ESSENTIAL SERVICES COMMISSION

Level 2, 35 Spring St
Melbourne 3000, Australia
Telephone +61 3 9651 0222
+61 1300 664 969
Facsimile +61 3 9651 3688

Gippsland Water Determination

Schedule Three

Application of Prices

3.3 Quality Based Trade Waste Tariff

3.3.1 Risk Based Assessment

The quality based trade waste tariff will apply to all new and existing businesses who are identified as presenting an elevated level of risk to the wastewater treatment process. To assess this risk, trade waste customers will be subjected to a risk based review which will consider five separate criteria to establish a risk score for each trade waste customer. These criteria are –

- Volume discharged per annum (kL);
- Trade waste risk;
- Compliance history over 12 months (number of samples with at least one parameter out of limits);
- Wastewater treatment plant discharging to; and
- Proportion of customer discharge compared to total discharge to plant.

Each criteria will be individually scored according to the level of risk the trade waste customer presents. The following table outlines these five risk criteria and the risk based scores that are applicable.

Table 1 **Risk criteria and scoring principles**

Risk	*5*	*4*	*3*	*2*	*1*	*0*
Score Risk						
Volume Discharged per annum (kL)	>300,000	< 300,000 >200,000	< 200,000 > 100,000	< 100,000 > 10,000	< 10,000 > 10	0-10
Trade Waste Risk	Catastrophic	Major	Moderate	Minor	Insignificant	Nil
Compliance History over 12 months (number of samples with at least one parameter out of limits)	> +5	4	3	2	1	0
Wastewater Treatment Plant discharged to	Gippsland Water Factory	Moe, Morwell, Neerim South, Warragul	Drouin, Rawson	Maffra, Mirboo Nth, Willow Grove	Heyfield, Sale/Fulham , Stratford, Seaspray.	
Proportion of customer discharge compared to total discharge to plant.	> 5%	>4%	>3%	>2%	>1%	<1%

The scores for each criteria will then be summated to determine a total score for that particular trade waste customer. The trade waste customer will then be categorised into one of three risk classes depending on their total score, as outlined below.

Table 2 **Risk Ranking**

Class 1	*Class 2*	*Class 3*
Low Risk (Total Score < 10)	**Medium Risk** (Total Score 10 - 15)	**High Risk** (Total score 16 >) or (two or more criteria scored at 5)

3.3.2 Application of Quality Based Trade Waste Tariff

Customers who are ranked as Class 1 will not be subjected to the quality based trade waste tariff. These customers will be covered by Gippsland Water's Trade Waste Agreement specifications and incur the standard non-residential wastewater volumetric tariff. Class 2 and Class 3 risk ranked customers will be subject to the quality based trade waste tariff.

Where the quality based trade waste tariff applies, it will replace the existing non-residential wastewater volumetric fee applied to the customer. Gippsland Water will apply the same caps to the quality based tariff as currently apply to the non-residential wastewater volumetric tariff. In other words, the quality based trade waste tariff will only apply where water consumption exceeds 100kL in any four month billing period. Where a dedicated wastewater meter exists, the tariff will continue to be applied on the total volume recorded at the meter.

In addition, the current annual trade waste agreement charge will remain in place, and trade waste customers will also be required to pay for sampling costs inherent in the monitoring program required by the trade waste agreement. The frequency and cost of sampling will be dependant on the customer's risk ranking. For example, a minimum of four samples will be taken per annum once a customer is determined to be at Class 2.

Table 3 **Application of quality based trade waste tariff**

	Class 1	*Class 2*	*Class 3*
Risk Ranking	Low Risk **(< 10)**	Medium Risk **(10 - 15)**	High Risk **(16 <) (or two or more 5 scored)**
Quality based trade waste tariff applicable	No	Yes	Yes
Frequency and cost of sampling	Audited as per Commercial Trade Waste Agreement	Minimum of 4 times per year (at cost)	12 + times per year. (individually assessed dependant on risk) (at cost)
Annual charges applicable*	Commercial Trade Waste annual charge	Commercial Trade Waste annual charge Quality based trade waste tariff	Commercial Trade Waste annual charge Quality based trade waste tariff
Life of Trade Waste Agreement	5 years	3 years	2 years

3.3.3 Calculating the quality based trade waste tariff

The quality based trade waste tariff will consist of two components, a volumetric fee per kilolitre; plus a quality based fee per kilogram dependent on the concentration of three parameters: Biochemical Oxygen Demand (BOD), Suspended Solids (SS), and Total Phosphorous (P).

The quality based trade waste tariff has been designed such that trade waste customers who are discharging at the assumed high domestic strength will pay the equivalent of the non-residential wastewater volumetric charge. Customers who discharge below the assumed high domestic strength will pay less than this charge, while customers who discharge above will be charged more.

A high strength domestic waste stream is assumed to contain:

- BOD (400 mg/L)
- Suspended Solids SS (350 mg/L)
- Phosphorus P (15 mg/L)

Customers will still be required to meet Gippsland Water's trade waste limits at all times.

The quality based trade waste tariff shall be calculated and levied on the following basis

Step 1: Determine the current approved volumetric wastewater tariff ($) and allocate to both the volumetric and quality components of the quality based trade waste tariff (refer table 4.1).

Table 4.1 **Quality based trade waste tariff components**

Tariff Components	*$/kL*
a) Volumetric component per kL	50% of approved Volumetric Wastewater Tariff
b) Quality based component at assumed high domestic strength per kL	50% of approved Volumetric Wastewater Tariff

Step 2: Distribute the quality based component (b) by the quality weighting determined by Gippsland Water to determine a rate per kilogram for Biochemical Oxygen Demand (BOD), Suspended Solids (SS), and Total Phosphorous (P) (refer table 4.2).

Table 4.2 **Weighting of quality component**

Parameter	*Assumed Domestic High Strength Quality (mg/l)*	*Weighting of quality component*	*Quality Tariff At assumed domestic high strength ($/kL)*	*Unit quality tariff $/kg*
BOD	400	10%	10% of (b)	=1000 / 400 * 10% * (b)
SS	350	70%	70% of (b)	=1000 / 350 * 70% * (b)
P	15	20%	20% of (b)	=1000 / 15 * 20% * (b)

3.3.4 Calculating the total amount payable

Step 1: Determine the number of kL discharged over the billing period.

Step 2: Determine the concentrations of Biochemical Oxygen Demand (BOD), Suspended Solids (SS), and Total Phosphorous (P) in mg/L in the wastewater stream, using results from latest sample.

Step 3: Calculate the total payable using the following equation:

Total Amount Payable ($) =

(0.5 x non-residential waste water tariff ($/kL) x (A))

plus (A x B x quality tariff BOD ($/Kg) / 1000)

plus (A x C x quality tariff SS ($/Kg) / 1000)

plus (A x D x quality tariff P ($/Kg) / 1000)

where :

A = the number of kL discharged over the billing period

B = the concentration (mg/L) of Biochemical Oxygen Demand (BOD);

C= the concentration (mg/L) of Suspended Solids (SS); and

D= the concentration (mg/L) of Phosphorus (P).