

HUNTER WATER CORPORATION

PRICES OF WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES

Medium-term price path from 1 July 2000

**INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES**

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DETERMINATION NO 3, 2000		



INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

**REPORT TO THE PREMIER ON THE DETERMINATION OF MAXIMUM PRICES UNDER
SECTION 11 (1) OF THE INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT,
1992**

Reference No: 99/176

Report: No 3, 2000

Agency: Hunter Water Corporation

Declaration of government monopoly services under Section 4 of the Act:

The Government monopoly services were declared by the Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997, made on 5 February 1997 and published in Gazette No. 18 dated 14 February 1997 at page 558.

The maximum prices listed or calculated under sections 1 to 9 of this Determination are to apply from 1 July 2000 to 30 June 2003. The maximum prices for developer charges listed or calculated under section 10 are to apply from 1 July 2000 until replaced.

1 INTRODUCTION

The Independent Pricing and Regulatory Tribunal of New South Wales (the Tribunal) regulates the charges that Hunter Water Corporation (Hunter Water) can levy for the water, sewerage and drainage services it supplies to residential and non-residential customers. Its role is to set the maximum prices Hunter Water can charge for these services, in accordance with section 11(1) of the *Independent Pricing and Regulatory Tribunal Act, 1992*.

The 1996 determination will expire on 30 June 2000. The Tribunal has undertaken an investigation and review, and has set a price path for the next three years, effective from 1 July 2000 to 30 June 2003.

The main changes resulting from this determination include a 1.5 per cent real reduction in average tariffs per year, which will be achieved through lower water and sewer usage charges. This change is designed to address the current imbalance between revenue received from usage charges and that received from service charges, particularly in water. For Hunter Water, this will lead to average revenue reductions of less than 0.5 per cent (real) per annum, on the basis of existing consumption forecasts and a CPI forecast of 3 per cent per annum over the regulatory period.

The Tribunal's investigation has included detailed financial analysis of Hunter Water's revenue needs. This analysis indicates that the prices the Tribunal has set will generate sufficient revenue for Hunter Water to maintain a strong financial position.

This report outlines the determination and the Tribunal's results of the investigations in more detail. It sets out:

- the review process and regulatory framework
- the financial analysis that underpins the determination
- the prices set for each service and the implications for Hunter Water's customers
- the implications for the environment
- the implications for service standards.

The complete determination, which lists the maximum prices Hunter Water can charge for all water, sewerage and drainage services, follows this report.

2 REVIEW PROCESS AND REGULATORY FRAMEWORK

2.1 What was the review process?

The Tribunal reached its determination after an extensive investigation and review process. This process began with the Tribunal releasing an issues paper, and Hunter Water submitting proposals of the maximum prices it believes it needs to charge for supplying water, sewerage and drainage services. The Tribunal then invited the public and interested parties to make submissions on these proposals and other issues relating to the pricing of these services (Attachment 1 provides a list of submissions received). It also held a public hearing, where interested parties presented their views (Attachment 2 provides a list of presenters).

In addition, the Tribunal commissioned Halcrow Management Sciences Ltd (Halcrow) to analyse the projected capital expenditure and operating costs of the four metropolitan water agencies under its jurisdiction. It also conducted its own analysis into the impacts of alternative pricing levels on Hunter Water, its customers and the environment, in line with Section 15 of the Act.

The Tribunal then made its determination, taking into account all the information and analysis obtained through the process outlined above. The Tribunal members who considered this determination are Dr Thomas Parry (Chairman), Mr James Cox (Full-time Member), and Ms Cristina Cifuentes (Member).

Copies of all submissions, a transcript of the public hearing, and Halcrow's report can be viewed on the Tribunal's website at www.ipart.nsw.gov.au and are available for inspection at the Tribunal's office.

2.2 What pricing principles did the Tribunal follow?

In determining prices under the IPART Act, the Tribunal must have regard for a range of economic, social and environmental issues, listed in Section 15 of the Act. The requirements of this section are set out in Attachment 3. In general, the Tribunal aims to achieve the following objectives in setting prices:

- economic efficiency
- financial sustainability
- competition, including in upstream and downstream industries
- equity
- environmental sustainability
- simplicity and transparency
- certainty and control of the costs of regulation.

These pricing principles are consistent with the requirements in Section 15. The extent to which the Tribunal has had regard to these requirements is outlined in Attachment 3.

2.3 What form does the price regulation take?

This determination takes the form of a price cap applicable over a period of 3 years. It sets specific prices for all services in 2000/01. For 2001/02 and 2002/03, Hunter Water will be able to vary these prices in line with inflation using a CPI-X¹ formula.

In deciding on the price capping approach, the Tribunal took into consideration all four agencies' preference for this approach, and the Public Interest Advocacy Centre's (PIAC) support for its use for the regulation of water and sewerage supply services. It was also argued that the alternative approach—revenue regulation—was difficult to apply to water services because demand, and therefore revenue, fluctuates from year to year with weather conditions.

In deciding how long this determination would apply, the Tribunal decided on a medium-term price path of three years. This period has several advantages over a one-year price path, including:

- providing the agency with an incentive to improve its efficiency and certainty about the basis on which its revenue can be obtained
- providing customers with certainty about what they will be charged
- reducing the regulatory burden imposed on the agency, thus enabling it to focus on running its business rather than on making new pricing proposals each year.

Although the Tribunal had suggested in its issue paper that a longer determination period might be appropriate, it opted for the three years period. It is possible that the environmental standards Hunter Water must meet could change over time, which would have implications for its capital expenditure requirements. There was also uncertainty about demand forecasts. Given the relatively short regulatory period, the Tribunal does not envisage having a mid-term review.

¹ The value of X varies depending on the service. The CPI used for these movements in prices excludes any impact of the introduction of the GST.

3 HUNTER WATER'S REVENUE NEEDS

One of the key questions the Tribunal considered in making this determination was how much revenue Hunter Water needs to earn from water, sewerage and drainage services to remain financially viable. Based on its analysis, the Tribunal believes that Hunter Water can maintain a strong financial position with average real revenue of around \$112 million over the regulatory period (Table 3.1) while maintaining appropriate service standards. This is on average 2.5 per cent less than Hunter Water's own estimate, and as a consequence, Hunter Water will need to reduce its operating costs by improving its efficiency, and may need to increase debt levels to some extent to fund its capital expenditure programs.

Table 3.1 Tribunal's estimate of Hunter Water's total real revenue in \$1999/00²

\$million	2000/01	2001/02	2002/03
Annual revenue requirements	112.3	111.8	113.0

The Tribunal arrived at these figures after considering Hunter Water's pricing proposals, and their impacts on customers and pricing outcomes. This generated a set of tariffs that were put into a financial model which uses a 'building block approach'³ to estimate the Hunter Water's revenue requirements. This approach sets the base revenue requirement as the sum of the estimated efficient operating costs and capital costs. Although capital expenditure does not explicitly appear in the building block formula, it is accounted for through additions to the asset base and reflected in capital costs.

The Tribunal believes the building block approach is an effective method for estimating the revenue needs of the agencies it regulates. It notes PIAC's view that its use will establish consistency between regulated industries (eg electricity and gas), and that it offers greater transparency and accountability to consumers.⁴ However, there is a risk that relying solely on the outcomes of the building block approach could lead to procedure-bound methodology in which key decisions on major components of the revenue requirement are made in isolation. To avoid this risk, the Tribunal also considered the overall implications of the resulting price paths. This involved analysing a range of financial indicators to ensure that its determination would not have a negative affect on Hunter Water's business financial capacity or credit rating.

The remainder of this section outlines the main components of the Tribunal's analysis of Hunter Water's financial position that underpin its determination.

3.1 Operating Costs

To determine Hunter Water's efficient operating costs, the Tribunal considered Hunter Water's forecast operating expenditure, and potential for improving its efficiency. It also considered Hunter Water's obligations under the Federal Government's New Tax System (including the goods and services tax (GST)).

² Annual revenue requirement = operating expenditure + return on capital (rate of return) + return of capital (depreciation).

³ For a more detailed description of this approach, see IPART, *Pricing for Electricity Networks and Retail Supply*, June 1999.

⁴ Public Interest Advocacy Centre, submission, p 2.

3.1.1 Operating expenditure

The Tribunal believes Hunter Water can reduce its total operating costs by 1.5 per cent per annum over the next three years, through greater efficiency. As shown in Table 3.2, this is more than the operating expenditure savings Hunter Water forecast for the period of the determination. In reaching this view, the Tribunal considered analysis by Halcrow which it commissioned to analyse the projected operating and capital performance of the four water agencies under its jurisdiction.⁵

Table 3.2 Projected annual operating expenditure (\$nominal millions)

	2000/01	2001/02	2002/03
Hunter Water's proposed operating expenditure *	52.6	54.7	57.8
Tribunal's estimate of required operating expenditure	51.4	52.6	54.7

* from information provided in Hunter Water's Annual Information Return.

Halcrow's overall view is that Hunter Water is a well-managed, efficient and innovative organisation. Its operating costs per connection compare favourably with those of water companies in Australia, England and Wales. Hunter Water has reduced these costs by 40 per cent over the last ten years through a range of initiatives, including:

- reducing staffing levels
- dividing the organisation into 'client' and 'service provider' elements with the service provider concentrating on supplying by the most cost-effective means
- using labour more efficiently, for example by multi-skilling staff
- becoming technologically 'smarter'
- renegotiating contracts for purchases of electricity.⁶

However, Halcrow believes that Hunter Water's projected reductions for the next three years are too conservative. The agency has forecast a 9 per cent reduction in operating costs over this period, to be achieved by further rationalising its workforce, co-locating its customer centres in local government offices, and using powdered fluoride rather than liquid fluoride. But it also indicated that these savings will be offset by forecast cost increases from other sources, including higher treatment levels at some plants, higher costs to dispose of bio-solids, and higher fees as a result of the EPA's load-based licensing scheme. In addition, Hunter Water believes that it is reaching the limit of big efficiency savings, and is approaching an 'efficiency frontier'.⁷

Although Halcrow acknowledges that significant improvements have been made, it has identified a range of opportunities for Hunter Water to make further operational savings. These include:

- reducing maintenance costs by upgrading treatment works and pumping stations

⁵ The four agencies are Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council.

⁶ Halcrow Management Sciences Limited, *New South Wales Water Agencies' Review*, December 1999 Appendix B, pp 41-42.

⁷ Halcrow Management Sciences Limited, *New South Wales Water Agencies' Review*, December 1999, Appendix 4, p 47.

- increasing use of outsourcing
- introducing technological improvements in areas such as telemetry coverage to wastewater assets and the processing and storage of data
- rationalising the customer services area
- reviewing corporate overhead costs
- introducing a built-in incentive scheme to encourage further innovation
- developing Key Performance Indicators for the core business areas
- linking the operating budget to Key Performance Indicators.

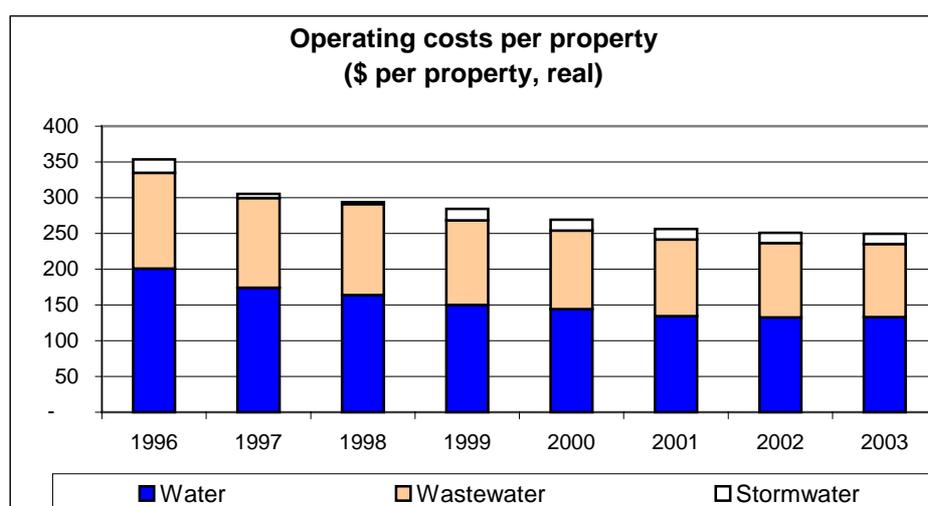
Hacrow's analysis indicates that by capturing these opportunities, Hunter Water can achieve a total annual percentage operational efficiency savings of between 0.8 per cent and 1.5 per cent.

Following consideration of Hunter Water's projected operating expenditures and Halcrow's analysis, the Tribunal believes there is scope for Hunter Water to achieve a 1.5 per cent per annum efficiency saving in its operating expenditure. This is at the high end of range proposed by Halcrow.

The following graphs illustrate Hunter Water's historic and forecast operating costs. For the years 2001 to 2003, the costs have been adjusted to include the net impact of the GST and for the 1.5 per cent efficiency saving the Tribunal believes is possible.

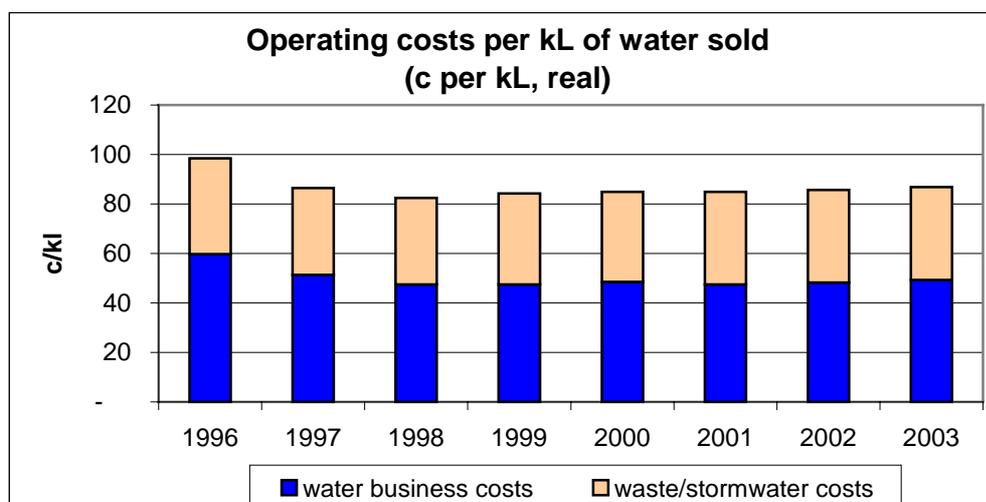
Figure 3.1 shows that over the period of this determination, operating costs per property are projected to fall slightly. In terms of water sold, Figure 3.2 shows that operating costs per kL sold is increasing slowly.

