HUNTER WATER CORPORATION

PRICES OF WATER SUPPLY, WASTEWATER AND STORMWATER SERVICES

From 1 July 2003 to 30 June 2005

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

HUNTER WATER CORPORATION

PRICES OF WATER SUPPLY, WASTEWATER AND STORMWATER SERVICES

From 1 July 2003 to 30 June 2005

Determination No 3, 2003

May 2003

ISBN 1 877049 69 7

The Tribunal members for this review are:

Dr Thomas G Parry, Chairman
Mr James Cox, Full Time Member
Ms Cristina Cifuentes, Part Time Member

Inquiries regarding this review should be directed to:

Chris Spangaro ☎ (02) 9290 8419
Nigel Rajaratnam ☎ (02) 9290 8461

Independent Pricing and Regulatory Tribunal OF New South Wales
Level 2, 44 Market Street, Sydney NSW 2000
☎ (02) 9290 8400 Fax (02) 9290 2061
www.ipart.nsw.gov.au
ALL CORRESPONDENCE TO: PO BOX Q290, QVB POST OFFICE NSW 1230

TABLE OF CONTENTS

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: 02/33

Report: No 3, 2003

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.

SUMMARY

The Tribunal has conducted its 2003 review of prices for Hunter Water Corporation against a backdrop of one of the worst droughts in New South Wales history. Hunter Water's customers however have been relatively unaffected by the drought with no voluntary or mandatory water restrictions required.

The drought has further increased community awareness that water is a limited resource and that supply may ultimately be constrained. The Tribunal is acutely aware of the need to send a signal to customers of the need to conserve water but, in making pricing decisions, it is required balance competing pressures and interests. Further, it is concerned to ensure that pricing responses are developed as part of a comprehensive policy response and are likely to be effective.

As part of the review process, the Tribunal undertook extensive public consultation. It also engaged consultants to provide expert analysis and advice on Hunter Water's proposed capital expenditure, asset management and operating expenditure programs across its water, wastewater and stormwater businesses, and on its trade waste proposals.

To fund these programs, Hunter Water sought price rises at least in line with movements in the consumer price index (CPI) across all of its services, but also with some restructuring of prices. The Tribunal has decided to allow an overall increase in the average prices marginally above the rate of inflation and also to restructure prices. The key changes are that the:

- water usage price will increase by 1 per cent in real terms in both 2003/04 and 2004/05, while the water service charge will decrease by 5 per cent in both years, providing the community with a stronger water conservation signal
- wastewater service price will increase by 1 per cent in real terms in both 2003/04 and 2004/05, while the wastewater usage charge will decrease by 2 per cent in both years.

Stormwater charges were also restructured and the Environment Improvement Charge was increased to recover the costs associated with the Fern Bay backlog sewerage project.

The overall impact of the Tribunal's pricing decisions on customers will be small. An average water user's bill is expected to increase marginally in real terms, although bills for flats and units will experience slightly higher real increases due to the continued phasing in of the minimum sewer service fee.

The impact of the pricing decisions on Hunter Water will be relatively minor. Hunter Water's revenue is expected to increase marginally above the rate of inflation, thus ensuring that the agency can maintain its strong financial position. Its rate of return is expected to fall slightly through the period—mainly because of an expected increase in its capital program in 2004/05 - although the rate of return will be higher than that implied by Hunter Water' price proposal.

Perhaps the most significant implication for Hunter Water is the Tribunal's decision to incorporate efficiency targets into the allowances for operating and capital expenditure. Within the overall revenue allowance, every dollar saved by the agency through efficiency gains is kept by the agency for the period of the determination. This creates an incentive for the agency to continually seek efficiency gains in all areas of spending.

In making its pricing decisions, the Tribunal was specifically concerned about their implications for the affordability of water services and for the environment. It aimed to achieve a balance between these concerns and the need to promote efficiency in the delivery of services by Hunter Water. It expects that its determination will deliver benefits to customers through environmental and service improvements.

By increasing the water usage charge, the Tribunal is contributing to the overall policy of increasing awareness among Hunter Water's customers of the scarcity and value of water, and the need to curb water demand. Other policies will be needed to translate this awareness to incentives for customers to take action.

The Tribunal decided to limit the increase in water usage charges at this price review because of concerns about how such an increase would affect customers. The Tribunal did not have sufficient information to assess the potential customer impact and intends to do further work in this area prior to the next price review.

The Tribunal notes two issues that its consultant, Halcrow Pacific Pty Ltd, has identified. The first issue is the relatively low level of renewals and maintenance expenditure being undertaken by Hunter Water.[1] While the Tribunal has made allowance for all of the requested expenditure in this area, a more detailed review will be required for determining an appropriate level of renewals expenditure for the next determination.

The second is the extent of change in the capital program committed to at the last determination process and the lack of hard evidence that Hunter Water has actively sought to achieve capital efficiencies.[2] While some variation in a capital program is expected due to circumstances beyond an agency's control, Halcrow believes that the level of variation in Hunter Water's program is unacceptable. The Tribunal will need to consider how best to provide incentives to achieve capital efficiencies for the 2005 price determination.

The Tribunal also expects improvements in Hunter Water's asset planning and management processes, to allow it to have greater confidence in the expenditure proposals at the next price review. It expects Hunter Water to be able to link outputs and outcomes to expenditure levels and customer preferences. This will allow the Tribunal to consider setting prices for services that are part of a whole of water cycle process. The benefits from this approach for customers and the environment may be substantial.

1 Halcrow, *NSW water agencies review – Hunter Water, 2002,* p 45.

2 Halcrow, *NSW water agencies review – Hunter Water, 2002,* p 43.

1 INTRODUCTION

The Independent Pricing and Regulatory Tribunal of New South Wales (the Tribunal) has completed its 2003 review of metropolitan water businesses. Based on this review and its own detailed decision making process, it has determined the maximum prices Hunter Water can charge for water, wastewater and stormwater services for the period 1 July 2003 to 30 June 2005.

