



Independent Pricing and Regulatory Tribunal

Discharge factors for non-residential customers

Towards a standardised approach

Water — Discussion Paper
September 2013



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Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due by 4 October 2013.

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by mail to:

Discharge Factors Review
Independent Pricing and Regulatory Tribunal
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If you would like further information on making a submission, IPART's submission policy is available on our website.

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1 Introduction

IPART is responsible for setting water and sewerage prices. We do this by first using the building block approach to estimate the revenue a water utility needs to efficiently and sustainably run its business. We then divide this revenue requirement by our estimate of the quantity or volume (ie, per connection or per kilolitre) of the service provided. This is quite straight forward for water, but is more complicated for sewerage.

Sewerage quantities (volumes) are expensive to measure directly. This is not cost effective for the majority of customers. Therefore, for a given customer, the volume of sewage discharged is calculated by estimating the percentage of their water purchases that are discharged to the sewerage system. This is called a discharge factor. Discharge factors have a significant impact on quantity (volume) estimates, and hence price, but they are currently set by the water utilities independent of IPART. The water utilities can, in theory, change discharge factors at any time.

Under our current price determinations, discharge factors are applied to non-residential properties to determine their volumes of sewerage usage (kL) – which is then subject to a sewerage usage charge (\$/kL).¹ Discharge factors are also applied to sewerage service charges (\$ per property, based on meter size).

In reality, the percentage of water purchases discharged to the sewerage system (ie, the actual discharge factor) will vary between different types of businesses. For example, offices will almost invariably have a higher discharge factor than a garden nursery – which is likely to use a large proportion of its water on its plants, and therefore not discharge it to the sewerage system.

We are currently considering whether discharge factors for a given customer type should be uniform across the metropolitan water utilities that we regulate. That is, whether a bakery in Sydney should be subject to the same deemed discharge factor as a bakery in Hunter, Gosford and Wyong. We are also considering the extent to which IPART should have a role in setting discharge factors at the next round of metropolitan water price determinations.

Under consideration is a 2-tier system, where an extensive list of discharge factors is set for most small to medium businesses, whilst still allowing for individual discharge factor assessments for large businesses and industry. Individual assessments, for small to medium businesses, could occur at the request of customers or where the utility considers them appropriate.

¹ Residential customers are deemed to have 150 kL of sewerage discharge per annum and this is built into the fixed service charge.

The purpose of this discussion paper is to outline why IPART considers there may be scope for standardisation of common small business discharge factors and to seek stakeholder views about the possibility for standardisation. If there is scope for standardisation, then we put forward a table of standard discharge factors as a starting point for consultation. Hopefully, this will lead to a consensus view on a standard list.

It should be remembered that at any future price review, an increase in the average discharge factor will not increase revenue to the utilities. It will, however, impact on the distribution of costs across customers.

Table 1.1 below lists the indicative timetable for our consideration of discharge factors.

Table 1.1 Important Dates

Date	Milestone
23 August	Release Discussion Paper
26-30 August	Initial consultation with water utilities
4 October	Submissions close
27 November	Release Final Report

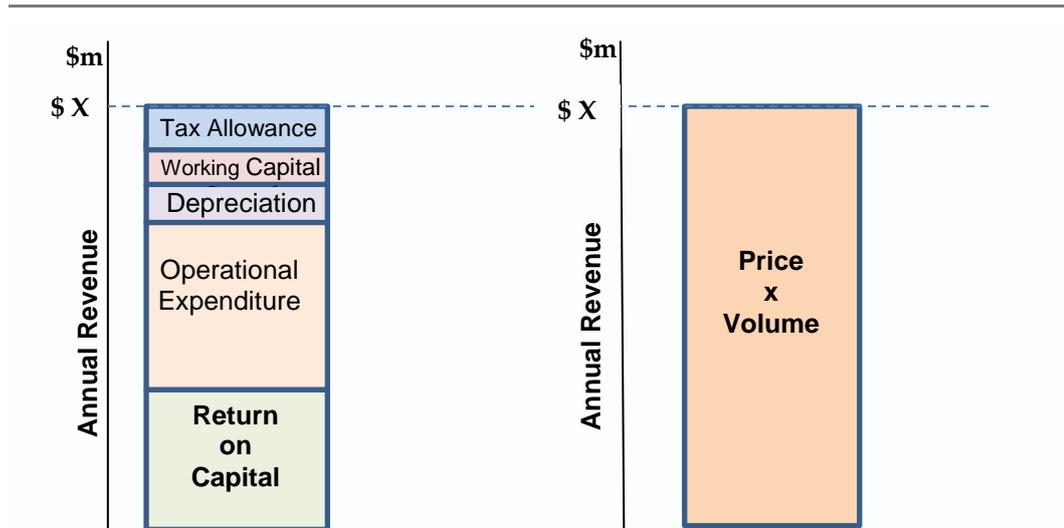
This paper is broken into 3 further sections:

- ▼ Section 2 outlines, in general terms, our current practice for setting prices and how this relates to discharge factors. It also describes relevant changes arising from the review of price structures implemented in the last round of price determinations.
- ▼ Section 3 presents a proposed approach to discharge factors, to inform consultation.
- ▼ Section 4 discusses anomalies arising from calculating discharge factors for small water users with large fire fighting capacity, and proposes a methodology to provide equity in such cases. It also asks stakeholders to identify any other anomalies they are aware of.

2 How IPART sets prices

IPART's primary role is to regulate prices. In the water industry, this has consistently been done through a building block approach.

Figure 2.1 The building block approach



Note: The stack graph of the building block is designed to illustrate the components of the building block rather than their actual ratios. These ratios vary significantly between utilities based on their operating models.

As shown in the left hand column of Figure 2.1, IPART sets prices by calculating allowances for:

- ▼ operating expenditure
- ▼ return on capital (rate of return)
- ▼ return of capital (depreciation)
- ▼ working capital
- ▼ tax.

The total of these items is the utility's annual revenue requirement (ARR) or, in other words, the utility's annual efficient costs of supplying its services.

IPART aims to set prices to recover the ARR for each of the 3 main business functions:

- ▼ water service
- ▼ sewerage service
- ▼ stormwater drainage service.

In simple terms, we divide the ARR (revenue) by the expected volume (quantity) to arrive at a price. If the volume is accurate, then the business will neither over-recover nor under-recover revenue.²

2.1 The problem of measuring sewerage volumes

Measuring water volumes is straightforward. Nearly every residential and non-residential customer has a water meter. These meters accurately record the volume of water consumed. Accurate forecasts of future sales can generally be made and the price required to recover the ARR for water can be determined with a fair degree of precision.

The situation is different for sewerage. Meters that can measure sewage flows are very expensive and are generally only cost effective on larger commercial and industrial properties.

Whilst residential water purchases can vary significantly, residential sewage discharges have a much smaller variation.³ This small variation, and the difficulty in metering sewage flows, has led IPART to set a simple fixed charge for residential customers.⁴

In the case of non-residential customers, IPART generally sets a fixed charge per connection (based on meter size) and a sewerage usage charge (per kilolitre of estimated sewage discharged).

However, accurately estimating the sewerage discharge volumes of most non-residential customers is problematic. Currently, this is done by measuring the water consumption of non-residential customers and applying a discharge factor to their water consumption to estimate the volume of their sewerage discharges. A discharge factor is the percentage of the metered water consumption of a property that is estimated to be discharged to the sewerage system.

² The fact that we have a combination of fixed and variable charges for water services does not change the importance of accurately forecasting volumes or customer numbers.

³ This is because large water users tend to have high outdoor consumption that is not discharged to the sewer system.

⁴ This fixed charge incorporates a deemed 150 kL usage charge.

