers that have invested significant capital expenditure in compliance are not being rewarded by lower trade waste costs. This situation will worsen under the proposed trade waste price model. Echoing the concerns of Business SA in their submission, the industry is concerned about the increased costs in on-site water treatment infrastructure[10].

Further, SA Water has stated that for the first three years of the new pricing model, the increases would be limited to CPI across all trade waste parameters. However, price increases from July 2017 onwards remain largely unknown. The ability of businesses to plan in a 5-year horizon will be compromised and will also cloud the assessment of expenditure for waste water treatment facilities.

With their approach of "user pays", SA Water seems to be shifting its responsibility to build and maintain water treatment infrastructure to food manufacturers in the State, whose *core* mission and reason of existence is food production and processing. Further, the current infrastructure supported by SA Water does not cover in an equitable manner all the SA regions. Some regional food manufacturers have been told to accept this fact, establishing that SA Water will not invest in water treatment infrastructure in their areas[11]. This philosophy profoundly discourages the growth of regional F&B businesses[12].

**4)** The F&B industry acknowledges its environmental responsibility and acts on sensible improvement programs. Energy, water and waste management are all important to the industry. Businesses are ready to jump into active participation in voluntary actions that make good environmental and business sense. A recent example is the Business Case for Energy Efficient Equipment initiative run by Food South Australia[13] : the program enrolled 28 food manufacturers to find opportunities to decrease their energy consumption, leading to estimated annual savings of 4,102 MWh and

[9] Page 5, Draft Inquiry Report:
[10] http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-BusinessSA.pdf
[11] For example, one Adelaide Hills food business and Food South Australia member has had their discharge limits in the permit reduced, as Shannon Uern (SA Water's trade waste compliance manager), verbally stated, "We don't want to invest in the local treatment works". Why should a business started in the Hills making cheese be penalized through tighter limits and higher charges because it costs SA Water more to treat the waste?
[12] In the words of representatives of the seafood industry in Port Lincoln, "SA Water have stopped confidence and investment here by at first an outright refusal to accept saline discharge over unrealistic limits" followed by the need for expensive monitoring equipment and a further (uncertain) plan of setting a reverse osmosis plant, with no assurances that SA Water will cover the costs of this facility. This approach is particularly vexing, as risk ratings carried out in the area show that old degraded sewer pipes laid below sea level are the culprit of high saline levels in trade waste, not the industry.
[13] http://foodsouthaustralia.com.au/toolkits/energy-efficient-equipment/

additional productivity increases. This program, coupled with the application of some manufacturers to Federal and State grants available to implement corrective actions, led to a total Government-Industry investment of $14 million to realise the energy savings projected. Almost 80% of this investment was from the industry. This case demonstrates that positive mechanisms can bring better return on investment than penalties and increased fees and such programs should be considered to decrease trade waste in the industry.

## Estimated Impacts

We have split the impacts in three major items: 1) gross trade waste costs; 2) monitoring costs; and 3) capital expenditure for compliance.

### Gross Trade Waste Costs

Food businesses generate a range of waste products during processing, with the products somewhat dependent on the type of processing and the efficiency of the plant. Waste types vary significantly from industry to industry, with some generating larger quantities of harder-to-treat waste than others.

The limits set on parameters such as Biochemical Oxygen Demand (BOD), Total Soluble Solids, Total Dissolved Solids[14], oil, fats and grease also vary widely from business to business, and from location to location. For some businesses, compliance with low limits for a parameter such as oil, fat and grease will require significant capital expenditure to install a DAFF plant, despite having relatively low levels of other waste material.