Figure 3.1 Tribunal's estimate of Hunter Water's operating costs per property (adjusted for GST and 1.5 per cent efficiency saving)



Source: Annual Information return and Tribunal modelling

Figure 3.2 Tribunal's estimate of Hunter Water's operating costs per kL (adjusted for GST and 1.5 per cent efficiency saving)



Source: Annual Information return and Tribunal modelling

3.1.2 GST

The Tribunal has made an explicit adjustment to Hunter Water's costs as a result of the Federal Government's New Tax System. The provision of water and sewerage services is GST-free.⁸ This means that the water utilities:

- will not be required to pay GST on their revenue and will not have to increase prices by 10 per cent
- will be able to claim back GST credits on their purchases
- will see decreases in input costs where wholesale sales tax equivalents have been paid, and indirectly as suppliers' costs decrease.

The Tribunal proposes to adjust prices from 1 July 2000 for the specific impact of the new tax system package on the utility, and will exclude the economy-wide impact of the package from subsequent price indexation. This approach has the benefit that there will be no 'windfall' loss or gain for the utility and the impact on the consumer will equal the net impact of the GST package on the utility.

As price regulator, the Tribunal has set in place procedures to assist it in satisfying itself that the effects of the new tax system package are appropriately reflected in prices charged by the utilities it regulates. This is separate to the ACCC's role on price exploitation under the Trade Practices Act. The utilities regulated by the Tribunal are required to comply with the Tribunal's determination (and its procedures on new tax system compliance) and the price exploitation guidelines of the ACCC.

In estimating Hunter Water's operating costs, the Tribunal has considered the various ways the Federal Government's new tax system could affect the Hunter Water. These include reduced input costs due to the abolition of wholesale sales taxes, additional compliance costs

⁸ GST-free means that no GST is levied on the sale of these goods or services. However, the registered business can claim input tax credits.

associated with the new system, a windfall gain associated with the 'spike' in the September quarter consumer price index (CPI) and subsequent impacts on the CPI, and an obligation to charge the 10 per cent GST on some of the services it supplies.

After careful consideration, the Tribunal made the following adjustments for the GST.

1. The Tribunal has estimated the cost savings as 0.9 per cent of revenue prior to the New Tax System. This figure was applied to both capital and operating expenditure.

To estimate this cost savings, the Tribunal required all regulated utilities to use an economic model, Econtech,⁹ to predict the cost savings that would arise from the new tax system. This model examines all costs of the regulated services, and calculates the direct and indirect tax savings for that business.¹⁰

The Tribunal required each utility to engage an independent auditor to certify that the costs it used in modelling is an accurate and representative record of its costs. Econtech has also reviewed each agency's modelling and provided an opinion on whether the data used in the model was representative, and the model was used correctly. In its financial modelling the Tribunal used only the short term impacts as a one-off adjustment in 2000/01.

2. The CPI value used to calculate charges in 2001/02 and 2002/03 excludes the impact of the GST. The Tribunal considers that using a CPI value that includes the effects of the GST would result in Hunter Water 'double-dipping'. The CPI formula for calculating charges for 2001/02 and 2002/03 will include the period from the September quarter 2000, which would normally include the effects of the GST. This means that using a CPI value that includes the GST impact to calculate the 2001/02 and 2002/03 charges would have resulted in a windfall gain to Hunter Water. The Tribunal will use a value of the CPI that excludes the GST impact.
3. No compliance costs were included in the modelling. Hunter Water indicated that these costs would be small.
4. Maximum prices were determined on the basis that all charges are GST-free. Section 38.1 of *A New Tax System (Goods and Services) Act, 1999* indicates that the supply of water, sewerage services and a service that consists of the emptying of a septic tank or draining storm water are GST-free. Further, under Section 81.5(2) of the Act, the Federal Treasurer can make a determination to exempt the payment of certain Australian taxes, fees and charges from GST. At the end of January 2000, the Treasurer made a draft determination covering some charges affecting Hunter Water but he is yet to issue a final determination. The ATO has issued a draft ruling that interprets Section 38 under which some (non-cash) developer contributions may not be GST-free. The maximum charges included in this determination have been made on the basis that the charges are GST-free. In the event that any of the charges listed in this or any other determination do attract GST, the Tribunal has developed an approach for including GST in the maximum prices.¹¹

⁹ The Econtech model has been used widely, including by ACCC and the NSW Treasury, to assess GST impacts.

¹⁰ Direct tax savings arise where the business no longer has to pay certain taxes such as wholesale sales tax. Indirect tax savings arise from the business's supply chain, as taxes previously embedded in its inputs are removed.

¹¹ This approach is outlined in the determination.

The Tribunal's approach to modelling is consistent with the Australian Competition and Consumer Commission (ACCC) guidelines on price exploitation and the new tax system.¹²

3.2 Capital costs

To estimate Hunter Water's capital costs, the Tribunal has revised its valuation for Hunter Water's existing asset base for regulatory purposes, that is, its regulatory asset base (RAB). It also considered its rate of return on these assets and depreciation (return of capital).

3.2.1 Regulatory asset base

At the time of its last determination, the Tribunal made a preliminary estimate of the value of Hunter Water's regulatory asset base using the 'Line in the Sand' methodology discussed below. The Tribunal has re-estimated the agency's regulatory asset base for the current determination using an optimised deprival valuation (ODV) approach. According to this approach, there are three underlying bases which have to be considered.

- **Replacement cost**—the cost of replacing the existing assets with identical assets in the same condition (ie after allowing for depreciation). For regulatory purposes, these costs can be optimised by adjusting for technological change and past poor investment decisions. The value so obtained is called the Depreciated Optimised Replacement Cost.
- **Recoverable amount**—the future revenue stream, less cash operating costs, that the assets will generate. This figure is then adjusted to today's dollars (ie present value) to allow for the time value of money (or interest cost). This approach is known as the Line in the Sand (LIS) methodology.
- **Net realisable value**—if the assets are surplus to requirement, the value is the price the assets could be sold for in the open market.

Once an amount has been estimated for each of these bases, whichever is higher of the recoverable amount and the net realisable value is considered to be the Economic Value of the assets. Whichever is lower of the Economic Value and the Depreciated Optimised Replacement Cost (DORC) is the Optimised Deprival Value of the assets.

¹² ACCC, *Price Exploitation and the New Tax System*, second edition, March 2000.

Since in the case of Hunter Water's assets, the DORC is certain to be much higher than the Economic Value,¹³ the Tribunal has estimated the value of the Hunter Water's assets by using LIS methodology¹⁴ to determine their Economic Value. However, unlike the 1995 estimation, it has allowed for renewals expenditure, and based the calculation on actual (1998/99) cashflows.¹⁵ This resulted in an Optimised Deprival Value of its regulatory asset base of \$810 million for 1999/2000.¹⁶

For financial analysis, the Tribunal has also estimated the value of the asset base for 2002 and 2003 by rolling forward the 2001 regulatory asset base (as described above) from year to year as follows:¹⁷

- the opening asset base at the start of each year is indexed by the CPI¹⁸
- projected capital expenditure (excluding capital contributions) is added and indexed¹⁹
- depreciation and asset disposals are subtracted to obtain the closing asset base.

Attachment 4 provides the components of the regulatory asset base for 2001 to 2003.

At the next determination the Tribunal will consider again how it values Hunter Water's underlying regulatory asset base. The Tribunal is likely to conduct a prudency review of capital expenditure for the period 1 June 2000 to 30 June 2004. The purpose of this review would be to establish the validity of the underlying reasons for that capital expenditure.

3.2.2 Rate of return

The prices set in this determination will result in a rate of return ranging between 6.0 per cent and 6.4 per cent (Attachment 4), which the Tribunal believes is adequate for Hunter Water.

The rate of return a regulated agency receives on its assets is a key element of its overall revenue requirement. Its rate of return multiplied by the value of its underlying asset base determines its dollar return. The Tribunal, therefore, needs to ensure the prices it sets will result in an adequate rate of return for the agency.

An adequate rate of return is one that enables the owners of a regulated business to finance its regulated undertakings and obtain reasonable returns in accordance with the risks involved. If the rate of return is too low, the regulated business may face financial difficulties and run short of capital. It would then have to reduce maintenance and capital

¹³ Hunter Water values its assets (ie their book value) at their so called Modern Equivalent Asset value which is comparable to the DORC. At the end of 1998/99 this value was \$1.9 billion.

¹⁴ As the assets are clearly not surplus there is no need to test their net realisable value so the Economic Value is equivalent to the LIS.

¹⁵ For the current determination, the LIS value as of the end of 1998/99 was estimated using the actual free cashflow in that year. The free cashflow is the actual cash revenue less cash operating costs and renewals expenditure. The opening regulatory base for the regulatory period was obtained by rolling forward the 1998/99 LIS value one year to 1999/00.

¹⁶ This estimate of the regulatory asset base includes \$20 million of working capital.

¹⁷ The asset roll forward process is discussed in detail in the Tribunal's recent determination for the NSW electricity distributors, *Regulation of NSW Electricity Distribution Networks, Determination and Rules Under the National Electricity Code*, IPART, December 1999, p 53.

¹⁸ CPI inclusive of the impact of the New Tax System or GST.

¹⁹ Capital expenditure occurs throughout the year. Half the percentage change in CPI is used because, on average, the capital expenditure would be incurred half way through the year.

expenditure to below optimum levels, resulting in lower levels of service and increased costs to customers in the long term. If the rate of return is too high, the business is likely to be charging higher prices, and this could result in it over investing in assets or building up cash.

Since the rate of return usually reflects a business' cost of capital, the Tribunal has estimated the agencies' likely Weighted Average Cost of Capital (WACC) using a range of underlying parameters²⁰ listed in Attachment 5. This resulted in a range of 4.8 per cent to 7.8 per cent on a real, pre-tax basis. For its financial modelling, the Tribunal has used a WACC of 7 per cent for all the agencies—this decision was in line with the view of several stakeholders.²¹

The final issue the Tribunal considered in relation to return on assets was working capital. The Tribunal recognises that any business must maintain an investment in working capital to allow it to manage the lag between payments to suppliers and receipts from customers. Because an investment in working capital is a necessary part of conducting the business it should earn a return similar to investment in physical assets. For financial modelling, the Tribunal has used a nominal return of 10 per cent.²² This approach is consistent with the Tribunal's other recent determinations.

3.3 Depreciation

The Tribunal considered depreciation in estimating Hunter Water's capital costs. It has determined to allow depreciation on the asset base established for regulatory purposes, and to adopt depreciation schedules based on the straight-line depreciation methodology.

In its submission, Hunter Water used an average asset life of around 75 years for existing assets. This is the average asset life the Tribunal has used to depreciate the regulatory asset base in its financial modelling.

3.4 Capital expenditure

The Tribunal seeks to ensure that the prices it sets enable regulated agencies to fund prudent and efficient capital expenditure. In considering Hunter Water's proposed capital expenditure, the Tribunal has taken into account Hunter Water's need to meet agreed service standards, as well as future demand. It has also considered the need for appropriate disincentives for over-investing in infrastructure, and the trade-off between capital expenditure, operating expenditure and demand management.

Hunter Water has revised the capital expenditure program presented in its Submission.²³ The revised projected capital expenditure program is shown below. Over the regulatory period, expenditure on water increases significantly after an initial decline. Expenditure on

²⁰ For financial modelling purposes, the Tribunal has estimated the Weighted Average Cost of Capital for the agencies (WACC) on a commercial basis. The WACC is a weighted average of the agency's cost of debt and equity. The agencies' cost of equity has been estimated using the Capital Asset Pricing Model (CAPM). A detailed discussion of this methodology may be found in the Tribunal's recent determination for the NSW electricity distributors, *Regulation of NSW Electricity Distribution Networks, Determination and Rules Under the National Electricity Code*, IPART, December 1999.

²¹ See the following submissions - NSW Treasury p 13, Hunter Water Corporation p 24, Public Inertest Advocacy Centre p 23, Sydney Water Corporation p 93, Sydney Catchment Authority p 41.

²² A 10 per cent nominal return is consistent with a 7 per cent real rate of return.

²³ Hunter Water, Submission p 21 and Annual Information Return.

sewerage is high but decreases over the regulatory period (Table 3.3). The drop in total expenditure from 2000/01 to 2001/02, and subsequent rise, reflects the revised timing of projects taking into account the time required for completion of designs and approvals.

Table 3.3 Hunter Water's proposed capital expenditure (\$ real) from 2000/01 to 2002/03²⁴

Activity	2000/01	2001/02	2002/03	Total
Water	11.4	7.8	14.9	34.1
Sewerage	35.9	27.7	32.0	95.6
Other²⁵	4.6	4.3	4.1	13.0
Total	51.9	39.8	51.0	142.7

The primary factors driving the capital works program are shown in Table 3.4. The Tribunal notes that although a high proportion of the proposed expenditure is directed at meeting the expanding needs of existing and new customers these 'growth' expectations are not reflected in Hunter Water's sales expectations. This is because, while growth is driving demand for new assets in some areas, there is contraction of demand in other areas.²⁶

Table 3.4 shows that 'growth' and 'standards' are the main factors driving this expenditure. However, 'renewals' expenditure is also a major contributor.

Table 3.4 Projected capital expenditure by driver - major projects > \$1million

Driver	2000/01	2001/02	2002/03	Regulatory Period (%)
Renewals (%) (replacement and renewal of existing assets to maintain current capacity)	21%	21%	26%	23%
Standards (%) (expenditure needed to meet new standards or environmental requirements)	37%	27%	31%	32%
Growth (%) (expenditure to met the expanding needs of existing and new customers)	42%	52%	43%	45%
Total	100%	100%	100%	100%

The Tribunal has reviewed Hunter Water's projected capital expenditure program, again relying on Halcrow's analysis and recommendations.²⁷ In general, Halcrow considered that Hunter Water should be able to deliver its proposed service levels for lower capital expenditure. It identified the potential for Hunter Water to make efficiency gains of

²⁴ Hunter Water proposed this capital expenditure subsequent to making its submission in a letter dated 7 April 2000.

²⁵ Includes fleet, meters, computers, telemetry.

²⁶ Correspondence from Hunter Water.