2.1.1 Adjusting Service Charges

Under our current price determinations, the discharge factor is also applied to the sewerage service for non-residential customers (\$ per connection, based on meter size) component of the bill. A shopping centre and a commercial nursery may both have 100mm water meters and should be charged the same water service charge because they are imposing similar costs on the water system. However, if the commercial nursery is using nearly all its water outdoors watering plants (and therefore not discharging it to the sewerage system), it is only imposing a fraction of the fixed costs on the sewerage system compared to the shopping centre.⁵ Whilst the size of the water connections is the same, the size of the sewerage demands are not. If sewerage meters were economically viable, then the commercial nursery would have the same size water meter as the shopping centre, but a much smaller sewerage meter. Because we don't have sewerage meters, we need to apply an adjustment (discharge factor) to the sewerage service charge as a proxy for the appropriate sewerage meter size.

2.2 Current Practice

IPART undertook a detailed review of price structures⁶ over the last 2 years and implemented the results of this study in the 2012 Sydney Water price review and the 2013 price reviews for Hunter Water, Gosford Council and Wyong Council.

The major guiding principle of the price structure review was that customers imposing similar costs should pay similar prices.

Residential

The 4 metropolitan water utilities (Sydney Water, Hunter Water, Gosford Council and Wyong Council) now have a standard residential water service charge and standard water usage charge. All residential customers face a standard residential sewerage service charge.⁷ Residential customers do not pay discrete sewerage usage charges.

⁵ The commercial nursery is likely to only have a kitchen, toilet and a shower. This imposes no more costs on the sewerage system than the average house.

⁶ IPART, *Review of metropolitan water utility price structures - Final Report*, March 2012.

⁷ In the case of Hunter Water, residential customers in flats and units will see their sewerage service charge rise from 65% to 75% of the residential sewerage charge for houses over the current determination period. Source: IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - 1 July 2013 to 30 June 2017*, p 118.

Non-residential

Prior to the price structures review, all 4 metropolitan water utilities had a water service charge and a water usage charge for non-residential customers. They also all had a non-residential sewerage service charge that was a meter based charged and a sewerage usage charge. However, elements of the sewerage service charges and the sewerage usage charges varied considerably between the utilities. Other differences are listed below.

Sydney Water

Non-residential customers all received a 500 kL pa sewage discharge allowance⁸ and most customers were given a standard discharge factor of 78%.⁹ Non-residential sewerage service charges were proportionate to the residential sewerage service charge, based on the meter size.¹⁰ Sewerage service charges were adjusted by the discharge factor¹¹.

Hunter Water

There was no sewage discharge allowance, thus the sewerage usage charge applied to all estimated sewage discharges. Non-residential sewerage service charges were double the equivalent residential charge, but were subject to discharge factors that varied between 10% and 85%¹², and averaged 74%¹³.

⁸ For example, if a customer had metered water consumption of 1000 kL and a discharge factor of 78% then their estimated sewerage usage is 780 kL. A 500 kL discharge allowance was then applied lowering their billable consumption to 280 kL. *Billable Sewerage Usage = (Water Consumption x Discharge Factor) - Discharge Allowance.*

⁹ Communication from Sydney Water 16 July 2013. Note however the 2012 Sydney Water Determination Price Model uses an average discharge factor of 79%.

¹⁰ The residential charge used to be based on a 20mm meter. For example, if the 20mm charge was \$500 and a non-residential customer had a 40mm meter, then the 40mm service charge was calculated by multiply \$500 by 40² and dividing by 20². (40² and 20² being the respective ratios of the cross sectional areas of the connections). The resultant 40mm base charge would be $\$500 \times 1600/400 = \2000 .

¹¹ The actual service charge paid would be adjusted by the discharge factor. Eg, $\$2,000 \times .78 = \$1,560$.

¹² <http://www.hunterwater.com.au/Your-Account/Managing-Your-Account/Non-residential-Pricing--Charges/Sewer-Charges.aspx>, Accessed on 13 August 2013.

¹³ IPART calculations from the 2013 Hunter Water Determination Price Model.

Wyong Council

Non-residential customers did not receive a sewage discharge allowance. The non-residential base sewerage service charge was significantly lower than the residential base charge. However, there was a minimum non-residential sewerage bill equal to the residential sewerage charge (bill). Discharge factors were aligned to the NSW Office of Water's recommendations for country water authorities¹⁴ and were applied to both non-residential sewerage service and sewerage usage charges.