1.1 Overview of determination

The Tribunal has decided that Hunter Water's overall average prices can increase by marginally more than the rate of inflation in each year of the determination period. The Tribunal has also restructured its prices:

- **water service prices have been restructured so that usage charges constitute a greater proportion of customer water bills.** The water usage price will increase by 1 per cent above inflation in both 2003/04 and 2004/05, while the water service charge will decrease by 5 per cent in each year. These changes aim to increase customers' awareness of the scarcity and value of water, and encourage them to use it more carefully. However, they are expected to have a marginal impact on an average water user's total bill in real terms. Higher water users may experience a small real increase in the bills, while lower water users may see a small real decrease.
- **wastewater charges have been restructured so that there is less emphasis on usage charges.** The wastewater usage charge will decrease by 2 per cent below inflation in both 2003/04 and 2004/05, while the service charge will increase by 1 per cent in real terms in both years.
- **stormwater charges have been restructured so that there is less emphasis on property value based charges,** signalling a likely removal of these charges in the future. The property value based charge will decrease by 5 per cent below inflation in 2003/04 and 16 per cent in 2004/05. The stormwater service charge will increase by 7.6 per cent above inflation in both years.

The Tribunal's pricing decisions are expected to result in Hunter Water earning a pre tax real rate of return on the Regulatory Asset Base (RAB) of 5.1 per cent in 2003/04 and 5.0 per cent in 2004/05. This will maintain Hunter Water's ability to pay dividends and its financial viability over the period of the determination.

In reaching these decisions, the Tribunal was guided by the requirements set out in the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act), and placed equal weight on each of the factors contained in section 15 of this Act. The Tribunal is satisfied that its determination achieves a reasonable balance between these factors.

1.2 Structure of report

This report explains the Tribunal's determination in detail, including why it reached its decisions and what those decisions mean for Hunter Water, its customers and the environment. It is structured as follows:

- Chapter 2 outlines the review and decision-making process the Tribunal used to reach its decisions
- Chapter 3 provides an overview of the regulatory approach it has adopted to regulate Hunter Water's revenue and prices
- Chapter 4 explains the financial analysis the Tribunal based its decisions on, and the implications of these decisions for Hunter Water, including the expected impacts on its revenue, operating and capital expenditure, return on assets and overall financial viability
- Chapter 5 focuses on the implications for Hunter Water's customers, including residential, industrial and commercial customers
- Chapter 6 discusses the implications for the environment, including the environment-related capital expenditure the Tribunal has allowed and the likely impact on water demand management
- Chapter 7 provides an overview of the pricing decisions for all Hunter Water's services
- Chapter 8 summarises the issues arising from the review that the Tribunal believes Hunter Water needs to better address in the lead up to the 2005 price review.

The Tribunal members who considered this determination were Dr Thomas Parry (Chairman), Mr James Cox (Full-time member), and Ms Cristina Cifuentes (Member).

2 TRIBUNAL'S REVIEW AND DECISION-MAKING PROCESS

The Tribunal has made its price determination for Hunter Water in accordance with section 11(1) of the *Independent Pricing and Regulatory Tribunal Act, 1992* (the IPART Act). It reached its decisions after a thorough review and decision-making process.

The Tribunal's review included an extensive investigation and public consultation. As part of this review, the Tribunal:

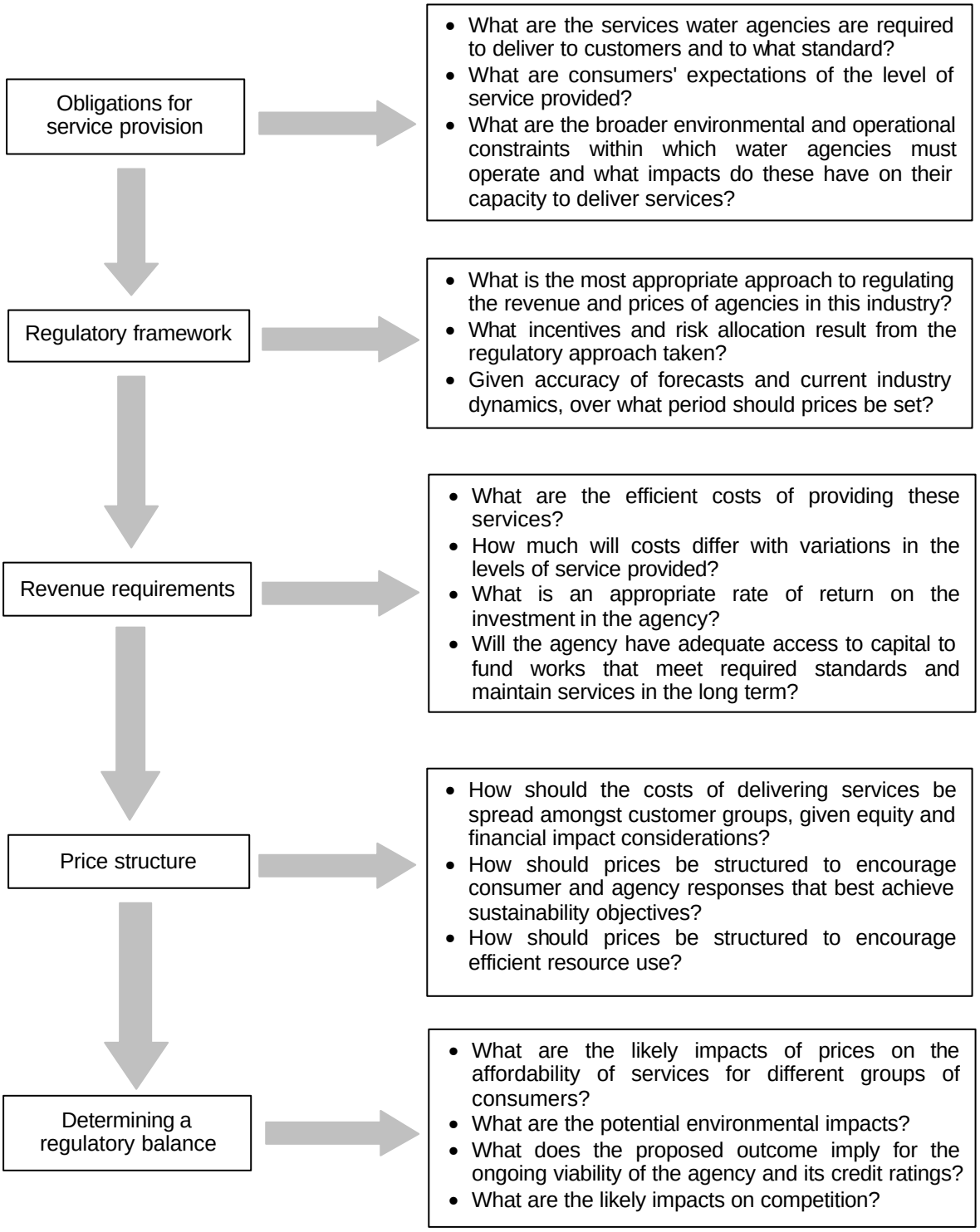
- released an issues paper in June 2002
- invited Hunter Water to provide a submission detailing its pricing proposals, and required it to provide extensive financial and performance data on the future capital and operating expenditure it believes will be necessary to maintain customer service levels and respond to regulatory and customer demands
- invited other interested parties to respond to water agencies' submissions, and received 30 written responses (see Appendix 1 for a list of respondents)
- held a public hearing on 9 December 2002 and invited some of the parties who submitted written responses to present their submissions at this hearing (see Appendix 2 for a list of presenters)
- engaged Halcrow Pacific Pty Ltd (Halcrow) to conduct a review of Hunter Water's capital expenditure, asset management and operating expenditure submissions across its water, wastewater and stormwater businesses
- gave Hunter Water the opportunity to respond to the Halcrow review, both formally in writing and through direct meetings between representatives of Hunter Water and the Tribunal Secretariat
- engaged GHD Pty Ltd (GHD) to review Hunter Water's proposals in relation to trade waste prices
- gave Hunter Water the opportunity to respond in writing to the GHD review.