²⁷ Halcrow Management Sciences Limited, *New South Wales Water Agencies' Review - Summary*, December 1999.

between two per cent and 17 per cent of projected capital expenditure per annum as listed in Table 3.5.²⁸

Table 3.5 Hunter Water's potential to reduce capital expenditure through greater efficiency (Halcrow estimates, per cent)

Year	2000/01	2001/02	2002/03
Efficiency Gain	2% to 4%	9% to 13%	12% to 17%

The Tribunal considers that it is reasonable to expect Hunter Water to achieve capital efficiency gains at the high end of the ranges. Therefore in its financial analysis the Tribunal has adjusted Hunter Water's capital expenditure projections on the basis that Hunter Water achieves these gains (see Table 3.6).²⁹

Table 3.6 Total capital expenditure projections from 2000/01 to 2002/03 (\$1999/2000)

Projection	2000/2001	2001/2002	2002/2003	Total
Submitted to Halcrow (November 1999)	51.7	58.8	43.3	153.8
Revised proposal to IPART (April 2000)	51.9	39.8	51.0	142.7
Halcrow efficient estimate (as allowed for in financial analysis)	50.0	51.7	36.4	138.1

The main factor influencing this decision was Halcrow's concerns about the appropriateness and timing of some of Hunter Water's planned projects. In particular Halcrow noted that the timing of the replacement of Chichester Trunk Gravity Main project—scheduled to commence in 2002/03 with a total cost of \$9.4m – is justified by the use of unsubstantiated social consequence costs.³⁰ The Tomago to Anna Bay (Tomaree) pipeline, due to commence in 2002/03 with a total cost of \$6.2 million, is sensitive to assumptions about rainfall patterns.³¹

²⁸ Halcrow's proposed capital efficiency gains for the NSW agencies are comparable with those recently proposed by Ofwat for the UK water authorities, as shown below

Capital maintenance expenditure to maintain serviceability to customers of the networks. A stepped improvement in 2000–01 of between 0 per cent and 11 per cent in addition to 1.4 per cent²⁸ per year leading to savings in the range 3 per cent – 15 per cent in the period to 2004–05.

Capital enhancement expenditure to meet new quality and environmental standards. A stepped improvement in 2000–01 of between 1 per cent and 19 per cent in addition to 2.1 per cent²⁸ per year leading to savings in the range 7 per cent – 24 per cent in the period to 2004–05.

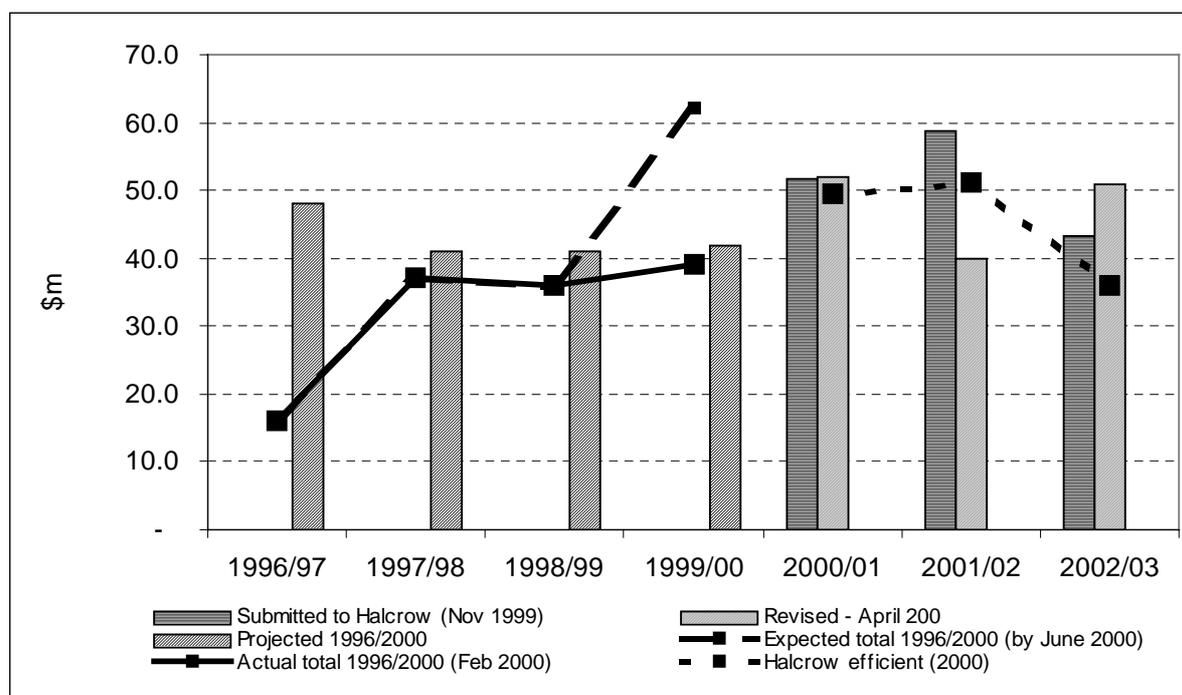
²⁹ Halcrow reviewed the capital expenditure program as submitted to them by Hunter Water, in late 1999. In its revised program Hunter Water reduced the total projected expenditure over the regulatory period by some \$12 million. For consistency in its financial analysis, the Tribunal derived the Halcrow efficient estimate of capital expenditure for each year, by applying Halcrow's highest efficiency factor for that year to the corresponding capital expenditure as reviewed by Halcrow. The resulting total capital expenditure, allowed for in the financial analysis is about \$4.6 million less than Hunter Water's revised total figure.

³⁰ Hunter Water assumed that the customer disruption costs of being without water is \$1.58 per household per hour.

³¹ Halcrow Management Sciences Limited, *New South Wales Water Agencies' Review - Summary*, December 1999, p 32.

Figure 3.3 shows Hunter Water's capital expenditure as forecast for the period from 1996/97 to 2002/2003 compared to actuals (and the Halcrow efficient estimate allowed for in financial analysis). In the past regulatory period Hunter Water has underspent on its forecast. However much of this was in 1996/97. However Hunter Water has indicated that it would make up for this in the current year (1999/00).³²

Figure 3.3 Historical and projected capital expenditure



3.5 Dividends and tax equivalents

Hunter Water pays dividends and tax equivalents to the State Government. In the Tribunal's financial modelling, tax equivalents were calculated using the standard corporate tax rate, which is currently 36 per cent and will reduce to 34 per cent in 2002 and 30 per cent in 2003. Tax expense was calculated by applying the relevant tax rate to operating profits before tax and capital contributions, and after abnormal items. Further, the depreciation expense was adjusted for permanent differences. This adjustment was required to exclude, for taxation purposes, the depreciation of contributed assets and capital expenditure funded by means of capital contributions.

In its financial modelling, the Tribunal has assumed that dividends and income tax equivalents are 85 per cent of pre tax profit. The Tribunal considers that Hunter Water should be able to meet its dividend and tax equivalent requirements under this determination.

³² Hunter Water Corporation, submission to IPART for the medium Term Price Path 2000-2003, Supplementary Information, March 2000, p 14.

3.6 Financial outcomes

The final major component of the Tribunal's analysis in relation to estimating Hunter Water's revenue needs aimed to ensure that the prices it sets for water and sewerage services will ensure an appropriate financial outcome and credit rating.

This involved analysing a range of financial indicators which are commonly used by debt rating agency, Standard and Poors, and the NSW Treasury. These indicators were chosen on the basis of relevance, availability of information, and common usage in the financial community. They focus on the agency's financial capacity and ability to service debt.

As Table 3.7 indicates, the prices set in this determination will enable Hunter Water to maintain its strong financial position and current credit ratings over the next three years. For example:

- The funds flow and earnings indicators both suggest that Hunter Water is well able to service its debt—both indicators remain at AA.
- The gearing level (total debt to total capital ratio) remains low over the regulatory period (13 per cent on the regulatory asset base, by 2002/03).
- Funds flow net debt payback—the indicator shows Hunter Water's level of debt is very low compared with the level of funds from operations.
- The internal financing ratio indicates that borrowing will be required to fund the capital expenditure program. Although the indicator is rated <BB in 2001 (as in the previous two years), it is projected to improve to A, by 2003. The lower ratings cover a period of high levels of capital expenditure and should not be a cause for concern as Hunter Water is well able to service its total debt which is low in comparison with its asset base.

Table 3.7 Projected Financial Indicators and Credit Ratings Implied by the Determination

	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03
Funds flow interest coverage	83.5	54.1	41.5	103.7	14.7	9.7	8.7
Credit rating-S&P US utilities	AA						
Pre-tax interest coverage	41.72	34.8	23.8	54.0	7.6	5.5	4.8
Credit rating-S&P US utilities	AA						
Funds flow net debt payback	(0.6)	(0.4)	(0.2)	0.7	1.6	2.5	2.4
Credit rating-NSW Treasury	>AAA	>AAA	>AAA	AAA	AAA	AAA	AAA
Funds operations/total debt	0.6	0.6	0.5	0.6	0.5	0.4	0.4
Credit rating	AA						
Total debt/total capital	12%	12%	11%	10%	12%	13%	13%
Credit rating-S&P US utilities	AA						
Internal financing ratio	404%	61%	9%	10%	-7%	22%	69%
Credit rating-S&P US utilities	AA	A	<BB	<BB	<BB	BB	A

Together, these indicators show that the prices set through this determination will generate sufficient cashflow for Hunter Water to comfortably fund its operations, service its debt and meet its capital expenditure and dividend payments, while at the same time meeting appropriate service standards.

For a definition of each of these financial indicators see Attachment 6.

4 MAXIMUM PRICES SET FOR WATER, SEWERAGE AND DRAINAGE SERVICES AND IMPLICATIONS FOR CUSTOMERS

In addition to ensuring the prices it sets will enable Hunter Water to remain financially viable, the Tribunal must consider the effect these prices will have on Hunter Water's customers. This section outlines its determination on the maximum prices Hunter Water can charge for water, sewerage and stormwater (drainage) services, and discusses the implications of these determinations for both residential and non-residential customers.

4.1 Water charges

The Tribunal has not supported Hunter Water's proposal to maintain average water tariffs in real terms. The Tribunal has accepted Hunter Water's proposal to introduce a location-based third tier water usage tariff. The Tribunal has rejected Hunter Water's proposal to increase other water usage charges to fund the new third tier tariff.

4.1.1 Hunter Water's Proposal

Hunter Water proposed maintenance of its 1999/2000 tariffs in real terms throughout the new regulatory period. However, Hunter Water proposed some restructuring of tariffs. These changes included:

1. **Introducing a location-based third tier usage charge in 2001/02**, through which large water users would be charged a lower rate for every kL they use over 50,000kL per annum. The actual rate will depend on how far the customer is from the water source. This new tier was to be revenue-neutral, and the \$830,000 in lost revenue it entailed was to be recovered by increases in the water service charge and in the second tier tariff. Alternatively, Hunter Water proposed raising this revenue through increases in miscellaneous charges. Hunter Water argued that a third tier charge was justified because it reflects the lower cost to supply very large customers (particularly those residing close to the source of supply) and because of the importance of these customers to the regional economy. It believes the third tier is a better way to address these issues than ad hoc contractual arrangements, which have high transaction costs, lack transparency and create probity and credibility issues.
2. **Introducing a discount for the supply of (untreated) raw water at seven cents/kL below the standard usage charge for each tier.** This proposal affects two types of customer—those who draw water from the Chichester trunk gravitation main upstream of the Dungog water treatment plant, and potential new major industrial customers seeking supply of raw water from Grahamstown Dam or Tomago Sandbeds. Hunter Water argues that the first group should pay less than the standard price, as they do not benefit from the Dungog treatment plant processes. Although there are currently no customers in the second category, Hunter Water believes it is strategically important to be able to offer potential large-industrial raw water customers a lower charge, reflecting lower delivery costs. The proposed seven cents per kilolitre discount is based on the estimated savings in power and chemicals costs per kilolitre of untreated water.

Hunter Water's proposed water tariffs are set out in Table 4.1.

Table 4.1 Hunter Water's Proposed Water Charges (\$1999/00)

Water Charges	1999/2000 (current)	2000/01	2001/02	2002/03	2003/04
Base service charge (\$pa)	24.60	24.60	27.15	27.15	27.15
Usage charges (c/kL)					
Tier 1 (< 1000 kL)	92.2	92.2	92.2	92.2	92.2
Tier 2 (1000-50 000 kL)	84.9	84.9	86.7	86.7	86.7
Tier 3 (>50 000 kL)	n/a	n/a	73.4 – 86.7*	73.4 – 86.7	73.4 – 86.7

* the actual third tier charge for each customer would depend on distance from the water source.

Note these proposals were made in the context of a possible four year regulatory period ending 2003/04.

4.1.2 The Tribunal's determination and implications for customers

The Tribunal is not convinced Hunter Water's intention to maintain average tariffs in real terms is justified. It considers that average tariffs can be reduced by around 1.5 per cent (in real terms) each year between 2000/01 and 2002/03 while still maintaining Hunter Water's financial viability and appropriate service standards.

The Tribunal has therefore reduced the first and second tier usage charges 2 per cent in real terms in each of the three years.³³ This will go some way towards redressing the current imbalance between Hunter Water's service and usage charges for water.³⁴ The Tribunal has decided to maintain water service charges at the existing level in real terms.

Table 4.2 Water charges determined by the Tribunal

Charge	2000/01	2001/02	2002/03
Water usage			
first tier	92.20 c/kL	2000/01 charge x	2000/01 charge x
second tier	84.90 c/kL	$(1 + \text{CPI}_1^{-\text{GST}} - 2\%)$	$(1 + \text{CPI}_1^{-\text{GST}} - 2\%) \times$ $(1 + \text{CPI}_2^{-\text{GST}} - 2\%)$
Water service			\$25.07 x
20mm	\$25.07	$\$25.07 \times (1 + \text{CPI}_1^{-\text{GST}})$	$(1 + \text{CPI}_1^{-\text{GST}}) \times (1 + \text{CPI}_2^{-\text{GST}})$

1 CPI and $\text{CPI}^{-\text{GST}}$ are defined in the Determination attached to this report.

$\text{CPI}^{-\text{GST}}$ means the CPI exclusive of the net impact of:

- the GST; and
- changes to any other Commonwealth, State or Territory taxes or charges, consequent upon the introduction of the GST.

³³ In 2000/01, the real decline is actually 1.9 per cent, as this is the relevant year to March inflation rate. First and second tier usage charges are maintained in nominal terms at the 1999/00 level and thus decline 1.9 per cent in real terms.