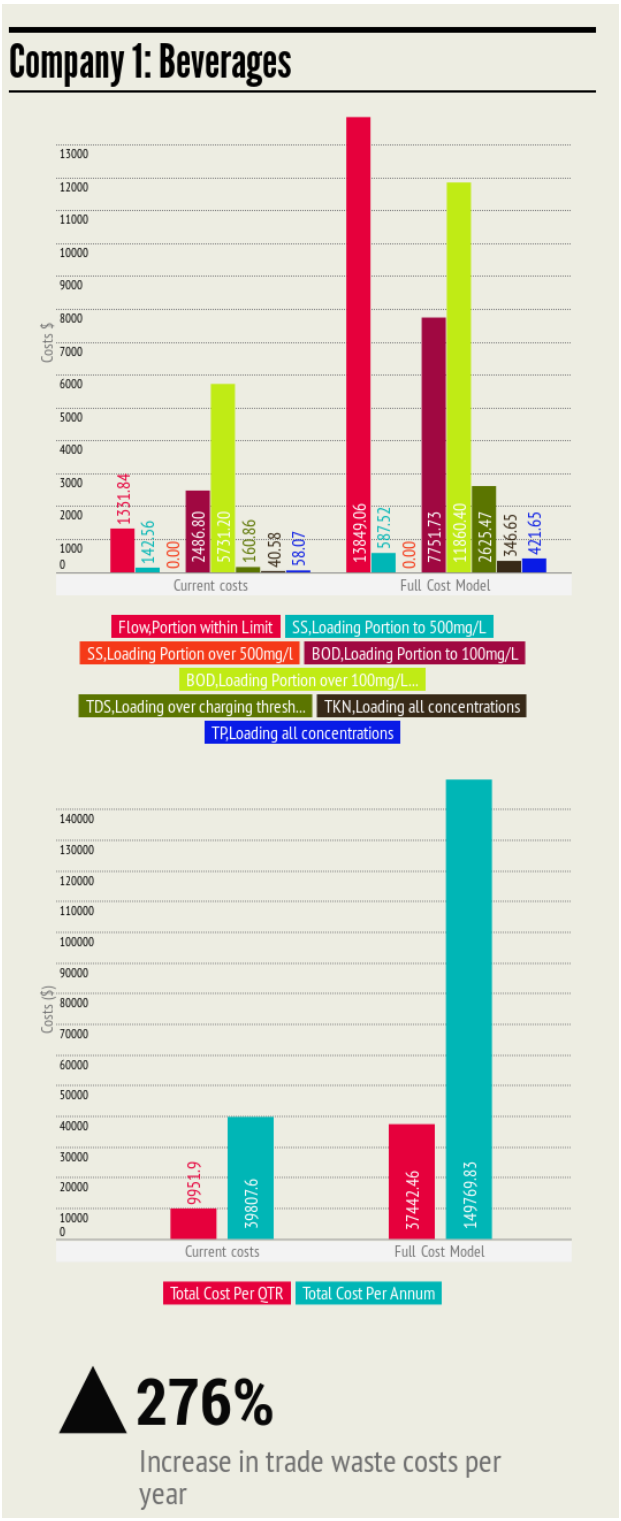
Similarly, compliance with low limits for BOD means that, unless there is a lot of insoluble material, businesses will likely need to install a waste treatment plant of their own. Considering that a large proportion of the industry is located in Adelaide and suburbs, most sites will not have the necessary space for segregation of waste treatment and food processing. The costs of purchasing/renting the required equipment and space for waste treatment for many food businesses will be simply uneconomical.