In addition, the Tribunal explicitly considered all the matters outlined in Section 15 of the IPART Act (see Appendix 3). These matters can be grouped as follows:

- **consumer protection**—protecting consumers from abuses of monopoly power; standards of quality, reliability and safety of the services concerned; social impact of decisions; effect on inflation
- **economic efficiency**—greater efficiency in the supply of services; the need to promote competition; effect on functions being carried out by another body
- **financial viability**—rate of return on public sector assets including dividend requirements; impact on pricing of borrowing, capital and dividend requirements of agencies
- **environmental protection**—promotion of ecologically sustainable development via appropriate pricing policies; considerations of demand management and least-cost planning.

The Tribunal took all these matters, plus the information and analysis it obtained through its investigation and public consultation, into careful consideration as it worked through a decision-making process. Figure 2.1 provides a high-level summary of the key stages in this process.

Figure 2.1 The Tribunal's decision-making process



In reaching its decisions, the Tribunal had to weigh the diverse needs and interests of Hunter Water's stakeholders. For example, Hunter Water's customers need an affordable water supply and acceptable service standards. The general community needs water services to be supplied in a way that is sustainable in the long term, does not compromise Hunter's environment, and is economically efficient. Hunter Water needs prices that are high enough to ensure its financial viability and enable it to earn an appropriate rate of return on its assets, and signal the costs to customers to encourage efficient resource use.

In addition, the price review took place during one of the worst droughts in New South Wales' history,[3] and at a time of heightened concern about water supply and demand imbalances, and appropriate investment in renewals and maintenance of the water, wastewater and stormwater systems.

The diversity of these interests and concerns often required the Tribunal to trade off customer affordability issues with environmental impacts and the maintenance of the overall quality of Hunter Water's service delivery, in addition to considering the financial viability and dividend payments of the business. It took active steps to ensure that these trade-off decisions were well informed during the course of its review.

The Tribunal's consideration of the matters listed in Section 15 in relation to specific pricing decisions is discussed throughout the report. Appendix 3 provides section references for where each matter is discussed. Further information relating to the Tribunal's review, including copies of all submissions, can be found at the Tribunal website: www.ipart.nsw.gov.au.

[3] Dr Couglan, Head of the National Climate Centre, as reported in Weekend Australian, 29 March 2003, p 12.

3 REGULATORY APPROACH TAKEN

As in previous metropolitan water price determinations, the Tribunal has used a form of incentive regulation known as CPI±X to set maximum prices for services in 2003/04 and 2004/05.[4] With this approach, the Tribunal estimates the amount of revenue Hunter Water requires in each year of the determination period using the building block revenue methodology.[5] Given forecast demand, prices are then set to generate this amount of revenue in the first year. At the same time, the Tribunal calculates the amount by which these prices can rise or fall in each subsequent year of the period, to account for movements in general inflation,[6] efficiency improvements, and significant changes in the operating environment such as new environmental standards or customer service standards.

The building block methodology involves the addition of cost blocks that represent forecasts of the regulated agency's efficient operating expenditure, depreciation and a return on assets, to determine its overall efficient revenue requirements. This methodology is outlined briefly below, and is described in more detail in Appendix 4:

- **Operating expenditure.** The operating expenditure cost block was determined by reviewing Hunter Water's proposals to determine what an efficiently operating business could be expected to spend so that it could operate effectively without compromising the quality of its services.
- **Depreciation (or capital maintenance):** This cost block was determined by calculating a straight line depreciation allowance based on the regulatory asset base, using an assumed average asset life of 70 years. This, combined with a return on assets, ensures that sufficient revenue is allowed for essential renewals and maintenance capital expenditure (see Appendix 5 for a detailed explanation).
- **Return on assets.** The return on assets is determined by multiplying the agency's regulatory asset base (RAB) by an appropriate rate of return. The RAB represents the agency's financial investment in the business, and bears no direct relationship to the value attributed to the physical assets of the business. To calculate this cost block, the Tribunal used the RAB it established in its 2000 review of Hunter Water's prices, and rolled this forward into the 2003 to 2005 regulatory period by adding an allowance for prudent capital expenditure,[7] and accounting for inflation and depreciation. It then determined an appropriate rate of return for Hunter Water and multiplied the rolled forward RAB by this rate. The Tribunal proposes to maintain this approach for calculating the return on assets in subsequent price reviews.