Gosford Council

Non-residential customers did not receive a sewage discharge allowance. The non-residential base sewerage service charge was lower than the residential base charge. However, there was a minimum non-residential sewerage bill equal to the residential sewerage charge (bill).

Gosford Council aligned its sewerage usage discharge factors to the NSW Office of Water's recommendations. Gosford Council did not apply a discharge factor to the sewerage service component of the bill.

2.3 The results of the price structures review

Through our 2012 and 2013 determination for metropolitan water utilities, we have implemented the principles and results of our price structures review. The relevance of these to discharge factors is outlined below.

Sewerage usage charges

Sewerage usage charges are being transitioned to levels that are more reflective of the marginal (incremental) cost of transporting, treating and disposing of domestic strength effluent.

¹⁴ Email correspondence from Wyong Council 25 February 2011.

Discharge Allowances

All utilities are being transitioned towards a 150 kL discharge allowance for non-residential customers, in line with the deemed allowance for residential customers. Sydney Water's discharge allowance for non-residential customers is reducing from 500 kL pa to 300 kL pa over the current determination period. Hunter Water's discharge allowance for non-residential customers is rising from 0 kL to 75 kL pa over the current determination period. Gosford and Wyong Councils' 2013 determinations incorporate a 150 kL pa discharge allowance for non-residential customers. Transitioning to 150 kL pa discharge allowances means non-residential customers imposing similar costs on the sewerage system as residential customers will pay similar prices.

Discharge Factors

With the completion of the 2012 and 2013 determinations for the metropolitan water utilities, discharge factors apply to both the sewerage service charge and the calculation of the chargeable sewerage usage volumes.

3 What is left to do?

IPART has 2 primary principles it applies:

- ▼ That ex-ante prices recover the efficient costs of the business.
- ▼ That customers imposing similar costs should pay similar prices.

3.1 Cost Recovery

In simple terms:

$$\text{Price } (P) \times \text{Quantity } (Q) = \text{Revenue } (R)$$

Our building block gives us the revenue required (R) and the Annual Information Return (AIR) provides the agency's forecast of quantity (Q). The equation for IPART is:

$$\text{Price} = \text{Revenue} \div \text{Quantity}$$

Water Charges

In the case of water charges, whilst there is a 2-part tariff comprising fixed and usage charges, it is a fairly straight forward process.

$$ARR \text{ (Non – Residential Water)} = \\ (Price_{Service\ Charge}) \times (Quantity_{Service\ Charge}) + \\ (Price_{usage}) \times (Quantity_{usage})$$

Where:

- ▼ Price_{Service Charge} = is the price/s for the service charge.
- ▼ Quantity_{Service Charge} = is the number of connections/meters in the network.
- ▼ Price_{Usage} = is the volumetric (usage) charge for water.
- ▼ Quantity_{Usage} = is the volume (quantity) of water sold.

We have set the water usage price with reference to long-run marginal cost (LRMC). We have estimated water sales quantities from previous patterns adjusted for factors such as customer growth, forecast long-term weather and improvements in water efficiency. This gives us the expected revenue from water sales.

We deducted this expected water sales revenue from the total revenue requirement for water, to get the revenue that needs to be recovered from service charges. We divided the required water service charge revenue by the number (quantity) of connections¹⁵ to determine a price for the water service charge.

Sewerage Charges

It is not economically viable to install sewage flow meters in most non-residential properties. Therefore, sewage discharge volumes need to be estimated by another means. The common practice is to start with metered water consumption and, by assessing a representative number of similar businesses, estimate the percentage of this metered water consumption that is discharged to the sewerage system. This percentage is the known as the discharge factor.

$$ARR \text{ (Non – Residential Sewerage)} = \\ (Price_{Service\ Charge}) \times (Quantity_{Service\ Charge}) \times (DF_{avg}) + \\ (Price_{usage}) \times [(Quantity_{usage}) \times (DF_{avg}) - (DA)]$$

Where:

- ▼ Price_{Service Charge} = is the price/s for the sewerage service charge.
- ▼ Quantity_{Service Charge} = is the number of connections/meters in the network.

¹⁵ Adjusted for meter size, in the case of non-residential customers.