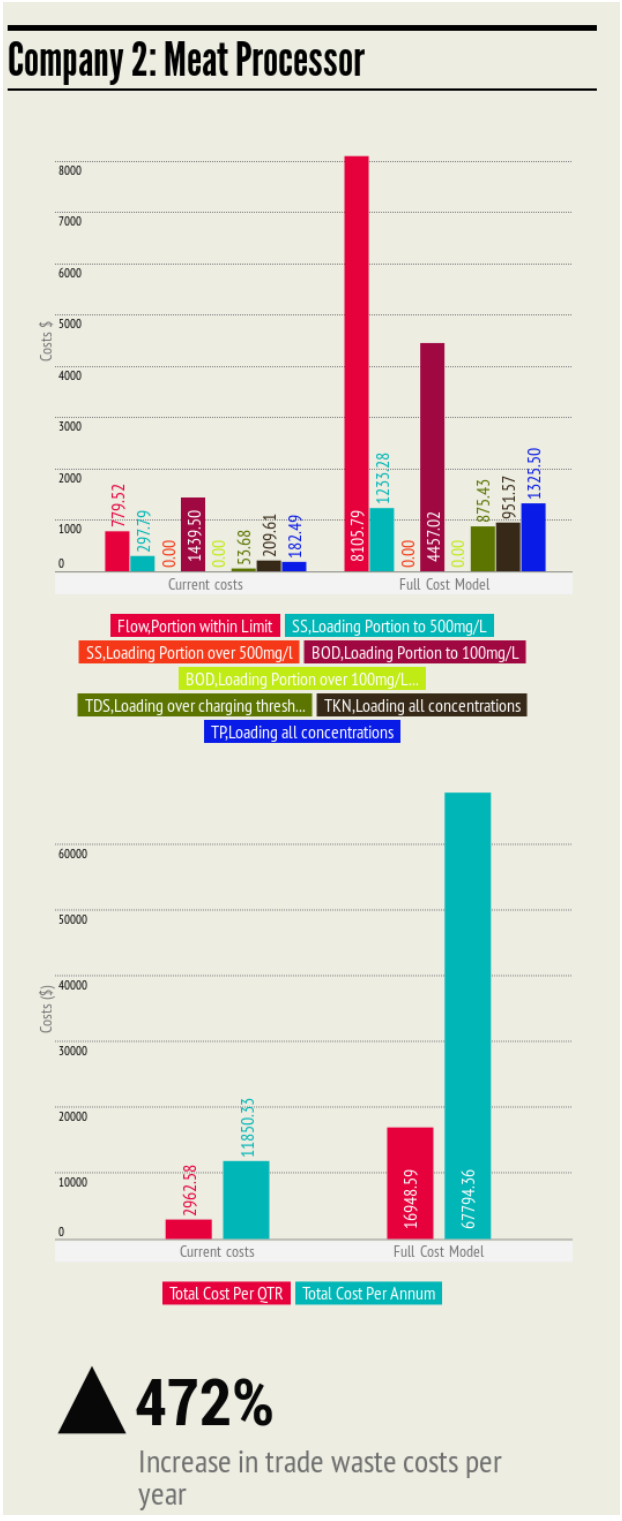
We modelled the effects of the full recovery model on ***gross trade waste costs***, using actual data provided by food manufacturers for this submission. The data used for modelling the full recovery scenario is presented in APPENDIX 4: SA WATER'S TRADE WASTE FEES AND CHARGES 2014/15 of the Commission's Draft Inquiry Report.

The results show that under the full recovery model, all companies would see an increase of over 250% in their annual trade waste costs.

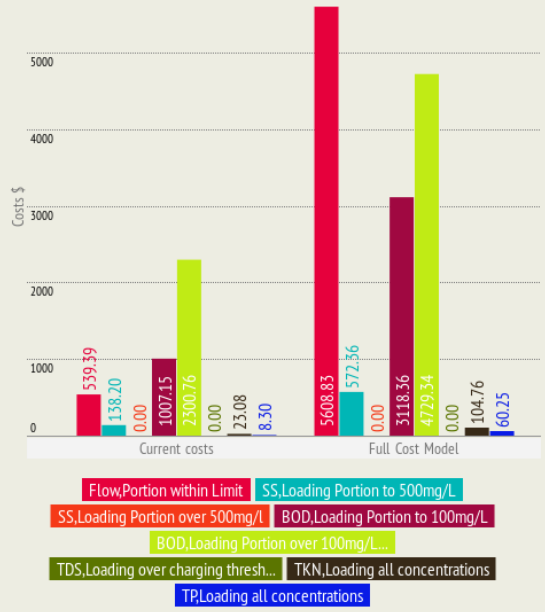
[14] See glossary in the last page of this submission.