---

4 This is the most common form of incentive regulation. A detailed explanation of CPI±X is provided in Appendix 4.

5 The building block methodology is the main method used by economic regulators in Australia and abroad for determining prices for monopoly services. Alternative approaches include the use of index based approaches such as total factor productivity or data envelope analysis to determine X factors. These techniques are under ongoing consideration by the Tribunal but are not at this stage intended to replace the building block approach. The building block methodology was used at each of the previous metropolitan water reviews conducted by the Tribunal.

6 Measured as the consumer price index, average of all cities on an annual March on March basis.

7 Capital is determined to be prudent on the basis of both an engineering examination of individual capital projects, and a review of asset management planning processes within the agency.

The determination of future operating and capital expenditure required the Tribunal to form a view on the efficiency gains that could reasonably be achieved. The purpose of incorporating these efficiency gains in the price regulation approach is to provide a guide for the agency about the potential for it to improve the efficiency of its operating and capital expenditure without reducing the quality of the services it delivers to customers, and to provide a basis for the Tribunal's revenue allowance decision. The incentive to pursue efficiency gains arises from the fact that prices have been set for the period of the determination and are not linked to costs actually incurred. If the agency more than achieves the targets it can expect to earn a higher return than forecast by the Tribunal.

In deciding on an appropriate allowance for capital expenditure, all justified renewals and maintenance capital expenditure which has been based on sound asset management practices and where it has been appropriately justified by the agency, has been incorporated in full in revenue building blocks for price setting. Where the agency seeks easy cost savings by delaying essential renewals and maintenance expenditure, then this is at their own risk, and not a result of the regulatory pricing approach. A detailed explanation of this investigation is contained in Appendix 5.

In relation to efficiency targets for capital expenditure, the Tribunal is concerned that the incentives in the current regulatory approach do not sufficiently encourage water agencies to minimise capital costs through innovation and efficiency. Further, it is not satisfied that the current approach has resulted in water businesses sufficiently linking capital expenditure programs to demonstrated regulatory and customer expectations. The Tribunal therefore proposes to review the approaches it has used to date to better assess and allow for capital expenditure programs in its pricing determinations. It will assess options for creating stronger incentives for businesses to pursue capital efficiencies and improve asset management practices (see section 4.4.5).

This price determination has been limited to a two year period. The Tribunal was persuaded that the circumstances facing the industry generally, and specific agencies particularly, over the short to medium term, indicated that a two year price period was appropriate. In making this decision, the Tribunal took into account broader concerns about the uncertainties surrounding future demand on water supply systems (which could have implications for capital investment) and the review of stormwater institutional structures.

Box 1 Overview of Hunter Water Corporation

Hunter Water provides water, sewerage and some stormwater drainage services within the local government areas of Newcastle, Lake Macquarie, Maitland, Cessnock and Port Stephens. It also supplies bulk water to the towns of Dungog, Clarence Town and Paterson.

Hunter Water currently services a population of around 480,000 people in its area of operations. It services some 198,000 residential properties and 12,500 non-residential properties, which are connected to its systems through 4,300 kilometres of water mains and 4,200 kilometres of wastewater mains.

Hunter Water's water supply comes from three main sources: Chichester and Grahamstown Dams and the Tomago Sandbeds. It also accesses ground water sources at Anna Bay and Lemon Tree Passage to supply the Port Stephens area.

Under the *Hunter Water Act 1991*[8], Hunter Water is required to have an operating licence that specifies certain quality and performance standards. As part of the operating licence, it is required to have a Customer Contract that sets out the rights and obligations of customers and of Hunter Water, including customer complaint handling procedures and rights of redress if there is a failure to provide the agreed level of service. The Tribunal is responsible for conducting annual audits of Hunter Water's compliance with its licence. Financial and other penalties can be imposed for breach of the licence conditions.

The Tribunal's most recent review of Hunter Water's operating licence took place in 2001. As a result of this review, a new licence was which took effect from 1 July 2002. The Tribunal has recently completed the process of negotiating Hunter Water's Customer Contract which is expected to be in place by July 2003.

Detailed financial information for Hunter Water, compared with the other four metropolitan water agencies is presented in Appendix 10.

8 Sections 12 and 35, *Hunter Water Act 1991.*

4 FINANCIAL ANALYSIS THAT UNDERPINS THE DETERMINATION, AND IMPLICATIONS FOR HUNTER WATER

The Tribunal has determined that Hunter Water's overall revenue requirement is $124 million in 2003/04 and $125 million in 2004/05 (in 2002/03 dollar terms), and has set maximum prices for all of its services to generate this amount of revenue. The Tribunal reached this determination after considering Hunter Water's proposed annual revenue requirements and capital and operating expenditure programs, together with analysis of these programs provided by Halcrow and GHD and its own analysis of the impact of its determination on Hunter Water's financial viability, on its customers and on the environment.

The key implications of these prices for Hunter Water over the price path are as follows:

- the Tribunal has used its own water consumption projections rather than those provided by Hunter Water to set prices, in line with its view that consumption assumptions used in price setting should reflect long term historical consumption patterns
- in real terms, Hunter Water's overall revenue is expected to increase marginally during the period
- the Tribunal expects Hunter Water to make efficiency savings in forecast operating expenditure of $2.7 million, but has allowed an additional $3.9 million above the 2001/02 base year to cover expected cost increases that were beyond Hunter Water's control
- the Tribunal expects Hunter Water to reduce forecast capital expenditure by $2.2 million through efficiency gains and slippage in capital projects, but has allowed $62 million in 2003/04 and $70 million in 2004/05 to cover capital projects associated with growth and renewals and to meet mandatory standards
- the Tribunal's price decisions are expected to allow Hunter Water to maintain its currently sound financial position, and generate a real pre tax rate of return to the regulatory asset base of 5.1 per cent in 2003/04 and 5.0 per cent in 2004/05.