- ▼ DF_{avg} = weighted average discharge factor for non-residential customers.
- ▼ DA = sewage discharge allowance for each customer.
- ▼ Price_{Usage} = is the volumetric (usage) charge for sewage discharges.
- ▼ Quantity_{Usage} = is the volume (quantity) of sewage discharges.

These discharge factors are currently the sole responsibility of the utilities and can be changed at any time. There is also significant variation in discharge factors for the same type of small businesses between the metropolitan water utilities. For example, a baker in Belmont¹⁶ is currently subject to a different discharge factor than a baker in Bondi.¹⁷

The fact that discharge factors vary so significantly or that a utility can have a single discharge factor for all small business appears to be a legacy of the different price structures that were in place until the 2012 Sydney Water price review and the 2013 Hunter Water, Gosford City Council and Wyong Shire Council price reviews.

In line with the price structure principle, that customers imposing similar costs should pay similar prices, we consider there is merit in reviewing the current approach to discharge factors.¹⁸

3.2 What is IPART considering

IPART is considering a 2 part approach for discharge factors, comprising:

1. A list of discharge factors for an extensive range of small business types, which IPART would likely include in future price determinations.
2. Where the utility or the individual customer disagrees with this discharge factor, then a site-specific discharge factor can be calculated for that premises. This could occur under the following arrangements:
 - a) Where the utility initiates a site specific assessment, there is no cost to the individual customer.
 - b) Where the individual customer requests a site specific assessment, then the utility may levy a charge for the assessment.

¹⁶ Hunter Water's network area.

¹⁷ Sydney Water's network area.

¹⁸ It should be noted that this has not been a significant issue for Sydney Water customers to date, as the 500 kL/pa discharge allowance that applied prior to July 2012 coupled with a 78% discharge factor meant that non-residential customers had to consume in excess of 640 kL of water before they faced a sewerage usage charge. This meant that only approximately 10% of non-residential customers received sewerage usage bills in 2011/12. However, with the discharge allowance transitioning towards 150 kL, now is the time to review this matter. Whilst the discharge factor did affect the service charge most non-residential customers ended up paying the minimum charge, which was the residential service charge.

- c) The applicable assessment charges could be published in future determinations, as a miscellaneous charge.
- d) Only where the site specific assessment varies by 10% or more from the standard discharge factor, could the site specific discharge factor apply.

3.2.1 Deriving the extensive list of discharge factors

If a standard list of discharge factors is to be adopted, we consider that a good starting point may be the standard discharge factors published by the NSW Office of Water (NOW) (see Appendix A). This list was first compiled in 2002 by the then Department of Land and Water Conservation. It was intended to help the large number of Local Water Utilities in NSW, by avoiding duplication in the research and assessment necessary to formulate the table. The table was expanded and updated in 2006 and 2009.

If there is a case for developing a standard list of discharge factors, we will consult with the 4 metropolitan water utilities and the NSW Office of Water to derive such a list. It is worth noting that if such a list were applied at future price determinations, it would not impact on the financial position of the utilities. Changes to their current discharge factors will not change the utilities' revenue, only the distribution of charges amongst non-residential customers.

Questions

- 1 Do you consider that small business discharge factors should be standardised across the metropolitan water utilities?
- 2 If so, what are your views on the proposed 2-part approach to discharge factors?
- 3 Is the NSW Office of Water list of small business discharge factors suitable?
 - What Discharge Factors would you change?
 - Which would you add or consolidate?
- 4 Do you agree the requesting customer should pay for individual assessments or should these be borne by the rest of the customer base through periodic charges?
- 5 Is the 10% variance threshold suitable?
- 6 Do you propose any alternative approach to discharge factors? If so, why?

4 Anomalies with Discharge Factors

4.1 Fire-Fighting distorting Sewerage Charges

IPART has become aware of an anomaly in the calculation of sewerage discharge factors for customers who have large metered water capacity demand, predominately for fire-fighting purposes, but only low levels of actual demand.¹⁹

Discharge factors are calculated as the volume of water discharged to the sewer divided by the volume of water consumed and is expressed as a percentage.