³⁴ A disproportionate amount of capital related costs is currently recovered by Hunter Water via water usage charges. Such costs may more appropriately be recovered by the 'fixed' or service charge. Service charge revenue currently only recovers around 8 per cent of total water revenue, whereas capital related costs represent around 55 per cent of total water supply costs. However, the Tribunal has nevertheless continued to allow a large proportion of capital related costs to be recovered via the water usage charge because the relatively high usage charge is an effective demand management signal.

Table 4.2 summarises the water prices (other than for very large users) the Tribunal has determined while Table 4.3 summarises the impacts of the determined water prices for typical residential and 'average' non-residential customers.

Table 4.3 Impact on Average Customer Water Bills (\$2000/01)

	1999/00 Bill	2000/01 Bill	% Chg. 1999/00 - 2000/01 (real)	% Chg. 1999/00 - 2002/03 (real)
Residential Bill				
Average (210kL pa)	\$222.37	\$218.69	-1.7%	-5.0%
Non Residential Bill)				
Average (3000kL pa)	\$2770.05	\$2720.28	-1.8%	-5.5%

Non-Residential customer assumed to have 40mm connection and 80 per cent discharge factor.

The Tribunal accepted Hunter Water's proposals to introduce a third tier water tariff and a raw water rate. These are discussed below.

Third Tier Tariff

Hunter Water currently has around 35 customers consuming more than 50,000kL per annum. Under Hunter Water's proposal, 25 of these customers would be eligible to pay a third tier price ranging from 73.5c/kL to 86.2c/kL. The remaining 10 customers would pay the second tier charge.

Hunter Water estimates the third tier proposal would cost \$830,000. This represents around 1.4 per cent of projected total water sales revenue (\$58.9m in 1999/00). Hunter Water initially proposed to fund this by an increase in the general water service charge from \$24.60 to \$27.15 and an increase in the second tier usage charge to 86.7c/kL. Alternatively it proposed that most of the funding could be provided by additional revenue from an increase in Miscellaneous Charges.

Hunter Water proposed to introduce the third tier Tariff for the following reasons:

- large-customers exhibit economies of scale and constant annual demand and currently are overpaying
- in locations close to the water source, large customers use less of the Corporation's infrastructure and therefore are less costly to service
- the significance of industry in Hunter Water's customer base and to the regional economy
- it is preferable to 'ad hoc' contractual arrangements which have high transactions costs, lack transparency and create probity and credibility issues
- there is unlikely to be any third party access in the water industry in the near future.

Comments on the Third Tier in Submissions

In its submission to this Review, Incitec, advised it uses 3000 Megalitres of water per annum and contributes about 2 per cent of Hunter Water's total water revenue. In its submission:

Incitec notes with strong approval, the provision of a tariff intending to be reflective of the efficiencies that flow from a higher volume consumption, and also the actual costs incurred through the locational advantages of at least some industry.³⁵

In a submission to the Review, Macquarie Generation stated:

We would ...like to express our strong support for a proposal to introduce a third tier costing scheme for major water customers in the Hunter Water area...This will be important not only for new industries but also existing industries and will no doubt have an important flow on effect to mitigate the levels of unemployment in the Hunter Region.³⁶

Australian Business agreed that larger users should be entitled to 'modestly lower tariffs' as they are cheaper to service. However, Australian Business did not support penalising medium sized non-residential customers (relative to households) in order to reduce charges to larger users. Australian Business argued that bills for all users should reflect the cost of provision – 'marginal cost pricing should be comprehensive and not piecemeal'.

However, the Peak Environment Non Government Organisations (PENGO) opposed the introduction of large-customer tariffs and in particular, Hunter Water's third tier, as this would be contrary to principles of demand management. PIAC also opposes the introduction of large customer tariffs. PIAC finds it unacceptable that low volume water users (often low income as well) should subsidise large corporate customers. The Tribunal acknowledges PENGO's argument that such a discount may, unless care is taken, weaken demand management. It believes that there are other, more effective, demand management strategies for large customers that Hunter Water should pursue. However, the Tribunal decided that this disadvantage was outweighed by the fact the new price structure better reflects the costs of serving these customers, and the potential employment benefits of encouraging industry in the region by removing unnecessary costs.

Tribunal Response to the Third Tier

The Tribunal has supported the third tier change as it is a reasonable response to the call for a quantity discount from very large water users. The third tier charge reflects the lower costs of supplying these customers in general (due to economies of scale) and that these cost advantages are more significant for customers located closer to the source of supply.

The Tribunal has not supported Hunter Water's proposal to recover the costs of introducing the discounted third tier charge by increases in the service charge and second tier on equity grounds. As PIAC and Australian Business pointed out, it is not acceptable to increase charges for one group simply to offset decreases for other groups. The Tribunal considers that Hunter Water should be able to find alternative means to fund the third tier. It should not be funded by an increase in charges to other water users. The Tribunal has therefore modified Hunter Water's proposal.

³⁵ Incitec, submission, p 5.

³⁶ Macquarie Generation, submission, p 1.

The Tribunal has determined that the third tier Tariff will apply from 2001/02, but Hunter Water is required to bear the cost this entails. In addition, in 2002/03, the third tier is to be reduced by two per cent in real terms, in line with the first and second tier adjustments in that year. Table 4.4 shows the third tier price in 2001/02 for each location.³⁷

Table 4.4 Tribunal Determination of Third Tier Water Usage Charges in 2001/02

LOCATION	cents/kilolitre
Kooragang/Stockton	73.5
South Wallsend	74.0
Tomago	77.3
Warners Bay/Valentine	77.3
Seaham/Hexham	80.9
Newcastle/Highfields	81.7
Raymond Terrace	83.2
Port Stephens	83.5
Kurri/Cessnock	83.8
Lookout	83.8
All Other Locations	second Tier Tariff

Raw Water Discount

Hunter Water currently has around 60 customers, generally rural landowners using water for domestic and livestock purposes, who use raw water. Nearly three-quarters of these customers consume less than 1000kL (the second tier boundary), and none use more than this amount. The Tribunal accepts Hunter Water's argument that they should pay less than the standard price as they do not benefit from the Dungog treatment plant processes.

The Tribunal also accepts Hunter Water's more general proposal for a raw water discount of seven cents per kL, as it believes this represents a reasonable estimate of the lower costs of supply for untreated water.

4.2 Sewer Charges

The Tribunal has accepted Hunter Water's proposal to reduce the sewer usage charge for residential customers so it is the same as that for non-residential customers. This will be funded in the first year of the determination by a 1.8 per cent (real) increase in the sewer service charges for all customers. In the second and third years, sewer usage charges will be reduced by two per cent in real terms, while sewer service charges will be maintained in real terms.³⁸ This will achieve a better balance between usage and service charges, and will result in a reduction in average sewer tariffs of around 1.5 per cent (in real terms) over the determination period.

³⁷ Operational zones that are generally serviced by distinct reservoirs and separated by closed valves define these locations.

³⁸ At 1999/2000 levels.

The Tribunal has also decided to introduce a minimum sewer service charge for units and flats, and to maintain the Hunter Sewerage Project charges in real terms (but with no initial increase in the Environmental Improvement Charge).

4.2.1 Hunter Water's proposed sewer charges

Hunter Water proposed to equalise the sewer usage charges for residential and non-residential customers, and to fund this change by increasing the service charge for all customers. It also proposed several other changes, including:

1. **Introducing a minimum charge for flats and units in 2001/02, to achieve greater equity in the incidence of the sewer service charge.** Hunter Water argued that while residents of units placed a similar load on the sewer system as those of houses,³⁹ they currently pay service charges which are often substantially less than those paid by householders. This is because their sewer service charge is calculated as a proportionate share of the single service charge applying to the block. Hunter Water proposed to gradually introduce a minimum charge, starting at \$60 in 2001/02 and increasing to \$80 in 2002/03. Ultimately, this charge is to be around two-thirds of the level applying to a separate residential dwelling. In the next regulatory period, the additional revenue raised is to be used to fund a reduction in the sewer service charge for 20mm commercial customers (mostly small offices and shops), who currently pay double the rate paid by residential households, even though they place a very similar load on the sewer system.
2. **Separating the link between the discharge factor and the sewer service charge for (separate-dwelling) 20mm residential connections.** Currently, the sewer service charge is calculated by multiplying the base service charge by a discharge factor of 50 per cent. For separate dwellings (eg a house), Hunter Water proposes to restructure the charge by removing the reference to the discharge factor and charging a flat rate which is equal to 50 per cent of the base sewer service charge. This is designed to assist domestic customers with high external water usage. Under the current price structure they pay a 50 per cent discharge factor on their total water usage even though only a relatively small proportion goes into the sewer.⁴⁰ Under the proposed structure, these customers could opt to install a second water meter for external use (for \$25.07), for which no sewer service or usage charges would apply. They would also only be charged half the base service charge for the first meter.
3. **Increasing the Environmental Improvement Charge by 10 per cent in 2001, and maintaining this value and the Access Charge in real terms for the rest of the regulatory period.** Hunter Water argued that this is necessary to restore the financial viability of the Hunter Sewerage Project (HSP), which provides sewerage services in the fringe of the area that Hunter Water services.⁴¹ As part of the funding for this project, all Hunter Water sewerage customers (except pensioners) pay an Environmental Improvement Charge (EIC or 'environmental levy'). Owners of unconnected land within the fringe area pay a Hunter Sewer Service Access Charge (SSAC) upon connection. The EIC is scheduled to continue until 2009 for most

³⁹ Hunter Water argued that as the number of residents in a unit or flat was around two-thirds of that of a house, a fair service charge for a unit or flat would be two-thirds of that paid by a residential house.

⁴⁰ Refer to submissions to this Review from Mr B Nolan, Mr C Springbett, and Mr R McKee.

⁴¹ In these areas, development proceeded without sewer services being provided. The NSW Government initiated the Hunter Sewerage Project to address environmental problems arising from sewerage backlog. Under the project, the cost of the project is shared between owners of vacant land in the relevant area, the Hunter community generally and the NSW Government.

customers.⁴² In its 1996 determination, the Tribunal substantially reduced both the SSAC (-14 per cent) and the EIC (-49 per cent) because project costs were lower than initially forecast. However, Hunter Water has advised that the lower charges reduced the project's internal rate of return from seven per cent to four per cent. In addition, this rate of return is being further eroded as the lower charges have been held constant in nominal terms over the last regulatory period and developer charge receipts have been less than projected in 1996.

Hunter Water's proposed sewer tariffs are set out in Table 4.5, and the proposed Hunter Sewerage Project charges are in Table 4.6.

Table 4.5 Hunter Water's proposed sewer charges (\$1999/2000)

SEWERAGE	1999/2000 (current)	2000/01	2001/02	2002/03	2003/04
Sewer Usage charge (c/kL)					
Residential (subject to 50% discharge factor)	47.6	40.5	40.5	40.5	40.5
Non-Residential	40.5	40.5	40.5	40.5	40.5
Sewer Service charge (\$)					
Residential (houses 20mm)	202.58	207	207	207	207
Residential (units/flats new minimum charge)*	vary over a wide range	vary over a wide range	60	80	100
Small commercial (20mm)	405.15	414	414	414	230
Non-Residential	405.15	414	414	414	414

Table 4.6 Hunter Water's Proposed HSP Charges (\$real)

Hunter Sewerage Project (\$)	1999/2000 (current)	2000/01	2001/02	2002/03	2003/04
Environment Improvement Charge	40	44	44	44	44
HSP Sewer Service Access	2780	2780	2780	2780	2780

4.2.2 Implications for Customers

The Tribunal accepted Hunter Water's proposal to equalise residential and non-residential sewer usage charges in 2000/01, funded by an increase in the service charges, as it believes the proposal is equitable and likely to result in only a small change in most people's total sewer bill. However, while sewer service charges will then be maintained in real terms over the regulatory period, usage charges will be reduced by 2 per cent in real terms in 2002/02 and 2002/03 (in line with water usage charges). The impact of this decision on average Hunter Water residential and non-residential customers is shown in Table 4.7.

⁴² Some areas which joined the HSP after 1989 will pay the charge beyond 2009.

Table 4.7 Impact on Average Customer Sewer Bills (\$2000/01)

	1999/00 Bill	2000/01 Bill	% Chg. 1999/00 - 2000/01 (real)	% Chg. 1999/00 - 2002/03 (real)
Residential Bill				
Average (210 kL pa)	\$257.36	\$252.53	-1.9%	-2.5%
Non Residential Bill				
Average (3000 kL pa)	\$2,311.58	\$2,316.00	0.2%	-1.4%

Note: Non-Residential customers – assumed that average customers have 40mm connection and 80 per cent discharge factor.

Flats and units should see a 1.9 per cent reduction (in real terms) in 2000/01 but will have a \$20 increase in each of 2001/02 and 2002/03.

The Tribunal's decision on Hunter Water's other proposals, together with an overview of its rationale and the implications for customers is as follows:

1. **Introducing a minimum sewer service charge for units and flats in 2001/02.** The Tribunal supported this proposal in principle as it believes it is equitable. However, it was concerned that the change be more gradual than Hunter Water proposed, to avoid an adverse financial impact on affected customers. It has therefore determined that the maximum increase in the service charge for each individual unit or flat is to be \$20 in 2001/02 and in 2002/03. The appropriate adjustment to the service charge for 20mm commercial customers will be considered during the next Review. This charge will not be adjusted in this regulatory period.
2. **Removing the link between the discharge factor and the (separate dwelling) 20mm residential sewer service charge.** The Tribunal supports this adjustment to the definition of the 20mm sewer service charge for separate residential dwellings as a sensible way to ensure high-external-use residential customers are not over charged.
3. **Increasing the EIC in 2001, and maintaining this value and the Access Charge in real terms for the rest of the regulatory period.** The Tribunal accepts Hunter Water's claim that the rate of return to the HSP was declining due to the freeze on the charges during the last few years. It has decided to allow the charges to be adjusted for inflation in the second and third years of the regulatory period. However, it has rejected Hunter Water's proposal to increase the EIC by 10 per cent in 2001.

4.3 Stormwater Charges

The Tribunal has determined to increase stormwater service charges to enable Hunter Water to achieve cost recovery and move away from basing these charges on the customer's property value, in line with the agency's proposal. The Tribunal will further consider the merits of an area-based pricing structure at the time of the next review.

Hunter Water's stormwater responsibilities relate only to major concrete channels and culverts through some catchments. Local councils are responsible for street drainage and 'natural' creeks upstream and downstream of the concrete channels. Only 30 per cent of

Hunter Water's customer base are liable for stormwater charges⁴³ and stormwater revenue accounts for only two per cent of its total revenue. Current revenue is around \$2.4 million, compared with total stormwater costs of \$2.7 million.