In addition, the Tribunal is concerned that Hunter Water did not establish operating and capital expenditure efficiency targets which could be linked to expenditure savings identified in the last price determination. It intends to consider how it can strengthen the incentives for Hunter Water to achieve operating and capital efficiencies at the next price review.

This chapter discusses each of these implications and issues going forward in more detail, and explains the financial analysis that underpins the Tribunal's decisions.

4.1 Tribunal has used its own water consumption projections to set prices

Finding 1: For the purposes of setting prices the Tribunal assumed that consumption in Hunter Water's supply area would be equal to 62GL in 2003/04 and 2004/05.

As discussed in Chapter 3, the Tribunal determined the maximum prices for Hunter Water's water and wastewater services by calculating the total revenue requirement of its water business for each year of the price path. It then set prices to generate this amount of revenue, using financial modelling.

One of the critical variables used in this financial modelling is the projected level of water consumption during the period of the price path. The assumed level of consumption used in the Tribunal's financial model has a significant impact on the forecast rate of return and, indirectly, on pricing decisions.

The Tribunal believes that, as a matter or principle, the assumed level of consumption it uses for price setting purposes should reflect longer term consumption patterns. It should not attempt to account for or predict the effects of shorter term weather patterns. This may mean that in periods when water restrictions apply, water businesses will recover less revenue than forecast, while in periods when demand is high and no restrictions apply, they will recover more revenue than forecast.

In line with this belief, the Tribunal has plotted a trend line along the last nine years of metered consumption data and projected this forward into the two years of the coming determination. It has used this as a starting point for considering specific consumption assumptions for modelling purposes.

For Hunter Water, the outcome of this approach is that the Tribunal has used a metered consumption assumption for modelling purposes of 62GL per annum for both 2003/04 and 2004/05. This assumption is similar to the forecasts provided by Hunter Water (see Table 4.1).

Table 4.1 Water consumption assumptions used by Tribunal

GL per annum	2000/01 Actual	2001/02 Actual	2002/03 Projected	2003/04 Forecast	2004/05 Forecast
Hunter Water's proposal	62	62	64	61	62
Tribunal's proposal				62	62

The Tribunal noted Hunter Water's concerns about the Tribunal generating consumption forecasts based on a long term average consumption. Hunter Water argued that its own consumption forecasts were based on detailed modelling of residential consumption and interviews with its major industrial customers. It claimed that this was a more appropriate basis for forecasting consumption than the long-term average level of consumption.

However, the Tribunal believes water consumption is a difficult variable to forecast accurately, particularly where a large proportion of consumption is attributed to residential customers whose level of use is significantly influenced by weather conditions.[9] Given this, the Tribunal believes that a long-term average is an appropriate approach to base the consumption forecasts. If applied consistently it is an unbiased means of forecasting this critical variable. In addition, the Tribunal notes that the consumption assumption it used is not very different to the forecasts generated from Hunter Water's detailed modelling.

4.2 Hunter Water's revenues expected to increase marginally

Finding 2: The Tribunal found that a revenue requirement of $124 million in 2003/04 and $125 million in 2004/05 (in real dollar terms) was appropriate for the setting of maximum prices for water, wastewater, stormwater, and ancillary services provided by Hunter Water.

To calculate the revenue requirement for Hunter Water, the Tribunal estimated how much operating and capital expenditure an efficiently run water business could be expected to need, to operate effectively and earn an appropriate rate of return for efficient investment in capital infrastructure. It found that this revenue requirement is $124 million in 2003/04 and $125 million for 2004/05 (in real dollar terms).

The revenue requirement estimated by the Tribunal is marginally higher than that modelled by Hunter Water. Hunter Water's revenue forecast was based on a rate of return of 4.8 per cent which it considers to be at the lower end of an appropriate return range. The Tribunal's revenue forecast was based on a higher rate of return of 5.0 to 5.1 per cent based on revisions to the Weighted Average Cost of Capital. This is discussed further in section 5.2 and appendix 7.

Table 4.2 Tribunal's estimate of Hunter Water's total revenue

$ million 2002/03	2002/03	2003/04	2004/05
Hunter Water's proposal[10]	120	121	122
Tribunal finding		124	125
Difference		3	3

Source: IPART financial model for Hunter Water.

Although the Tribunal has set prices that are projected to generate the revenue shown in the table, the actual revenue Hunter Water generates will depend on its water sales and customer numbers. If it sells more water than the Tribunal assumed in its financial modelling, then it will earn more revenue. Similarly, if customer numbers increase by more than expected, it will earn more revenue than expected. Conversely, if water sales and customer numbers are below that forecasted by the Tribunal, Hunter Water will earn less revenue than expected.[11]

9 Approximately 63 per cent of Hunter Water's consumption is attributed to the residential sector - 85 per cent of these residential customers live in houses, with 15 per cent living in flats and units.

10 These figures are based upon information contained within Hunter Water's 2002 annual information return and exclude revenue from non-regulated sources. 2002/03 revenue was based on Hunter Water's original forecast annual water consumption of 59GL, which has since been revised upward to 64GL.

11 The risks associated with changes in water sales and customer numbers away from the forecast levels are commercial risks borne by Hunter Water and are compensated for through higher than risk free rate of return on the regulatory asset base.

In making this finding on Hunter Water's revenue requirement, the Tribunal considered Hunter Water's revenue requirement proposal and Halcrow's review of the agency's operating and capital expenditure. Specific findings on operating expenditure, capital expenditure, return to assets and dividends are discussed in the following sections.

4.3 Hunter Water expected to make operating cost savings of $2.7 million

Finding 3: The Tribunal found that $58.9 million in 2004/03 and $58.7 million in 2004/05 (in 2002/03 dollar terms) was an appropriate allowance for Hunter Water's operating expenditure.