This means that a business such as a wool storage warehouse with large water capacity demand²⁰, as a pre-cautionary fire-fighting capacity, and very low water consumption of say 50 kL/pa would have a measured discharge factor of nearly 100%. Whereas a commercial garden nursery with the same size water meter and the same volume of sewerage discharges, but much larger actual water consumption, may have a measured discharge factor of less than 10%.

This means that while the wool storage warehouse is imposing similar costs on the sewerage system as a small business, it is generally paying significantly more in sewerage service costs.

Where this situation occurs, it is inconsistent with our price structure principles that state *“Customers imposing similar costs should pay similar charges”*²¹ and is clearly unfair.

Many new large developments now have unmetered water supplies for fire-fighting and it is therefore not an issue for them.

Whilst the numbers of customers in this situation is small and the impact on the utilities’ revenue is relatively minor, it is inequitable and can be a significant burden on the customers involved.

¹⁹ For example a small kitchen, shower and toilet.

²⁰ 80mm water connection.

²¹ IPART, *Review of price structures for metropolitan water utilities – Final Report*, March 2012, p 3.

An illustration of the problem

What follows is a simple worked example of the problem and IPART's proposed solution. The assumptions for this worked example are:

- ▼ Residential sewerage service charge is \$512.
- ▼ Non-residential sewerage service charge (25mm Eq) is \$800.
- ▼ There is a minimum non-residential charge equal to the residential sewerage service charge of \$512.
- ▼ In the examples that follow we assume that the 2 illustrative businesses, a wool shed and a commercial nursery, both have had site specific discharge factors calculated. These vary a little from the standardised discharge factors in Appendix A. However, this does not change the results significantly.

Business 1- woolshed warehouse

Consider a wool storage warehouse that has an 80mm water connection (as required by the Building Code for fire-fighting capacity) but only has a toilet, shower and small kitchen and is only consuming 50 kL of water per annum. All this water is being discharged to the sewerage system.

It is reasonable that the owner pay the full 80mm water service charge, as there is a capacity demand placed on the system. However, no such capacity demand is being placed on the sewerage system. In fact, this warehouse is placing no higher cost than other small businesses on the sewerage system. The woolshed is only discharging 50 kL of domestic strength effluent (from its toilet, shower and kitchen), whereas a typical house discharges 150kL of the same domestic strength effluent.

Because all the water (only 50 kL/pa) used in the warehouse is in the kitchen, toilet or shower and therefore discharged to the sewerage system, the discharge factor is calculated as 100% and the warehouse owner pays a sewerage service charge of:

$$\begin{aligned} &= \left(\frac{\text{Meter Size}^2}{25^2} \right) \times DF \times 25\text{mm Charge} = \left(\frac{80^2}{25^2} \right) \times \mathbf{100\%}^{22} \times \$800 \\ &= \$8,192 \end{aligned}$$

²² The 100% figure in blue is the discharge factor. It is calculated as 50 kL of discharge divided by 50 kL of water consumption. It is important to remember that discharge factors are only ratios. A property that consumes 2000 kL of water and discharges 2000 kL of effluent would have the same discharge factor of 100%.

Business 2 – commercial nursery

A commercial garden nursery next door may have exactly the same volume of sewerage discharges (50 kL/pa) through the same facilities as the warehouse. However, because it uses 2,500 kL of water per annum (2,450 kL on outdoor use) it has a discharge factor of 2% and therefore pays the standard residential sewerage service charge of \$512:

$$= \left(\frac{\text{Meter Size}^2}{25^2} \right) \times DF \times 25\text{mm Charge} = \left(\frac{80^2}{25^2} \right) \times 2.0\%^{23} \times \$800 = \$164$$

which would default to the minimum charge, which is the residential sewerage charge of \$512.

4.1.2 How to make this fair

IPART is considering that, for the sole purpose of calculating non-residential sewerage service discharge factors, water consumption is deemed to be the greater of:

1. Actual Water Consumption; and
2. $100\text{kL} \times 25\text{mm Equivalent Water Connection(s)} = \left(100\text{kL} \times \sum_{n=1}^{\infty} \frac{\text{Meter Size}_n^2}{25^2} \right)$

Why use 100 kL per 25mm equivalent?