Hunter Water's existing stormwater pricing structure involves:

- an annual service charge of \$24.30 for all residential customers
- an annual service charge of \$15.75 for 700 non-residential customers who opened accounts after March 1991 (new customers or via redevelopment)
- an annual service charge of \$15.75 plus property valuation-based charges (AAV)⁴⁴ for 2800 non-residential customers who opened their account before March 1991.

Under this structure, 20 per cent of non-residential customers pay less than residential customers, while 80 per cent pay considerably more. Hunter Water believes the existing valuation-based charges result in inequitable charges in a number of cases, and should be phased out on these grounds. It considered an area-based ('user/polluter pays') stormwater price structure but, due to conceptual and implementation problems, it has proposed an interim reform to its stormwater charges for the coming regulatory period.

This interim approach entails progressively scaling down the emphasis on the valuation-based charges and increasing service charges for all customers. In 2000/01 it will involve a significant increase in the non-residential service charge to bring it to the same level as the residential charge. The additional revenue that results from this change make it possible for Hunter Water to replace the remaining valuation component with an 'appropriate user-pays' charge at some time in the future, with no further adjustment to the service charge.

Hunter Water's stormwater proposal is shown in Table 4.8

Table 4.8 Hunter Water's Stormwater Proposal (\$1999/00)

	Annual Service Charge Residential	Annual Service Charge Non-residential	Valuation Charge (c/\$ property value)	Reduction in Valuation Charge
Current			AAV<\$2200 – 1.890c	
1999/00	\$24.60	\$15.75	AAV>\$2200 – 1.710c	n/a
Proposed				
2000/01	\$26.60	\$26.60	1.677c	3%
2001/02	\$29.40	\$29.40	1.523c	9%
2002/03	\$32.20	\$32.20	1.371c	10%

⁴³ Only 20 per cent of Hunter Water's residential customers are liable for stormwater charges.

⁴⁴ AAV is the Annual Assessed Value of the property.

The Tribunal has accepted Hunter Water's 'interim' stormwater proposal as it is intended to recover efficient costs while reducing the level of property-based charges. As a result of this decision, service charges will increase by 31 per cent (residential) and 104 per cent (non-residential) over the regulatory period. The valuation charge will fall by 20 per cent (from 1.710c⁴⁵) for the 2,800 customers to which this applies.

4.4 Overall impacts of the Tribunal's determination

The Tribunal has also considered the combined impacts of its determinations on water and sewer charges on a range of 'typical' Hunter Water customers. Over the three years of the regulatory period, these customers are unlikely to face a real increase in charges (Table 4.9). However, for customers in flats and units there would be an increase in sewerage charges of up to \$20 per annum.

The average residential customer bill will fall in each year, with a total decline in real terms of 3.5 per cent over the three years. The sample of non-residential customers used in the Tribunal's analysis will all be better off in real terms over the three years. Very large water users will get an additional benefit when the new third tier tariff is introduced in the second and third years. However, for some owners of units and flats there will be an increase in sewer service charge in 2001/02.

Table 4.9 Impacts of the Tribunal Determination on Combined Customer Bill for Water, Sewerage and EIC (\$2000/01)

	1999/00 Bill	2000/01 Bill	% Chg. 1999/00 – 2000/01	% Chg. 1999/00 – 2002/03
Residential Bill (User Category)				
Low (100 kL pa)	\$390.46	\$387.52	0.8%	-1.9%
Average (210 kL pa)	\$520.48	\$511.22	-1.8%	-3.5%
High (400 kL pa)	\$745.07	\$724.87	-2.7%	-5.1%
Non Residential Bill (User Category)				
Low (300 kL pa)	\$777.01	\$774.87	-0.3%	-2.1%
Average (3000 kL pa)	\$5,122.39	\$5,076.28	-0.9%	-3.6%
High (300 000 kL pa)	\$438,654.03	\$433,253.75	-1.2%	-8.5%

Note: for residential sewerage service charge, a 20mm separate dwelling is assumed. Non-Residential customers – assumed that low-use customers have 20mm connection, average customers have 40mm connection, and high use customers have 300mm connection. All non-residential customers assumed to have 80 per cent discharge factor.

The real decline in usage charges each year combined with the introduction of the third tier water tariff means that most customers will be better off by the end of the regulatory period. Even most of the 30 per cent of customers who face a real increase in stormwater service charges will come out ahead, as the declining water usage charges over the period will offset the higher stormwater charges.

⁴⁵ Hunter Water proposes to have one AAV charge applying to all properties for administrative simplicity – the lower band of AAV < \$2200 is virtually redundant as few properties are valued below this amount.

5 MAXIMUM PRICES SET FOR OTHER CHARGES AND IMPLICATIONS FOR CUSTOMERS

Hunter Water has a number of other services for which the Tribunal sets the maximum charge. This section outlines the Tribunal's determination on the maximum prices Hunter Water can charge for trade waste, miscellaneous charges and developer charges. It also discusses, the implications of these determinations for customers.

5.1 Trade waste

After consideration of the impacts on Hunter Water's trade-waste customers, the Tribunal has supported Hunter Water's revised trade waste charging proposal which applies 'full-cost recovery' methodology to establish appropriate charges.

5.1.1 Trade waste charges – Tribunal decision

The Tribunal has approved Hunter Water's proposed charges for trade waste services. These charges were calculated to recover the full costs of supplying the services (using essentially the same approach Hunter Water has used since 1994). As a result, charges for trade waste permits and inspection fees will remain at the 1999/2000 level while, on average, BOD/NFR⁴⁶ charges will increase. The Tribunal notes that Hunter Water has consulted affected customers about these increases, and that these customers have significant control of the level of their trade waste bill. The Tribunal's decision on specific trade waste charges is set out in detail in the Determination.

5.1.2 Hunter Water's proposed charges

Hunter Water's methodology for calculating trade waste charges is designed to recover the full cost of supplying the service. Charges are calculated on the basis of the total cost of treating trade waste per kilogram of trade waste load. The formula used includes depreciation and a return on capital, and can be summarised⁴⁷ as:

$$\text{Trade Waste Charges (\$/kg)} = \frac{\text{Total costs for Trade Waste Treatment (\$)}}{\text{Total Trade Waste Load (kg)}}$$

5.1.3 Hunter Water Trade Waste Proposal – Impacts on Customers

Hunter Water estimated that its proposed charges would result in an overall increase in revenue from BOD/NFR charges of 4.6 per cent in 2000/01 and 3.3 per cent in 2001/02. However, it pointed out that this estimate cannot be very certain, as each customer's load is variable and many customers are implementing pollution reduction programs.

Total trade waste revenue—including revenue from heavy metals, tankering and phosphorous charges—is projected to fall by about 13 per cent in real terms over the three years to 2002/03. This is due to a major customer closing its operations and the success of other customers' pollution reduction programs.

⁴⁶ BOD/NFR means Biological Oxygen Demand/Non Filtrable Residue.

⁴⁷ Hunter Water Engineering, *Report on Review of Trade Waste Charges*, 21 January 2000, p 2.

5.1.4 Implications of Tribunal's decision for customers

The Tribunal supports Hunter Water's increases in BOD/NFR charges. Only a small percentage of Hunter Water's trade waste customers will be affected by this decision, as most are 'minor' customers who are only charged the annual Minor Permit fee. Of the 120 'major' customers, only 57 attract high-strength BOD/NFR charges.

For each of these customers, their total BOD/NFR charge will depend on how much waste they discharge and the strength of this waste. The strength of the waste varies with the company's activities, processes and control and so is difficult to predict. However, as an indication of the possible impact of increased BOD/NFR charges, Table 5.1 below compares projected costs under the new 2000/01 charges with 1999/00 charges, using the actual 1998/99 discharge loads.

Table 5.1 Trade Waste Customer Impact – Hunter Water Proposed BOD/NFR Charges (\$ of the day)

	% Variation in Price to 1998/99 Banded Price	Number of Customers	Projected Total Revenue Variation	Cause of Variance - Removal of Banding	Average Variation per Customer
Reduction	> -20%	13	\$-55,518	8	-\$4,271
	-15% to -19.9%	3	-\$1,231	2	-\$410
	-10% to -14.9%	0	\$0	0	\$0
	-5% to -9.9%	0	\$0	0	\$0
	0% to -4.9%	8	-\$1,143	4	-\$190
Increase	0% to 4.9%	4	\$358	0	\$90
	5% to 9.9%	1	\$9,979	0	\$9,979
	10% to 14.9%	4	\$7,415	1	\$1,854
	15% to 19.9%	10	\$35,651	8	\$3,565
	> 20%	16	\$54,089	8	\$3,381
	Totals		57	\$49,600	29

This table shows that 16 of the 57 customers will potentially face an increase in charges of more than 20 per cent in 2000/01. However, Hunter Water has advised the Tribunal that many of these customers are adopting pollution control measures which will reduce their load and therefore their bills.

5.2 Miscellaneous charges

In addition to water and sewerage charges, Hunter Water levies a range of miscellaneous charges for other related services. For this determination, proposals for these charges were detailed in separate submissions. The Tribunal has set a maximum fixed fee for every miscellaneous charge for each agency—those for Hunter Water can be found at the end of this report. These fees apply for the entire determination period, and no new miscellaneous charges can be introduced in this time.

5.2.1 Hunter Water's proposed charges

In late 1999, the Tribunal facilitated a Water Miscellaneous Charges Working Group (WMCWG) that included representatives of each agency and stakeholders. This group aimed to review the water agencies' range of miscellaneous charges and to assist them in preparing their proposals.⁴⁸ It decided that the agencies would present their proposed charges in terms of the underlying material and labour costs involved, and show the level of overheads recovered.

$$\text{Miscellaneous Charge} = \text{Base Cost} + \text{Direct Material Cost} + \text{Profit Margin}$$

Where: Base cost = [Direct cost of labour (including on costs) + transport + equipment] * [business unit overheads]

In its submission, Hunter Water based its charges on an underlying labour rate that ranged from \$42.85 to \$61.70. Hunter Water included a business unit overhead of \$25.75 per hour in these rates, but did not include a profit margin.

5.2.2 Tribunal's determination and its implications for customers

In making its determination, the Tribunal used a base labour rate of \$25 per hour and overheads of 100 per cent (ie all inclusive labour rates of \$50 per hour), and no profit margin was allowed. It adopted a number of charges that the WMCWG found were common services provided by all the agencies. It also accepted specific miscellaneous charges which Hunter Water calls 'Urban Development Fees' on the grounds that these charges were foreshadowed to Hunter Water's Developer Forum prior to its previous submission in 1998, and were accepted as being 'reasonable and representing value for money'.⁴⁹

Although miscellaneous charges do not collectively account for a material proportion of total revenue from the water and sewerage business, they can be individually significant, particularly for low-income consumers. In making its decision, the Tribunal took into account arguments made by consumer and environment groups. Both PIAC⁵⁰ and NCOSS⁵¹ argued that the Tribunal should determine an exhaustive list of charges. NCOSS believes fixed miscellaneous charges impact harshly and disproportionately on low-income consumers, and that the agencies should not be able to introduce new charges without clearly indicating why this was necessary. PIAC was particularly concerned about the introduction of late payment fees and personal visit fees. PIAC and the PENGOS⁵² considered it inappropriate to factor in a profit margin. The PENGOS believed that there should be no increase in the level of the charges. PIAC argued for common service levels for common charges.

⁴⁸ The following stakeholder representatives were invited to participate in the WMWCG: Electricity and Water Ombudsman of NSW, Council of Social Services of New South Wales, Public Interest Advocacy Centre, NSW Department of Community Services, Urban Development Institute of Australia. Of those EWION, NCOSS and PIAC attended meetings. UDIA and a DOCS representative at Sydney water were informed of outcomes.

⁴⁹ Hunter Water Corporation, submission on Miscellaneous Charges, p 4.

⁵⁰ Public Interest Advocacy Centre, submission, p 9.

⁵¹ NCOSS, submission, p 2.

⁵² Peak Environment Non-Government Organisations, submission to the Independent Pricing and Regulatory Tribunal, February 2000, p 10.

5.3 Developer charges

The Tribunal has decided to delay any changes to the methodology for calculating the maximum charge for supplying water and sewerage services to new developments. A determination for developer charges will be released in conjunction with the medium term determination for Sydney Water Corporation.

Developer charges are up-front charges paid by developers to water agencies to recover the infrastructure costs incurred in servicing new developments. In Determination Number 4, 1996, the Tribunal established a methodology⁵³ for Hunter Water to calculate developer charges. In the Issues Paper, the Tribunal indicated that it would review a number of matters raised by the development industry. The Tribunal has received a number of submissions and would like to consider and changes in the context of the Sydney Water review. As the Tribunal considers that any amendments to the methodology should be applied at the same time by all agencies, it will not be making a determination at this time.

The maximum prices for developer charges continue to be calculated by applying the methodology applicable as at 30 June 2000.

⁵³ The methodology was established under section 13A(1)(b) of the *Independent Pricing and Regulatory Tribunal Act, 1992*.

6 IMPLICATIONS FOR THE ENVIRONMENT

The Tribunal has not separately identified a conservation charge as proposed by Hunter Water. The Tribunal has adjusted usage charges by CPI-2% each year. Given that inflation is expected to be higher than 2 per cent, this should ensure that the usage charge does not fall below its current level.

The Tribunal believes that the structure of Hunter Water's two-part tariff, which includes a relatively high per kL usage charge and a relatively low fixed service charge, sends important demand management price signals to consumers. This position is strongly supported by the Environment Protection Authority (EPA)⁵⁴ and the Peak Environment Non-Government Organisations (PENGO).⁵⁵

The Tribunal acknowledges the success of Hunter Water's past efforts in demand management, which have resulted in a consistent average residential water use of 210kL per year. This performance has been broadly sustained since pay-for-use pricing was introduced in 1982.

Hunter Water's demand management initiatives include:

- support for the state-wide 'Waterwise' program
- sponsorship of the Department of Education's water and energy efficiency education programs
- promotion through leaflets, media advertising, public displays
- sponsorship of demonstration homes that showcase water and energy-efficiency features.

The maintenance of the two-part⁵⁶ tariff structure for water charges in this determination should continue to assist Hunter Water in its efforts to better manage demand. The ongoing dominance of the water-usage charge over the water service charge in customer bills will continue to serve as a strong demand management signal.