Hunter Water proposed operating expenditure of $60.7 million in 2003/04 and $60.9 million in 2004/05. The Tribunal decided to allow less than this (Table 4.3), because it believes the agency can achieve $2.7 million in cost savings against forecast operating expenditure between 1 July 2003 and 30 June 2005 by pursuing efficiency gains in its operations.

Table 4.3 Projected annual operating expenditure

$ million 2002/03	2002/03	2003/04	2004/05
Hunter Water's proposal	60.1	60.7	60.9
Tribunal finding		58.9	58.7

In making this decision, the Tribunal considered Hunter Water's justifications for its proposed expenditure, Halcrow's findings and recommendations in relation this expenditure, and its own financial analysis. (The methodology Halcrow used to make its recommendations is described Box 2.)

Box 2 Halcrow methodology for calculating proposed operating expenditure

Halcrow's review of operating expenditure involved analysing data provided by Hunter Water, and information obtained through interviews with its senior staff. By focussing on drivers for cost changes and program priorities, the cost basis for projections, and projected efficiencies, Halcrow estimated the operating expenditure that an efficiently operating Hunter Water would need to deliver its services to customers.

The detailed estimates involved establishing a base line operating expenditure for 2001/02, by considering the details underlying the actual cost presented by Hunter Water. Where abnormal items were identified in 2001/02, these were excluded. Halcrow then assumed that the base year operating expenditure should (in real terms) be sufficient for the delivery of services in subsequent years, assuming that service levels remained constant.

This base amount was varied in subsequent years, after considering a range of factors such as electricity price rises and real labour cost increases. Where capital expenditure was expected to result in operating cost efficiencies, then these were also explicitly considered.

From this modified operating expenditure, Halcrow applied an expected efficiency factor, reflecting its view on the savings a competitive water business should be seeking to achieve every year. This factor is based on Halcrow's experience in similar water businesses, both within Australia and internationally.

The final result from this approach became the recommended operating expenditure proposals for Hunter Water in 2003/04 and 2004/05.

In its submission Hunter Water proposed additional operating expenditure (above the 2001/02 base year) of $4.4 million in 2003/04 and $5.1 million in 2004/05. Halcrow found that $2.7 million in 2003/04 and $3.4 million in 2004/05 of the additional expenditure proposed by Hunter Water were justifiable as these costs are largely outside Hunter Water's control. These cost increases are associated with growth, electricity charges, real labour costs and employee provisions, and new mandatory obligations. Halcrow therefore recommended that the Tribunal allow this expenditure. Halcrow also identified efficiency savings that Hunter Water should make, as discussed in section 4.3.1.

The Tribunal has considered Halcrow's findings and believes that a number of other additional cost items proposed by Hunter Water should be allowed including a proportion of costs associated with its subsidiary (Hunter Water Australia) and adjustments to the level of capitalised labour costs in its base year operating expenditure. Each of these recommendations, and the Tribunal's decisions, are discussed below.

4.3.1 Operating cost savings of $2.7m

Finding 4: The Tribunal found that Halcrow's proposed operating efficiency target of $2.7 million (in real dollar terms) over the price path is reasonable and appropriate.

Hunter Water's proposed operating expenditure for 2003/04 and 2004/05 assumed the agency would achieve operating cost savings of $1.7 million (in real dollars) by the end of 2004/05. These savings were primarily the result of improved asset management, improved operational processes, better surplus property management and the introduction of new technology.

Based on its review of Hunter Water's proposal, Halcrow found that the agency can achieve further efficiency gains of $1 million by 2004/05, in addition to the $1.7 million already proposed. It recommended that the Tribunal impose a total efficiency target of $2.7 million on Hunter Water to be achieved by 2004/05. Halcrow identified several additional opportunities for achieving efficiency savings, including:

- moving towards the economic level of leakage
- increasing capital expenditure on above-ground asset maintenance and replacement which should deliver efficiency dividends on operating costs
- re-tendering of contracts currently provided to Hunter Water Australia
- further outsourcing, particularly in pressure monitoring, assessment of water system problems and pump testing.[12]

Hunter Water argued that Halcrow had provided limited justification for its recommended efficiency targets. Hunter Water also argues that it cannot achieve $2.7 million operating cost savings by 2004/05.[13] The Tribunal notes Hunter Water's concerns but believes that the targets are reasonable and are necessary to drive efficiency improvements. If Hunter Water operated in a competitive market, it would need to continually seek operating cost savings. Further, customers should only be expected to fund the efficient costs which are reasonable for Hunter Water to achieve and are consistent with the safe operation of the water, wastewater and stormwater systems within desired performance standards.

---

12 Halcrow, *NSW water agencies review – Hunter Water,* 2002, pp 20 and 24.

13 Correspondence from Hunter Water, *Review of Hunter Water's Price Determination,* 5 May 2003, p 3.

It is important to note that although Halcrow identified specific areas where Hunter Water may be able to make cost savings, it is up to Hunter Water to decide how best to achieve these savings. The Tribunal seeks to create incentives for Hunter Water to achieve operating cost savings, rather than tell it how to operate its business.

4.3.2 Costs associated with Hunter Water Australia

Finding 5: The Tribunal found that the inclusion of $0.17 million (in 2002/03 dollars) in additional operating costs, associated with Hunter Water Australia was sufficiently justified.

In the data return that formed part of its submission, Hunter Water identified operating cost increases of $0.54 million (relative to 2001/02) attributed to its subsidiary company, Hunter Water Australia (HWA). Halcrow did not allow these cost increases in its proposed operating expenditure for Hunter Water, as the costs appeared to be the result of accounting policy rather than increases in the cost of doing business.[14] However, Halcrow recommended that the Tribunal investigate these costs further.

Hunter Water subsequently provided additional information to the Tribunal to justify these costs. It noted HWA provides it with a range of services with the key contract being for the operation of water and sewage treatment plants, laboratory services and the maintenance of the GIS data. It also noted that these contracts are negotiated annually factoring in productivity improvements but with provision for cost increases to be passed through to the regulated business.