The average water consumption for a 25mm water connection is assumed to be 475.7 kL/pa.²⁴ Using 100 kL still achieves the desired effect of reducing the resultant sewerage service charge for the customers we are trying to remedy. It achieves this without causing unnecessary calculations for the utilities²⁵ or introducing other unforeseen consequences from setting it higher.

²³ The 2% discharge factor is calculated based on 50 kL of domestic strength effluent (the nurseries toilet shower and kitchen effluent- identical to the woolshed) but divided by a much higher water consumption of 2500 kL.

²⁴ This is calculated from Hunter Water's price structures special information request. Where total consumption for all 25mm connections for 2011/12 was 1,171,230 kL and there were 2,462 customer connections (25 mm).

²⁵ If the average was used then 50% of the customers could avail themselves of this clause. This is not the intention.

A Worked Example

Applying IPART's proposal would see the wool storage warehouse discharge factor deemed at

$$DF = \frac{\text{Estimated Discharge}}{\left(\frac{\text{Meter Size}^2}{25^2}\right) \times 100kL} = \left(\frac{50kL}{\left(\frac{6400}{625}\right) \times 100kL}\right) = 4.89\%$$

This would yield a sewerage service charge of \$401

$$= \left(\frac{\text{Meter Size}^2}{25^2}\right) \times DF \times 25\text{mm Charge} = \left(\frac{80^2}{25^2}\right) \times 4.89\% \times \$800 = \$401$$

which would default to the minimum charge, which is the residential sewerage charge of \$512.

The wool storage warehouse is not imposing any greater cost on the sewerage system than the commercial nursery or other small businesses. Therefore, in accordance with IPART's published price structure principles that properties imposing similar costs should pay similar prices, it is appropriate that it should pay the same charge as a house or the commercial nursery in this example.

Questions

- 7 Do you agree with the formula being considered for customers in this situation, or do you have an alternative solution?
- 8 Should IPART specify a formula in subsequent determinations or leave it to the utilities to come up with one of their own?
- 9 Are you aware of other cases that breach IPART's price structure principles?

A Proposed Standard Discharge Factors

Table A.1 Proposed Standard Discharge Factors

Business	%
Bakery	95
With a residence attached ¹	70
Bed and Breakfast/Guesthouse (max. 10 persons)	75
Boarding House	90
Butcher	95
with a residence attached ¹	70
Cakes/Patisserie	95
Car Detailing	95
Car Wash	75
Caravan Park (with commercial kitchen)	75
Caravan Park (no commercial kitchen)	75
Chicken/poultry shop (retail fresh, no cooking)	95
Charcoal Chicken	95
Club	95
Cold store	7
Community hall (minimal food only)	95
Correctional Centre	90
Craft/Stonemason	95
Day Care Centre	95
Delicatessen, mixed business (no hot food)	95
with a residence attached ¹	70
Dental Surgery with X-ray	95
with a residence attached ¹	70
Fresh Fish Outlet	95
Hairdresser	95
High School	95
Hospital	95
Hostel	90
Hotel	100
Joinery	95
KFC, Red Rooster	95
Laundry	95
Marina	90
McDonalds Restaurant, Burger King, Pizza Hut	95
Mechanical Workshop ³	95
Mechanical workshop with car yard	85
Medical Centre	95
Motels small (breakfast only, no hot food)	90
Motel (hot food prepared)	90

Business	%
Nursing Home	90
Office Building	95
Optical Service	95
Panel Beating/Spray Painting	95
Primary School	95
Printer	95
Restaurant	95
Self-Storage	90
Service Station	90
Shopping Centre	85
Supermarket	95
Swimming Pool (commercial)	85
Take Away Food	95
Technical College or University	95
Vehicle Wash: Robo, Clean and Go, Gerni Type	95
Veterinary (no X-ray), Kennels, Animal wash	80

Source: Appendix G of the NSW Office of Water (NOW), *Liquid Trade Waste Regulation Guidelines*, 2009.