The Tribunal's decision to allow Hunter Water to introduce a third tier water usage charge, under which very large water users are charged less for each kL over 50,000kL they use, could be seen as disincentive for these customer to reduce their usage. The PENGOs, for example, oppose this scheme,⁵⁷ and the EPA questions the assumptions Hunter Water has made in regard to the potential for water saving by large-users.⁵⁸ The Tribunal considered these arguments closely, but ultimately decided that the ongoing demand management initiatives Hunter Water is undertaking will offset any environmental disadvantages of this scheme. Importantly, these third tier customers will still face water bills sufficiently large to provide a strong incentive to encourage a reduction in water usage if technically possible.

⁵⁴ NSW EPA, submission to the Independent Pricing and Regulatory Tribunal, February 2000, p 24.

⁵⁵ Peak Environment Non-Government Organisations, submission to Independent Pricing and Regulatory Tribunal, February 2000, p 12.

⁵⁶ Or more correctly, 'multi-part' tariff structure, given that there are now three tiers to the water usage charge.

⁵⁷ Peak Environment Non-Government Organisations, submission to Independent Pricing and Regulatory Tribunal, February 2000, p 8.

⁵⁸ NSW EPA, submission to the Independent Pricing and Regulatory Tribunal, February 2000, p 25.

Hunter Water has also been quite successful in establishing effluent reuse schemes. Hunter Water has established a diverse range of customers for effluent reuse. In addition to Eraring power station—a large user of effluent—these include other industrial users to golf clubs, tree plantations and other agricultural users. In 1998/99, approximately 9.7 per cent of Hunter Water's dry weather effluent flows were recycled. This replaced potable supply equivalent to 21 per cent of the volume of Chichester Dam.

The EPA issues Hunter Water with licences for its 21 wastewater treatment plants. These licences stipulate the maximum flow which can be discharged from each plant. The EPA considers that emissions from the sewerage system have the greatest impact on the environment of all activities of water supply authorities.⁵⁹ The Tribunal considers that the sewerage and trade waste charges in this determination will provide sufficient revenue for Hunter Water to continue to improve its sewerage system.

⁵⁹ NSW EPA, submission to the Independent Pricing and Regulatory Tribunal, February 2000, pp 10-11.

7 IMPLICATIONS FOR STANDARDS

In making this determination, the Tribunal has taken into account Hunter Water's need to meet a range of service, quality and environmental standards over the period of the determination. In particular, it is required to:

- maintain specified service standards (see Attachment 7)
- meet environmental standards imposed by the EPA, NSW Fisheries and the Healthy Rivers Commission
- meet Water Quality Standards required under the operating licence
- reduce the incidence of sewage overflows
- improve its sewerage system so that it meets changing environmental standards.

The Tribunal will examine the extent to which Hunter Water has met these requirements when it makes its next determination. In addition, it is keen to see Hunter Water (and the other water agencies it regulates) make significant improvements to the way they set and specify the standards they will meet, and track and report their performance against these standards. The Tribunal notes that Hunter Water's operating licence is to be renewed shortly. This will provide the opportunity for a systematic review of the standards which Hunter Water has to meet.

Although the Tribunal's role is not to set or regulate standards, it has a legitimate interest in this area. The prices it sets for a particular service should be based on a clear understanding of the service standards to be delivered for that price. This is important as there is generally a trade-off between price and service levels, and the Tribunal needs to balance incentives to reduce costs with incentives to maintain and improve service standards.

In particular, the Tribunal believes a common regulatory framework that specifies clear, unambiguous standards, and requires the agencies to track and report their performance against these standards needs to be developed. This would help to overcome several shortcomings in the current situation, including:

- **Fragmented responsibility for setting standards.** For example, although Hunter Water and Sydney Water have operating licences which set out the operating standards they must achieve, Wyong and Gosford Councils do not.
- **Different service standards and performance targets among the four water agencies.** Halcrow found⁶⁰ that it was difficult to compare the four agencies in NSW and that there are wide variations in their service standards and performance targets (see Attachment 7).
- **No mechanism for ensuring the standards the agencies aim to meet are appropriate, and based on their customers' expectations and willingness to pay.** Halcrow observed⁶¹ that each agency's service levels seem to have been chosen to reflect the capability of the system rather than their customers' expectations.

⁶⁰ Halcrow Management Sciences Limited, *New South Wales Water Agencies' Review – Summary*, December 1999, p 20.

⁶¹ Halcrow Management Sciences Limited, *New South Wales Water Agencies' Review – Summary*, December 1999, p 19.

If this framework was in place, the Tribunal would be able to consider introducing financial incentives for the agencies to provide and maintain service standards in excess of minimum standards. Examples of such incentives include an adjustment to price limits in the first year of the regulatory period to reflect the overall standard provided to customers,⁶² and an allowed adjustment to prices to reflect the difference between actual and target reliability levels.⁶³

Such a framework would address Halcrow's recommendation that service standards be harmonised, and PIAC's concern that the significant variations in the agencies' service standards at least need to be justified or they may become entrenched at the expense of the principle of horizontal equity.⁶⁴

⁶² This incentive was introduced by the UK Office of Water Services in its most recent determination, see Final Determinations, *Future water and sewerage charges, 2000-05*, pp 99-101.

⁶³ Such a mechanism was proposed by the Office of the Regulator General in Victoria, in its report, *2001 Electricity Distribution Price Review, Draft Decision*, Chapter 3 and Appendix E.

⁶⁴ The principal of horizontal equity is that consumers in similar circumstances should be treated equally and have equal access to services irrespective of their geographic location.

ATTACHMENT 1 LIST OF SUBMISSIONS

Submissions were received from the following organisations in regard to Hunter Water Corporation:

Australian Business
Council of Social Services of New South Wales
Dungog Shire Council
Environment Protection Authority
Hunter Water Corporation
Incitec
Macquarie Generation
New South Wales Treasury
Peak Environmental Non-Government Organisations
Public Interest Advocacy Centre

Mr C. Springbett
Mr R. J. McKee
Mr B. Nolan

ATTACHMENT 2 PRESENTERS AT PUBLIC HEARING

The list of presenters at the public hearing on 17 March 2000 were:

Mr David Evans, Managing Director Hunter water Corporation
Mr Andrew Amos, Hunter Water Corporation

ATTACHMENT 3 IPART ACT REQUIREMENTS

Section 15 compliance

Section	Reference
s15(1)(a) the cost of providing the services concerned	The costs of providing water services to customers are discussed in chapter 3 .
s15(1)(b) the protection of consumers from the abuses of monopoly power in terms of prices, pricing policies and standard of services	Chapters 4 and 5 discuss how the Tribunal has managed the impacts of changes in prices. Chapter 4 also addresses price changes over the regulatory period. In general the Tribunal has increased prices by CPI-X.
s15(1)(c) the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales	Chapter 3 discusses appropriate profit margins and rates of return for Hunter Water.
s15(1)(d) the effect on general price inflation over the medium term	Constraints on the movement of individual tariffs for customers are detailed in chapters 4 and 5 . These will ensure that the impact of the Tribunal's determination will have a negligible impact on general price inflation over the medium term.
s15(1)(e) the need for greater efficiency in the supply of service so as to reduce the cost for the benefit of consumers and tax payers	Efficient operating costs and capital expenditure are discussed in chapter 3 .
s15(1)(f) the need to maintain ecologically sustainable development (within the meaning of section 6 of the Protection of the Environment Administration Act 1991) by appropriate pricing policies that take account of all the feasible options available to protect the environment	Chapter 6 discusses issues relating to the environment.
S15(1)(g) the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets	Chapter 3 discusses appropriate profit margins for Hunter Water. In making this determination, the Tribunal has considered dividend requirements. Hunter Water will be making reasonable dividend payments to the state government.
s15(1)(h) the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body	Not applicable
s15(1)(l) the need to promote competition in the supply of the services concerned	The Government has not created any provision for the establishment of competition in the supply of water and sewerage services. However, the Tribunal has allowed for the introduction of a third tier tariff for water usage charges See Chapter 4 .
s15(1)(j) consideration of demand management (including levels of demand) and least cost planning	Chapter 6 addresses the impact on demand management practices.

Section	Reference
s15(1)(k) the social impact of the determinations and recommendations	<p>Chapters 4 and 5 set the constraints in movements of individual tariffs. This determination has been designed to minimise price increases.</p> <p>Chapters 4 and 5 outline the maximum price Hunter Water can charge for a limited number of miscellaneous services.</p>
s15(1)(l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).	In making the determination the Tribunal has been mindful of the need to maintain existing levels of service and the potential for increases in some service levels. In chapter 7 the Tribunal discusses the standards of service.

Section 16 requirements

The Tribunal is required under Section 16 of the Act to assess and report on the likely annual cost to the Consolidated Fund if the price were not increased to the maximum permitted.

The Determination for Hunter Water Corporation will result in an increase in revenue of about \$1.5 million above 1999/2000 levels. Should tariffs be set below the scheduled levels, the level of dividends remitted to the consolidated fund would fall. The extent to which it falls would depend on Treasury's application of its financial distribution policy and how the change affects pre tax profit.

The Tribunal's financial model has projected payment of dividends and income tax equivalents at 85 per cent of pre tax profit. Every \$1 decline in pre tax profit will result in a loss of revenue to the consolidated fund of 85 cents.

ATTACHMENT 4 REGULATORY ASSET BASE AND RATE OF RETURN

Financial year ending 30 June	2000	2001	2002	2003
Opening fixed asset value		790.0	845.9	905.4
Plus net capital expenditure		42.6	45.4	29.9
Less depreciation		(10.7)	(11.7)	(12.5)
Less disposals		-	-	-
Plus indexation		24.0	25.7	27.3
Closing fixed asset value	790.0	845.9	905.4	950.0
Working capital (closing balance)	20.4	16.2	16.4	16.9
Total regulatory asset base	810	862	922	967
Operating expenditure	51.6	51.4	52.6	54.7
Depreciation	10.5	10.7	11.7	12.5
Expected return on assets	52.1	53.5	54.3	56.2
Expected revenue	114.15	115.7	118.6	123.4
Return on assets (% , real pre-tax)	6.6%	6.4%	6.1%	6.0%

Note: Columns may not add due to rounding.

ATTACHMENT 5 WACC PARAMETERS

Parameter	Value
Nominal risk-free rate	6.41%
Real risk-free rate	3.52%
CPI	2.8%
Market risk premium	5.0% to 6.0%
Debt margin	0.8% to 1.0%
Debt to total assets	60%
Dividend imputation factor (Gamma)	0.5 to 0.3
Tax rate	30%
Asset Beta	0.30 to 0.45
Equity Beta	0.65 to 1.02
Cost of equity (nominal post tax)	9.7% to 12.5%
Cost of debt (nominal pre tax)	7.2% to 7.4%
WACC (nominal post tax)	6.2% to 7.6%
WACC (real pre tax)⁶⁵	4.8% to 7.8%

⁶⁵ The lower bound of 4.8 per cent is estimated by applying the so called 'reverse transformation' approach to the lower range of the parameters listed. The upper bound is estimated by applying the 'market' or 'vanilla' transformation to the upper range of the parameters listed.

ATTACHMENT 6 DESCRIPTION OF FINANCIAL INDICATORS

FINANCIAL INDICATORS	GENERAL DESCRIPTION	DEFINITION/COMPONENTS
Funds Flow Interest Coverage	How many times funds from operations covers interest payments	$(\text{Pre-tax funds flow} + \text{net interest}) / \text{net interest}$
Pre-tax Interest Coverage	How many times profit before tax covers interest payments	$(\text{EBIT} - \text{capital contributions}) / \text{net interest}$
Funds Flow Net Debt Pay Back	How many years will it take to payback total debt	Net debt / funds from operations
Funds from operations / total debt	Proportion of funds from operations to total debt	Funds from operations / total debt
Total Debt / Total Capital	Proportion of debt to equity capital	Total Debt / (Total Debt + Total Equity)
Internal Financing Ratio	Funds retained as a proportion of capital expenditure	$(\text{Net cash flow} / \text{net capital expenditure}) \times 100$
Net Debt or (Cash holdings)	The amount of net debt or cash holdings	See definitions below

Where:

Capital contributions = cash and non-cash contributions of/towards physical assets

Capital expenditure = purchase of property, plant and equipment

Cash holdings = cash + short term investments

EBIT = earnings before (net) interest, tax abnormal items, but after capital contributions

Funds from operations = Profit after tax + depreciation and amortisation – capital contributions + movements in provisions + cost of assets sold + change in working capital – non-cash abnormal items

Net cash flow = funds from operations – dividends paid in year

Net interest = interest payable – net interest

Net debt = (total debt – cash – LT&ST investments)

Pre-tax funds flow = funds from operations + tax expense

Total debt = all interest bearing debt

Total equity = retained profits + reserves + share capital

ATTACHMENT 7 WATER SERVICE STANDARDS

Comparison of water agencies service standards

Standard	Agency	Standards of Service (1999)
Water reliability	Sydney Water Corporation	Not published
	Hunter Water Corporation	Imposition of water restrictions at no less than 10 yearly intervals
	Gosford City Council ¹	Storage capacity sufficient to meet demand without restriction 95% of the time
	Wyong Shire Council ¹	Meet unrestricted demand requirements unless operating under restricted conditions
Water continuity	Sydney Water Corporation	95% of customers will not experience a discontinuity >6hrs (each event)
	Hunter Water Corporation	92% of customers will not experience a discontinuity > 5hrs (cumulative for year)
	Gosford City Council ¹	6 hrs per property. per annum max (unprogrammed) 12 hrs per property per annum max (programmed)
	Wyong Shire Council ¹	Unprogrammed supply disruption per year not to exceed 4 hours per individual property 90% of the time
Supply adequacy	Sydney Water Corporation	98% of customers to receive pressure > 15m at main tap (excluding low pressure areas)
	Hunter Water Corporation	95% of customers to receive pressure > 20m at the service meter (throughout whole of geographic area)
	Gosford City Council ¹	Minimum of 12m head
	Wyong Shire Council ¹	Maintain 15m pressure in distribution mains
Water Quality	Sydney Water Corporation	Meet health related aspects of 1987 (1996 proposed in new licence) NHMRC Drinking Water Guidelines
	Hunter Water Corporation	Meet 1994 draft NHMRC Australian Drinking Water Guidelines in full
	Gosford City Council ¹	Meet 1991 NHMRC Health Guidelines 95% of the time
	Wyong Shire Council ¹	Meet 1996 NHMRC health and quality Drinking Water Guidelines
Sewer Surcharge	Sydney Water Corporation	96% of customers will not experience a surcharge on their property
	Hunter Water Corporation	96% of customers will not experience a surcharge on their property
	Gosford City Council ¹	800 recorded sewage discharges per year
	Wyong Shire Council ¹	Operate sewerage system in a manner consistent with EPA requirements.