Hunter Water explained that HWA's costs had increased by $0.54 million, but only $0.3 million should be passed through to the regulated business.[15] The Tribunal considered Hunter Water's justification for the $0.3 million increase in HWA's costs. It found that a portion of this increase—representing costs associated with real wage increases, increased level of groundwater testing and software licence fees—is outside HWA's direct control, and should be included in the cost base of the regulated business. It therefore allowed $0.17 million for these costs.

Halcrow raised concerns about the nature of the contracts between Hunter Water and HWA, and recommended that the Tribunal further examine the contractual arrangements between the parties.[16] The Tribunal notes Halcrow's concerns and requires Hunter Water to provide it with evidence that clear ringfencing guidelines are in place, prior to the next price review.[17] This requirement is discussed further in section 4.6.1.

---

14 Halcrow, *NSW water agencies review – Hunter Water,* 2002, p 8.

15 The remaining $0.24 million related to a transfer of functions from Hunter Water, and therefore these costs would be offset by a reduction in the agency's overall operating costs.

16 Halcrow, *NSW water agencies review – Hunter Water,* 2002, p 10.

17 The ringfencing guidelines refer to the need for accounting separation of business activities to ensure that the costs/revenues are clearly allocated between the regulated and unregulated business activities.

4.3.3 Capitalisation of labour costs

Finding 6: The Tribunal found that additional operating expenditure of $1 million above the 2001/02 base expenditure was justified to reflect a normal year of capitalised labour costs.

In its submission, Hunter Water claimed that its 2001/02 base year operating expenditure had an abnormally high level of capitalised labour cost.[18] It therefore proposed additional operating expenses (above the 2001/02 base year) of $1.3 million in 2003/04 and $1.5 million in 2004/05 to reflect the level of capitalisation in a 'normal' year (Table 4.4).

Table 4.4 Increase in operating expenditure due to capitalised labour

$ million 2002/03	2003/04	2004/05
Hunter Water's submission	1.3	1.5
Halcrow's finding	0.85	0.85
Tribunal's finding	1.0	1.0

Halcrow accepted that an adjustment was needed to reflect a normalised level of capitalisation. It recommended that an additional $0.85 million per annum operating expenditure be allowed, based on the average level of labour capitalisation in the three years from 1999/00 to 2001/02.[19]

The Tribunal considered Halcrow's recommendation, together with further information provided by Hunter Water. The Tribunal found that a minor adjustment was needed to Halcrow's recommendation to better reflect Hunter Water's normalised level of capitalised labour costs. It decided to allow for additional operating expenditure of $0.15 million above Halcrow's recommendation, resulting in a total increase in the operating expenditure of $1 million as an adjustment for the abnormally high level of capitalised labour costs in 2001/02.

4.4 Hunter Water expected to make capital expenditure savings

Finding 7: The Tribunal found that $62 million in 2003/04 and $70 million in 2004/05 (in real dollar terms) was an appropriate allowance for the capital expenditure program of Hunter Water.

Hunter Water proposed a capital expenditure program of $64 million in 2003/04 and $74 million in 2004/05 (see Table 4.5). This represents over 15 per cent increase compared with capital expenditure in 2002/03.

---

18 Accounting policy allows a company's labour costs associated with capital projects to be capitalised in the balance sheet, rather than charged as an expense in its Profit and Loss Statement. If a larger proportion of labour costs are capitalised, this has the effect of reducing the operating expenditure requirement, but increasing the value of assets in the balance sheet. The level of capitalisation will depend on the level and nature of the capital program and may vary from year to year.

19 Halcrow, *NSW water agencies review – Hunter Water*, 2002, p 12.

Table 4.5 Hunter Water's proposed capital expenditure by business activity

$ million 2002/03	2002/03	2003/04	2004/05
Water	18	14	26
Wastewater	31	34	41
Stormwater	1	0	0
Corporate	5	16	6
Total	54	64	74
Percentage change on previous year		19%	16%

Source: Annual information return 2002 for Hunter Water and email from Hunter Water on 17 April 2003.

Hunter Water intends to use a considerable proportion of this capital expenditure budget for asset maintenance, renewal and replacement (Table 4.6). It also proposed significant expenditure to meet growth and mandatory standards.

Table 4.6 Hunter Water's proposed capital expenditure by driver

$ million 2002/03	2002/03	2003/04	2004/05
-asset renewal/replacement	25	33	26
-mandatory standards	7	7	6
-discretionary standards	0	1	0
-growth	22	22	39
-efficiency	0	1	3
Total	**54**	**64**	**74**

Source: Annual information return 2002 for Hunter Water and email from Hunter Water on 17 April 2003.

The Tribunal decided to allow less capital expenditure than Hunter Water proposed (Table 4.7). This decision reflects the Tribunal's belief that the agency can reduce its capital expenditure over the determination period by pursuing efficiency gains, and that some slippage in its proposed capital program is likely.

In making this decision, the Tribunal carefully considered Hunter Water's justifications for its proposed capital expenditure, and Halcrow's findings and recommendations in relation this expenditure. Halcrow found that Hunter Water can reduce its capital expenditure by some $2 million in 2003/04 and $4 million in 2004/05, through a combination of efficiency gains and slippage.

As part of its review, Halcrow also looked closely at a range of other issues related to Hunter Water's capital expenditure. These include the variation in its actual expenditure between 2000/01 and 2002/03 and the forecasts it submitted to the last price review, its treatment of proposed capital expenditure related to Hunter Water's purchase of land at the Tillegra dam site, its proposed project to duplicate the South Arm Crossing, and its asset management practices. Halcrow's findings and recommendations in relation to capital efficiency and these other issues, and the Tribunal's decisions, are discussed below.