**Comparison of quarterly and annual increases in gross trade waste costs under the *Current Cost* model and the proposed *Full Cost* model. Current costs are based on the last SA Water invoice received by each company in the financial year 2013-14.**



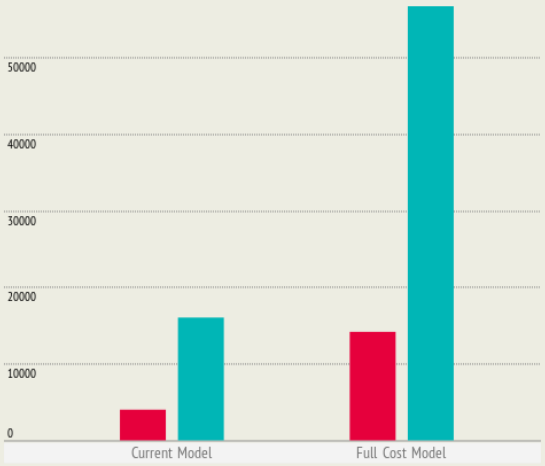



## Company 3: Fruit & Vegetable Processor









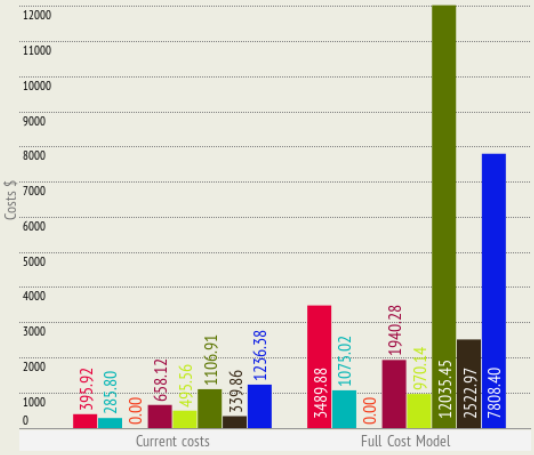


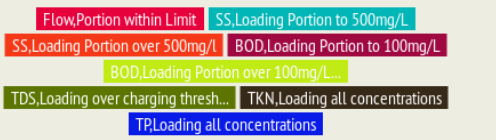


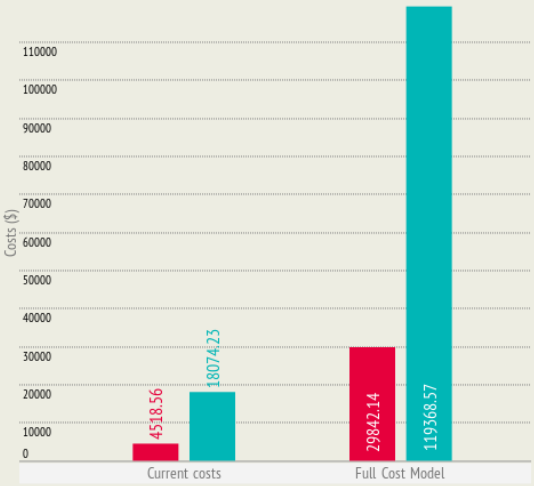
**253%**

Increase in trade waste costs per year

## Company 4: Smallgoods Processor



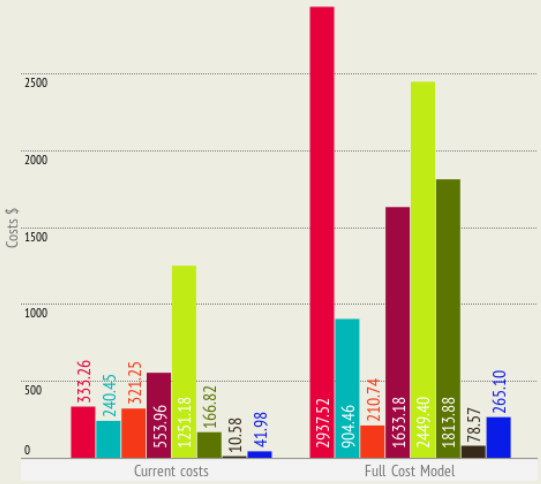


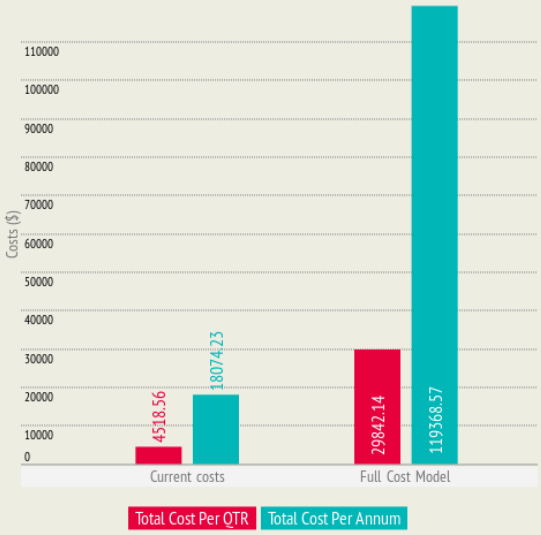


**560%**

Increase in trade waste costs per year

## Company 5: Fruit and Vegetable Processor 2

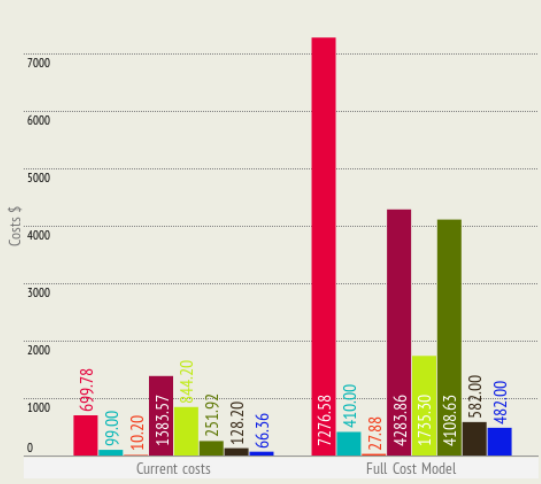