¹ Internally set standards

Source: Halcrow Review p 20.



INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

**DETERMINATION UNDER SECTION 11 (1) OF THE INDEPENDENT PRICING AND
REGULATORY TRIBUNAL ACT, 1992**

- Reference No:** 99/176
- Determination:** No 3, 2000
- Agency:** Hunter Water Corporation
- Services:** The following services are declared to be government monopoly services:
- (a) water supply services,
 - (b) sewerage services,
 - (c) stormwater drainage services,
 - (d) trade waste services,
 - (e) services supplied in connection with the provision or upgrading of water supply and sewerage facilities for new developments and, if required, drainage facilities for such developments,
 - (f) ancillary and miscellaneous customer services for which no alternative supply exists and which relate to the supply of services of a kind referred to in paragraphs (a) to (e),
 - (g) other water supply, sewerage and drainage services for which no alternative supply exists.

The Government monopoly services were declared by the Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997, made on 5 February 1997 and published in Gazette No. 18 dated 14 February 1997 at page 558.

The maximum prices listed or calculated under sections 1 to 9 of this Determination are to apply from 1 July 2000 to 30 June 2003. The maximum prices for developer charges listed or calculated under section 10 are to apply from 1 July 2000 until replaced.

1 DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Determination:

CPI means the consumer price index, All Groups index number for the weighted average of eight capital cities as published by the Australian Bureau of Statistics, or if the Australian Bureau of statistics does not or ceases to publish the index, then CPI will mean an index determined by the Tribunal that is its best estimate of the index.

CPI^{-GST} means the CPI exclusive of the net impact of:

- a) the GST; and
- b) changes to any other Commonwealth, State or Territory taxes or charges, consequent upon the introduction of the GST,

as calculated and published by the Australian Bureau of Statistics from time to time. If the Australian Bureau of Statistics does not, or ceases to, calculate and publish it then CPI^{-GST} will mean:

- (i) an index published by Commonwealth Treasury which is its best estimate of the CPI^{-GST}; or
- (ii) if Commonwealth Treasury does not, or ceases to, publish an index then an index published by the Reserve Bank of Australia which is its best estimate of CPI^{-GST}; or
- (iii) if the Reserve Bank of Australia does not, or ceases to, publish an index, then at the Tribunal's discretion, either:
 - (A) an index published by a person appointed by the Tribunal which is that person's best estimate of CPI^{-GST}; or
 - (B) an index published by the Tribunal that is its best estimate of CPI^{-GST}.

CPI₁^{-GST} means the number derived from the application of the following formula:

$$CPI_1^{-GST} = \left(\frac{CPI_{Jun\ 2000} + CPI_{Sep\ 2000}^{-GST} + CPI_{Dec\ 2000}^{-GST} + CPI_{Mar\ 2001}^{-GST}}{CPI_{Jun\ 1999} + CPI_{Sep\ 1999} + CPI_{Dec\ 1999} + CPI_{Mar\ 2000}} - 1 \right) \times 100\%$$

where:

- CPI is as defined and where the corresponding subtext (for example Jun₂₀₀₀) means the CPI for the quarter of the year indicated (in the example, the June quarter for the year 2000);
- CPI^{-GST} is as defined and where the corresponding subtext (for example Dec₂₀₀₀) means the CPI^{-GST} of the quarter and the year indicated (in the example, the December quarter for the year 2000).

CPI₂^{-GST} means the number derived from the application of the following formula:

$$CPI_2^{-GST} = \left(\frac{CPI_{Jun2001}^{-GST} + CPI_{Sep2001}^{-GST} + CPI_{Dec2001}^{-GST} + CPI_{Mar2002}^{-GST}}{CPI_{Jun2000}^{-GST} + CPI_{Sep2000}^{-GST} + CPI_{Dec2000}^{-GST} + CPI_{Mar2001}^{-GST}} - 1 \right) \times 100\%$$

where:

- CPI is as defined and where the corresponding subtext (for example Jun2000) means the CPI for the quarter and of the year indicated (in the example the June quarter for the year 2000);
- CPI^{-GST} is as defined and where the corresponding subtext (for example Jun2001) means the CPI for the quarter and of the year indicated (in the example, the June quarter for the year 2001).

Discharge factor means the assessed percentage of water purchased from the Hunter Water Corporation (“HWC”) which is discharged into the sewer.

Environmental Improvement Charge (“EIC”) means a yearly charge which is part of the funding arrangements determined by the State Government in 1988 to recover part of HWC’s capital costs for the Hunter Sewerage Project. The charge is levied on all properties served by HWC which have an existing sewerage service or will receive a sewerage service as part of the Hunter Sewerage Project.

The EIC applies for 20 years from the date of implementation. For all areas except the following the EIC would be levied from 1989 to 2009. For each of the following areas, charging of the EIC commenced on the date indicated and applies for 20 years from that date:

- Esteville, Cooranbong and Sutton Park Estate (Medowie) – charging commenced on 1 July 1995.
- A series of large lots in Ridge and Lakeview Road, Kilaben Bay – charging commenced on 10 May 1996.
- Wyee Point – charging commenced on 23 October 1997.

Pensioners who own and occupy their properties are exempt from the EIC.

Flat means an individual residential flat or apartment in a block of multiple residential dwellings which is not registered under the *Strata Schemes (Freehold Development) Act, 1973*.

GST means GST as defined in *A New Tax System (Goods and Services Tax) Act, 1999*.

IPART Act means the *Independent Pricing and Regulatory Tribunal Act, 1992*.

Major Permit means (as defined in Hunter Water Corporation’s Trade Waste Policy, April 1999) a trade waste permit issued where the Corporation considers the proposed discharge to be significant, usually because of the nature of the quantity of the waste.

Minor Permit means (as defined in Hunter Water Corporation’s Trade Waste Policy, April 1999) a trade waste permit suitable for the majority of trade waste dischargers.

Nominal dollars means a dollar amount expressed in the dollars of the year in which the relevant charge applies. A charge expressed in nominal dollars is not to be adjusted by the CPI Index.

Charges to remain constant in nominal terms means that the charge to customers in a particular year is exactly as shown in the Determination, the charge is not adjusted by the CPI index and the charge does not change over the defined period.

Non-residential customer means a proprietor of commercial, industrial, farm or mixed development (house & shop) property and includes the holder of council or government property.

Residential customer means a proprietor of a house, unit or flat.

(Separate Dwelling) residential customer means a residential customer who resides in a single dwelling with a 20mm meter water service, and which dwelling is not a unit or a flat.

Sewer Service Access Charge (“SSAC”) means a one-off charge which is part of the funding arrangements for the Hunter Sewerage Project. The SSAC applies to land in Hunter Sewerage Project areas which was vacant in February 1989. The charge is payable when making application to connect to the sewerage system. The SSAC is similar to the developer charges which are levied for other developments. Proprietors of existing developed properties within the Hunter Sewerage Project areas are exempt from this charge.

Tribunal means the Independent Pricing and Regulatory Tribunal of New South Wales established under the IPART Act.

Unit means one residence in a block of multiple residential dwellings which is registered under the *Strata Schemes (Freehold Development) Act, 1973*.

Water Usage Charges:

First Tier Water Usage Charge relates to water consumption of up to and including 1000 kilolitres per year;

Second Tier Water Usage Charge relates –

- in the year 2000/01 to water consumption in excess of 1000 kilolitres, and
- thereafter to water consumption in excess of 1000 kilolitres per year up to and including 50,000 kilolitres per year;

Third Tier Water Usage Charge applies in the year 2001/02 and thereafter to water consumption in excess of 50,000 kilolitres per year.

Year means a period commencing on 1 July and ending on 30 June in the ensuing calendar year.

1.2 Interpretation

1.2.1 If there is any inconsistency between this Determination of the Tribunal and a previous determination of the Tribunal, this Determination will prevail to the extent of the inconsistency.

1.2.2 In the interpretation of this Determination a construction that would promote the purpose or object underlying the IPART Act (whether or not that purpose or object is expressly stated in the IPART Act) is to be preferred to a construction that would not promote that purpose or object.

2 WATER SUPPLY SERVICES

Every residential and non-residential customer must pay the water service charge which is applicable to the customer's property together with a water usage charge as set out below.

2.1 Water service charge

The water service charge is based on the size of the meter connection to the property and is calculated according to the 'meter adjustment ratio' relevant to the meter size. This adjustment ratio is applied to the base water service charge for a 20mm service.

In 2000/01 the maximum yearly water service charges are as set out in Table 1.

Table 1 Water service charges in 2000/01

Meter Size (mm)	Meter Adjustment Ratio	Water Service Charge (\$)
20	1.00	\$25.07
25	1.55	\$38.86
32	2.55	\$63.93
40	4.00	\$100.28
50	6.25	\$156.69
80	16.00	\$401.12
100	25.00	\$626.75
150	56.25	\$1,410.19
200	100.00	\$2,507.00
250	156.25	\$3,917.19
300	225.00	\$5,640.75
350	306.25	\$7,677.69
400	400.00	\$10,028.00
500	625.00	\$15,668.75

For the years 2001/02 and 2002/03 the maximum yearly water service charges are as set out in Table 2.

Table 2 Water service charges in 2001/02 and 2002/03

Charge	2001/02	2002/03
Water service (per year)	Table 1 charge x $(1 + \text{CPI}_1^{-\text{GST}})$	Table 1 charge x $(1 + \text{CPI}_1^{-\text{GST}})$ x $(1 + \text{CPI}_2^{-\text{GST}})$

The maximum yearly fee for fire service charges is zero.

2.2 Water usage charge

In 2000/01 the maximum yearly water usage charges are as set out in Table 3.

Table 3 First and Second Tier Water Usage Charges in 2000/01

	cents per kilolitre
First Tier	
for each kilolitre of consumption up to and including 1000 kilolitres per year	92.2
Second Tier	
for each kilolitre of consumption in excess of 1000 kilolitres per year	84.9

From the year 2001/02, the Second Tier water usage charge will apply to each kilolitre of consumption in excess of 1000 kilolitres per year and up to and including 50,000 kilolitres per year. A new Third Tier water usage charge will apply, in the year 2001/02 and thereafter, in respect of each kilolitre of consumption in excess of 50,000 kilolitres per year.

In the years 2001/02 and 2002/03 the maximum First and Second Tier water usage charges are to be calculated in accordance with Table 4.

Table 4 First and Second Tier Water Usage Charges in 2001/02 and 2002/03

Charge	2001/02	2002/03
Water usage 1 st and 2 nd Tiers	Table 3 charge x (1 + CPI ₁ ^{-GST} - 2%)	Table 3 charge x (1 + CPI ₁ ^{-GST} - 2%) x (1 + CPI ₂ ^{-GST} - 2%)

Third Tier Charge Commencing in the year 2001/02

From 1 July 2001 the maximum Third Tier water usage charge per kilolitre of consumption in excess of 50,000 kilolitres per year will be as set out in Table 5.

Table 5 Third Tier Water Usage Charges in 2001/02

LOCATION	cents/kilolitre
Kooragang/Stockton	73.5
South Wallsend	74.0
Tomago	77.3
Warners Bay/Valentine	77.3
Seaham/Hexham	80.9
Newcastle/Highfields	81.7
Raymond Terrace	83.2
Port Stephens	83.5
Kurri/Cessnock	83.8
Lookout	83.8
All Other Locations	2001/02 2 nd Tier Charge in Table 4

In the year 2002/03 the maximum Third Tier water usage charges are to be calculated in accordance with Table 6.

Table 6 Third Tier Water Usage Charges 2002/03

Charge	2002/03
Water usage 3 rd Tier	Table 5 charge x (1 + CPI ₂ ^{-GST} - 2%)

Notwithstanding Tables 5 and 6, the maximum charge for the Third Tier in each year is not to exceed the maximum charge for the Second Tier which applies in each year.

Raw Water Discount

In the year 2000/01 the maximum discount which will apply to each Tier of the water usage charge for the supply of raw water to a customer is 7 cents per kilolitre. The maximum discount for each Tier will remain constant in nominal terms at 7 cents per kilolitre for the years 2001/02 and 2002/03.

Supply of Bulk Water to Dungog Council

The First and Second Tier water usage charges as defined above apply to the supply of water to Dungog Council in respect of quantities of water less than or equal to 50,000 kilolitres per annum.

In the years 2000/01 and 2001/02 the maximum usage charge for the supply of water to Dungog Council in excess of 50,000 kilolitres per year is as set out in Table 7. This usage charge is to remain constant in nominal terms in 2001/02.

Table 7 Dungog Council Third Tier Water Usage Charge

	cents per kilolitre
2000/01 and 2001/02	50.6

In the year 2002/03 the maximum Third Tier water usage charge per kilolitre for the supply of water to Dungog Council in excess of 50,000 kilolitres per year is to be calculated in accordance with Table 8.

Table 8 Dungog Council Water Third Tier Water Usage Charge in 2002/03

Charge	2002/03
Dungog Council 3 rd Tier usage charge	Table 7 charge x (1 + CPI ₂ ^{-GST} - 2%)

3 SEWERAGE SERVICES

3.1 Sewer Service Charge

3.1.1 (Separate Dwelling) Residential Customers with 20mm meter Water Service

In the year 2000/01 the maximum yearly sewer service charge for (separate dwelling) residential customers with a 20mm meter water service is \$210.00.

For the years 2001/02 and 2002/03 the maximum yearly sewer service charge is to be calculated in accordance with Table 9.

A discharge factor is not to be applied to the sewer service charge in the case of (separate dwelling) residential customers with a 20mm meter water service.

Table 9 20mm (Separate Dwelling) Residential Sewer Service Charges 2001/02 and 2002/03

Charge	2001/02	2002/03
20mm residential sewer service (separate dwelling)	$\$210 \times (1 + \text{CPI}_1^{-\text{GST}})$	$\$210 \times (1 + \text{CPI}_1^{-\text{GST}}) \times (1 + \text{CPI}_2^{-\text{GST}})$

3.1.2 All Other Customers

For all customers other than (separate dwelling) residential customers with a 20mm water service, the sewer service charge is based on the size of the meter connection to the customer's property and is calculated according to the 'meter adjustment ratio' relevant to the meter size. This adjustment ratio is applied to the base sewer service charge for a 20mm water service.

In the year 2000/01 the maximum yearly sewer service charges for all customers other than (separate dwelling) residential customers with a 20mm meter are as set out in Table 10.

Table 10 Sewer Service Charges in 2000/01

Meter Size (mm)	Meter Adjustment Ratio	Sewer Service Charge (\$)
20	1.00	\$420.00
25	1.55	\$651.00
32	2.55	\$1,071.00
40	4.00	\$1,680.00
50	6.25	\$2,625.00
80	16.00	\$6,720.00
100	25.00	\$10,500.00
150	56.25	\$23,625.00
200	100.00	\$42,000.00
250	156.25	\$65,625.00
300	225.00	\$94,500.00
350	306.25	\$128,625.00
400	400.00	\$168,000.00
500	625.00	\$262,500.00

Subject to the provisions of Section 3.1.3, in the years 2001/02 and 2002/03 the maximum yearly sewer service charges listed in Table 10 are to be adjusted in accordance with Table 11.

The sewer service charges listed in Table 10 are also to be adjusted by the appropriate discharge factor assessed by HWC. The discharge factor is 50 per cent for all residential customers other than (separate dwelling) residential customers with a 20mm service.

Table 11 All Other Customers - Sewer Service Charges (2001/02 and 2002/03)

Charge	2001/02	2002/03
Sewer service	Table 10 charge x (1+CPI ₁ ^{-GST})	Table 10 charge x (1+CPI ₁ ^{-GST}) x (1+ CPI ₂ ^{-GST})

3.1.3 Sewer Service Charge for Units and Flats

Commencing in the year 2001/02 the maximum sewer service charge to apply to each unit and flat is to be the greater of the charge calculated in accordance with Table 11 (pro-rated across each unit or flat) and that set out in Table 12 **provided however** that in the years 2001/02 and in 2002/03 the total sewer service charge for each unit and flat must not increase by more than \$20 each year (in nominal dollars). The charges in Table 12 are expressed in nominal dollars.

Table 12 Sewer Service Charge for Units and Flats

	2001/2002 (\$2001/02)	2002/2003 (\$2002/03)
Sewer service charge for each unit or flat (\$/year)	60	80

3.2 Sewer Usage Charge

All sewer usage charges are to be adjusted by the appropriate discharge factor assessed by HWC. The discharge factor is 50 per cent for residential customers.

For the year 2000/01 the maximum charge for sewer usage charges are as set out in Table 13.

Table 13 2000/01 Sewer Usage Charges

Property Type	2000/01
Residential and Non-Residential	40.5 cents per kilolitre

For the years 2001/02 and 2002/03 the maximum sewer usage charges are to be calculated in accordance with Table 14.

**Table 14 Residential and Non-Residential Sewer Usage Charges
(2001/02 and 2002/03)**

Charge	2001/02	2002/03
Sewer usage	Table 13 charge x (1 + CPI ₁ ^{-GST} - 2%)	Table 13 charge x (1 + CPI ₁ ^{-GST} - 2%) x (1 + CPI ₂ ^{-GST} - 2%)

4 STORMWATER DRAINAGE SERVICES

4.1 Residential and Non-Residential Stormwater Service Charge

For the year 2000/01, the maximum yearly stormwater service charge for residential and non-residential customers is as set out in Table 15.

Table 15 Stormwater Service Charge in 2000/01

	2000/01
Stormwater service charge (\$)	27.10

For the years 2001/02 and 2002/03 the maximum stormwater service charges are to be calculated in accordance with Table 16.

Table 16 Stormwater Service Charges in 2001/02 and 2002/03

Charge	2001/02	2002/03
Stormwater service	$\$30.00 \times (1 + \text{CPI}_1^{-\text{GST}})$	$\$32.80 \times (1 + \text{CPI}_1^{-\text{GST}}) \times (1 + \text{CPI}_2^{-\text{GST}})$

4.2 Stormwater Valuation-Based Charges (Non-Residential Properties only)

This charge applies only to non-residential customers whose properties were developed before March 1991. For these customers, this charge applies in addition to the service charge set out in Tables 15 and 16.

For the year 2000/01, the maximum yearly stormwater valuation-based service charge is as set out in Table 17.

Table 17 Stormwater Valuation-Based Charge in 2000/01

	2000/01
Valuation Charge (cents/\$ annual assessed value)	1.709

For the years 2001/02 and 2002/03 the maximum stormwater valuation-based service charges are to be calculated in accordance with Table 18.

Table 18 Stormwater Valuation-Based Charges in 2001/02 and 2002/03

Charge	2001/02	2002/03
Valuation charge (cents/\$ annual assessed value)	$1.552 \text{ cents}/\$ \times (1 + \text{CPI}_1^{-\text{GST}})$	$1.397 \text{ cents}/\$ \times (1 + \text{CPI}_1^{-\text{GST}}) \times (1 + \text{CPI}_2^{-\text{GST}})$

5 TRADE WASTE SERVICES

5.1 Trade Waste Permit Fees

In the year 2000/01 the maximum fees in respect of Trade Waste Permits are as set out in Table 19.

Table 19 2000/01 Trade Waste Permit Fees

FEE	Description	Amount
Major Permit	Yearly fee and establishment	\$347.40
	Extra establishment fee for negotiations in excess of 10 hours required to finalise permit conditions	\$ 79.25 per hour.
Minor Permit	Establishment fee	\$104.70
	Yearly fee	\$ 84.15
Inspection Fees	Equal to or less than 30 minutes	\$ 60.46
	For each additional 30 minutes or part there of	\$ 35.10

For the years 2001/02 and 2002/03 the maximum fees in respect of Trade Waste Permits are to be calculated in accordance with Table 20.

Table 20 Trade Waste Permit Fees in 2001/02 and 2002/03

Charge	2001/02	2002/03
Trade Waste Permit	Table 19 charge x (1+CPI ₁ ^{-GST})	Table 19 charge x (1+CPI ₁ ^{-GST}) x (1+ CPI ₂ ^{-GST})

5.2 Trade Waste Charges

In the year 2000/01 the maximum yearly charges for trade waste charges (in 2000/01 dollar terms) are set out in Tables 21 and 22.

Table 21 BOD/NFR Trade Waste Charges (\$2000/01)

BOD/NFR TRADE WASTE	Total Unit Rate 2000/2001	Total Unit Rate 2001/2002	Total Unit Rate 2002/2003
<u>TREATMENT WORKS</u>	\$/kg	\$/kg	\$/kg
BELMONT	\$1.86	\$1.78	\$1.78
BOLWARRA*	\$3.97	\$0.00	\$0.00
BOULDER BAY	\$2.12	\$2.21	\$2.21
BRANXTON	\$3.31	\$3.40	\$3.41
BURWOOD BEACH	\$1.45	\$1.54	\$1.57
CESSNOCK	\$1.99	\$2.08	\$2.09
DORA CREEK	\$1.91	\$1.99	\$1.99
EDGEWORTH	\$1.66	\$1.74	\$1.74
FARLEY	\$1.92	\$1.93	\$1.93
KEARSLEY	\$4.02	\$4.11	\$4.13
KURRI KURRI	\$2.17	\$2.26	\$2.27
MINMI*	\$1.68	\$0.00	\$0.00
MORPETH	\$1.71	\$1.81	\$1.89
PAXTON	\$8.95	\$9.05	\$9.08
RAYMOND TERRACE	\$2.36	\$2.55	\$2.55
SHORTLAND	\$3.17	\$2.97	\$2.48
STOCKTON*	\$1.87	\$1.96	\$0.00
TANILBA BAY	\$2.13	\$2.29	\$2.31
TORONTO	\$2.13	\$2.21	\$2.21
WINDALE*	\$1.49	\$0.00	\$0.00
KARUAH	\$0.00	\$2.72	\$3.29

* Indicates that these treatment plants are to be decommissioned during the price path. The prevailing charge shown in the table will carry forward to subsequent years if decommissioning is delayed.

Table 22 Phosphorous, Heavy Metals and Tankering* Charges (\$2000/01)

PHOSPHOROUS	2000/01	2000/02	2000/03
Total Average Rate (\$/kg)	\$3.26	\$3.34	\$3.40
HEAVY METALS	2000/01	2000/02	2000/03
Burwood Beach (\$/kg)	\$19.94	\$19.96	\$38.24
All Other Treatment Plants (\$/kg)	\$19.02	\$20.32	\$19.49
TANKERING	2000/01	2000/02	2000/03
<u>All Treatment Plants</u>			
Portable Toilet (\$/kL)	\$10.56	\$10.92	\$11.03
Greasy waste -Volume (\$/kL)	\$1.21	\$1.21	\$1.21
Greasy waste -Mass (\$/kg)	\$1.80	\$1.80	\$1.81
Septic Effluent (\$/kL)	\$1.49	\$1.51	\$1.51
Septic Sludge (\$/kL)	\$18.17	\$15.19	\$15.23
Combined Septic (\$/kL)	\$1.80	\$1.77	\$1.77

* Greasy waste charges are calculated on the basis of BOD mass plus volume.

For the years 2001/02 and 2002/03 the maximum yearly trade waste charges set out for the items listed in Table 21 and Table 22 are to be calculated in accordance with Table 23.

Table 23 Trade Waste Charges in 2001/02 and 2002/03

Charge	2001/02	2002/03
Trade Waste	(Table 21 or Table 22 charge) x (1+CPI ₁ ^{-GST})	(Table 21 or Table 22 charge) x (1+CPI ₁ ^{-GST}) x (1+ CPI ₂ ^{-GST})

6 OTHER WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES FOR WHICH NO ALTERNATIVE SUPPLY EXISTS

6.1 Hunter Sewerage Project

For the year 2000/01 the maximum charges for the Hunter Sewerage Project are as set out in Table 24.

Table 24 Hunter Sewerage Project Charges

	2000/01
Environmental Improvement Charge (per year)	\$40
Sewer Service Access Charge	\$2,780

For the years 2001/02 and 2002/03 the maximum charges for the Hunter Sewerage Project are to be calculated in accordance with Table 25.

Table 25 Hunter Sewerage Project Charges in 2001/02 and 2002/03

Charge	2001/02	2002/03
Environmental Improvement Charge	\$40 x (1+CPI ₁ ^{-GST})	\$40 x (1+CPI ₁ ^{-GST}) x (1+ CPI ₂ ^{-GST})
Sewer Service Access Charge	\$2,780 x (1+CPI ₁ ^{-GST})	\$2,780 x (1+CPI ₁ ^{-GST}) x (1+ CPI ₂ ^{-GST})

7 ANCILLARY AND MISCELLANEOUS CUSTOMER SERVICES

The maximum charges for these services are set out in Attachment 1.

8 NEW OR ADDITIONAL CHARGES

HWC must not levy any new or additional charges for water, sewerage and drainage services other than in accordance with this Determination or with the approval of the Tribunal in future determinations.

9 CONSISTENCY OF DETERMINATION WITH THE NEW TAX SYSTEM

The Tribunal's Determination of charges above has been made on the basis that those charges are free of the impact of the GST.

If any charge in this Determination is or becomes subject to the GST, it will be amended so that the maximum charge that may be levied is the charge determined in accordance with the formula:

$$\text{Charge}^{+\text{GST}} = \text{Charge} \times (1 + \text{Y})$$

Where:

Charge^{+GST} means the charge calculated under this section;

Charge means the relevant charge in this determination;

Y means the GST as defined, expressed as a percentage and calculated in the relevant year.

10 DEVELOPER CHARGES

The maximum prices for developer charges will be calculated by applying the methodology applicable at 30 June 2000.

ATTACHMENT 1

Miscellaneous Services

The following maximum charges for miscellaneous services are to apply for the years 2000/01, 2001/02 and 2002/03. Charges are to be held constant in nominal terms in each year.

Nature of Service	Fee (\$)
Section 47 Certificate	15.00
Sewer Location Print	15.00 per property
Special Meter Reading Statement	45.00
Billing Record Search	37.50
Building Over Sewer letter	Nil
Water Reconnection - during business hours	30.00
Water Reconnection - outside business hours (min 4 hour call out)	125.00
Bench Testing of Water Meters	
20mm & 25mm	94.00
32mm & 40mm	109.00
50mm	134.00
80mm	144.00
100mm	159.00
Water Connection or Disconnection for Accredited Plumbers	20.00
Large Water Main Connection 65mm +	167.00
Inserting (or Relocating) a Sewer Junction Application	77.00
Supervision of the Installation of a Sewer Junction by a Private Contractor	62.00
Standpipe hire -	
20mm (monthly)	16.00
20mm (4 months)	28.00
50mm (monthly)	25.00
50mm (4 months)	66.00
Back Flow Prevention - Annual Registration Fee	15.00
Connection to a Storm Channel Application	39.00
Determining Requirements on Builders	46.00
Fire Flow Application/General Pressure Statement	52.00
Fire Flow Full Investigation	193.00
Review of Hydraulic Drawings	
up to 80mm water service	100.00
all water services >80mm	113.00
Application to Build Over Easement	39.00
In-situ Testing of Water Meters	104.00
Application to Connect or Disconnect Sewer	20.00

Nature of Service	Fee (\$)
Application to Connect or Disconnect Water & Sewer Services (combined application)	20.00
Cutting Off or Reconnecting Water Supply at the Meter Upon Request	
8.00am to 5.00pm within business hours	30.00
5.00pm to 8.00am outside business hours	125.00
Disconnection Visit	16.00
Irregular & Dishonoured Payments	
irregular/dishonoured cheques	20.00
direct debit decline	11.00
credit card decline	10.00
Special Inspection of Plumbing Work (Per hour)	50.00
2000/2001 Proposed Urban Development Fees	
Application for Section 50 Certificate (Category 1) Water/sewer extension	222.00
Additional capacity required (Category 2)	273.00
Additional capacity required and works to be constructed under a minor works contract (Category 3)	657.00
Additional capacity and major works required (Category 4)	1485.00
Preliminary developer charge	48.00
Security Bond Lodgement	202.00
Security Bond Reduction	71.00
Revision fee	53.00
Minor works contract	147.00
Major works contract connection to existing water system (per connection)	529.00
Major works design assessment fee	Water \$73 plus \$0.06/m (min.charge \$98) Sewer \$98 plus \$0.12/m (mini.charge \$147) Rising main \$230 Sewer pump stations \$1,225 Water pump stations \$1,225
Major works contract supervision and work-as-executed fee	Watermains/CEP/Rising mains \$6.10/m Sewer mains \$9.20/m Water pump stations \$3,550 Sewer pump stations \$4,950