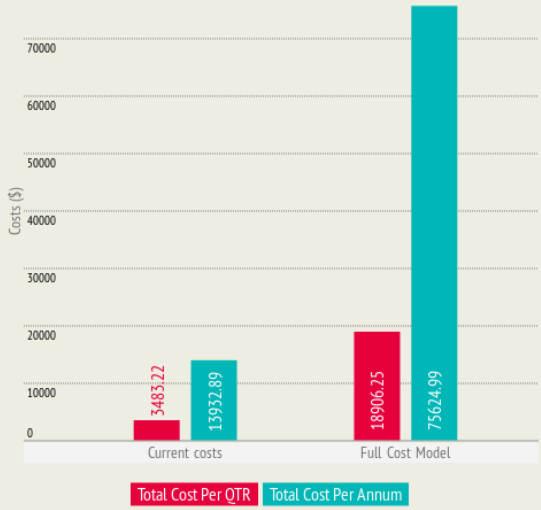




**253%**

Increase in trade waste costs per year

## Company 6: Ingredients Manufacturer



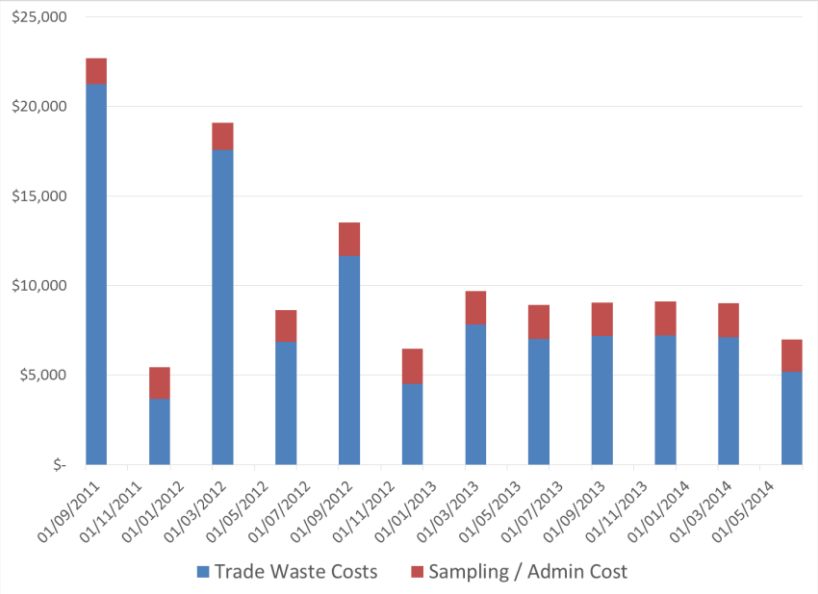




**443%**

Increase in trade waste costs per year

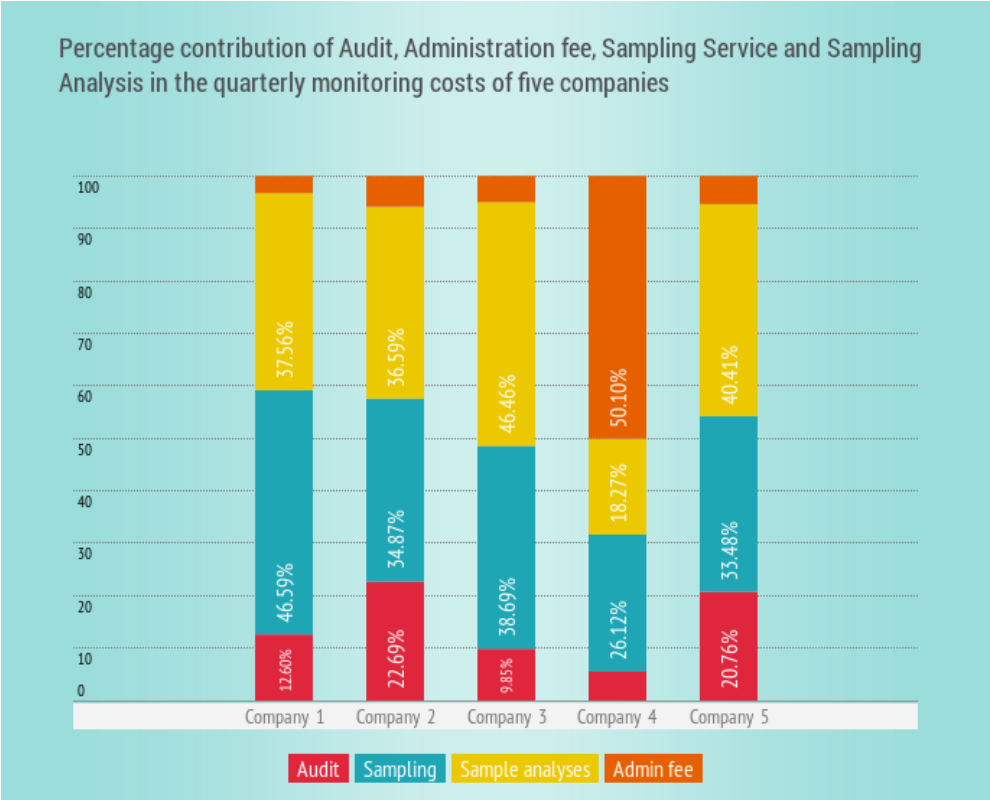
## Monitoring Costs

One case study to understand the impact of monitoring costs on customers refers to a beverage manufacturer that has invested in equipment to monitor and control trade waste. The figure below shows that, although the quarterly trade waste costs have been reduced as a result of the improvements, the cost of audits, sampling and sampling analyses, administration have not been reduced.




Administration and sampling costs do not go directly into efficiency improvements. Clearly, the more resources can go to the value-adding component (i.e. avoid waste), the more efficient the facility is at managing BOD in waste.

In particular, sampling services and analyses present an opportunity for cost savings, as the majority of monitoring costs for companies, except for one case as illustrated next. SA Water provided these services to the five companies that provided this information.




## Capital Costs

It is in the best interest of all involved that the tertiary treatment provided at Bolivar through the Dissolved Air Flotation Filtration (DAFF) plant is utilised, instead of food manufacturers having to invest in individual DAFF plants. The Bolivar plant is meant to produce a much higher standard of treated wastewater. Further, the business of F&B manufacturers is manufacturing food and beverage products, not treating waste.

However, if the industry is forced to treat its own trade waste to avoid the proposed fees by SA Water, then the State Government could implement programs similar to the Victorian "Water for the Industry Infrastructure Program", started in 2010. In this program, $10 million was allocated to industry projects with a focus to increase efficiency in water use, decrease wastewater production and mitigate trade waste costs[15]. This program led to annual savings for the industry of $10.9 million, the creation of 153 jobs and water savings of 7,514 ML per annum[16]. Food companies participated in this program successfully. There are alternative business models other than penalties for food manufacturers that can have a better environmental result, with job creation and savings for the industry.

Further, companies investing in decreasing their trades waste should not have the goalpost moved every year, with new cost increases and reductions in limits. This is a significant disincentive to businesses that genuinely want to improve their environmental performance.

[15] http://www.rdv.vic.gov.au/about-us/regional-infrastructure-development/evaluations-and-reviews
[16] http://www.rdv.vic.gov.au/__data/assets/pdf_file/0009/209259/WIIP-Evaluation-SED-Summary-20140114.pdf

## Paths for action

Rather than selecting one or two of these proposed paths for action, the following solutions should be approached holistically, with all options considered and actioned.

1. The F&B industry acknowledges that the SA Water Sewerage infrastructure needs to be maintained, and is prepared to work with SA Water to find the level of contribution that reflects the industry's impact on trade waste, within reason. The industry cannot meet costs increases well above 250% from previous bills, with no positive incentives and in short, unrealistic time frames. We request SA Water negotiate options with food manufacturers, proposing reasonable pricing strategies and timeframes to achieve the best outcomes for the environment, the industry and SA Water. Food South Australia offers to play a facilitation role in this process.
2. Prices should reflect the fair principle of industry paying for what they use, avoiding any penalties over and above the threshold. Current fines imposed to those companies that go over the threshold penalise companies twice over.
3. SA Water should work with industry to minimise the BOD loading into the system. There is no coordinated approach to improving the quality of waste into the treatment system. SA Water could work with other State Departments to implement an incentive scheme, where companies that demonstrate tangible areas or improvement are provided a rebate percentage for a period of time. For example: an agreed percentage reduction in BOD incentivised through a 25% reduction in usage fees.
4. The industry prefers to allocate capital expenditure funds for business growth and employing more people, instead of endlessly trying to meet moving posts in compliance and paying fines. However, if the industry must invest in waste treatment facilities to avoid the exorbitant increases of SA Water, the State Government could provide incentives for Capital Expenditure for companies (or clusters of companies) to address trade waste. For example: programs, vouchers or grants that fund an initial assessment of capabilities to meet trade waste targets, followed by an implementation phase, where the remaining of the grant is used to fund equipment or measures required to meet the targets. The "Water for Industry" Program in Victoria and the current Business Transformation Voucher from the Department of State Development offer good models to implement this mechanism.
5. The F&B industry is also willing to work with SA Water and PIRSA to find and agree cost reduction solutions through a series of activities and workshops. Potential outcomes could include providing incentives for a privately run biogas venture that can receive liquid and solid food waste to transform it into fertilizer and methane.
6. The industry requires a commitment from SA Water that if trade waste flows are reduced due to Continuous Improvement initiatives, SA Water prices and limits will not be increased to substitute for the shortfall in revenue. Instead, SA Water should look for internal efficiencies and decrease their fixed costs, as industry does. For example: reductions in sampling services and analyses, and operational efficiencies.
7. The double role of SA Water should be reviewed, with a view of decoupling the functions of setting compliance limits and receiving profits for non-compliance.
8. SA Water and the State Government could also implement mechanisms of assistance for food manufacturers that address the root causes and reward the adoption of waste minimisation practices. Industry programs in lean manufacturing, eco-efficiency and behavioural changes, designed to target

companies of different sizes and capabilities, would be well received. For maximum impact, these programs should be delivered by trusted parties and advisors.