Table 4.7 Projected capital expenditure used in the Tribunal's financial analysis

$ million 2002/03	2002/03	2003/04	2004/05
Hunter Water's proposal*	54	64	74
Tribunal finding		62	70
Difference		-2	-4

** the proposal differs from Hunter Water's submission due to an additional capital program identified after the submission.*

Although the Tribunal has considered the capital expenditure requirements of Hunter Water on a project basis, this does not necessarily reflect a view as to the appropriateness of the individual project expenditure by Hunter Water. Hunter Water may, after a Tribunal decision, decide to proceed with a project which it deems necessary, acknowledging that a subsequent review may result in the cost of such action being borne by the shareholder rather than customers.

4.4.1 Hunter Water expected to reduce capital expenditure through efficiency gains, and likely to spend less due to slippage

Finding 8: The Tribunal found that an efficiency target of 5 per cent was appropriate for all parts of Hunter Water's capital program except renewals and maintenance, and that 10 per cent slippage in growth related projects was likely.

Based on its review of Hunter Water's proposed capital expenditure program, Halcrow found that there was potential for the agency to achieve 5 per cent efficiency savings in all parts of the program, except for expenditure related to asset renewals and maintenance.[20] It identified several opportunities for Hunter Water to achieve efficiency gains in its asset management area. These included:

- optimising projects as their design progresses from the concept to detailed stage
- taking future efficiencies (including innovation and procurement efficiencies) into account when costs are estimated, rather than simply deriving them from historic sources
- using network optimisation techniques where it believes that this could give efficiency benefits.[21]

Halcrow also noted that Hunter Water's capital program was ambitious in size, particularly the growth-related projects. It was not confident that Hunter Water could deliver on all its proposed projects before the end of the pricing period, and found that 10 per cent slippage in growth-related water projects was likely. Halcrow also noted that Hunter Water had spent heavily over the last three years to overcome peak demand problems, so the risk involved in delaying some growth projects was limited.

Based on these findings, Halcrow recommended that the Tribunal impose a 5 per cent efficiency target on all Hunter Water's proposed capital expenditure except that related to asset renewals and maintenance. In addition, it recommended the Tribunal reduce the

20 Halcrow believes that all the agencies expenditure on asset maintenance/renewal may already below the optimal level of expenditure and therefore did not propose an efficiency adjustment.

21 Halcrow, *NSW water agencies review – Hunter Water*, 2002, p 53.

agency's proposed capital expenditure on growth-related assets by 10 per cent to account for likely slippage.

Hunter Water argued that Halcrow's justification for these recommendations was insufficient. It also noted Halcrow's finding that Hunter Water was an efficient business overall.

The Tribunal considered Hunter Water's comments, but decided that Halcrow's recommended efficiency targets and likely slippage are reasonable. The Tribunal recognises that Halcrow did not identify in detail the particular areas where efficiency gains can be achieved and where slippage is likely to occur. However, it notes that Hunter Water now forecasts that it will underspend its proposed capital program for the current year by $7.1 million—and that $3.2 million of this under-expenditure will be due efficiency gains, and $4.72 million will be due to slippage in projects. These amounts represent around 6 per cent and 9 per cent of Hunter Water's proposed capital program for 2002/03 respectively. Given this performance in the current year, Halcrow's assumptions for the coming two years appear reasonable.

4.4.2 Tribunal is concerned about the variation in actual and forecast capital expenditure

As part of its review, Halcrow examined the variation in Hunter Water's actual expenditure for the 2000-2003 pricing period and the expenditure forecasts it submitted to the 2000 price review. Halcrow noted this variation was significant: It found that Hunter Water had undertaken 17 new water projects and 8 new wastewater projects that were not planned at the time of the 2000 review.[22] Further, at the time of Halcrow's review Hunter Water was forecasting that it would overspend the capital program budgeted for at the last determination by approximately $5 million (or 3 per cent of the total capital program).[23]

Although Halcrow accepts that some variation in delivering a large capital program can be expected, it believes that the level of Hunter Water's variation is unacceptable. In addition, this level of variation suggests Hunter Water's asset management procedures may need to be improved. Halcrow noted, however, that the new projects undertaken by Hunter Water would have been needed at some point and, to that extent, they were prudent.

The Tribunal is concerned about the level of variation in Hunter Water's capital works program, and believes the agency needs stronger incentives to maintain expenditure within its planned budget and achieve efficiencies in the delivery of the capital program.

---

22 Halcrow, *NSW water agencies review – Hunter Water*, 2002 pp 43-44, p 62.

23 Subsequent to the Halcrow review, on 28 February 2003, Hunter Water provided a revised capital expenditure forecast for 2002/03. Based on the revised forecast the overspend indicated by Halcrow is not likely to occur.

4.4.3 Expenditure relating to Hunter Water's purchase of land at Tillegra Dam site has not been rolled into its RAB

Finding 9: The Tribunal found that capital expenditure related to the purchase of land at the Tillegra Dam site should not be included in Hunter Water's Regulatory Asset Base at this stage. It will reconsider including this expenditure in the Regulatory Asset Base if it is satisfied that purchasing this land remains a Government priority.

In February 2001, Hunter Water purchased land at the Tillegra Dam site and, in its submission, proposed that this expenditure be included in its regulatory asset base (RAB) for this price review. However, Halcrow questioned the prudency of this purchase, because the purchase of the land was not included in Hunter Water's Integrated Water Resources Plan as a priority project.[24]

In its response to Halcrow's concern, Hunter Water argued that the purchase of land for the Tillegra Dam project was a Government directive from September 1983. However, it accepted that the Tillegra Dam is not a requirement in the short term.

The Tribunal is concerned about including the capital expenditure related to this land purchase into the RAB, as it is not convinced that the Tillegra Dam is considered to be a priority option to augment the supply in the near future. It therefore requires that Hunter Water seek advice confirming the priority timing of the future site. If the dam remains a priority option for supply augmentation, the Tribunal will consider including the capital expenditure related to the purchase of this land into Hunter Water's RAB at the next price review.

4.4.4 Expenditure related to South Arm Crossing has been allowed

Finding 10: The Tribunal found that capital expenditure of $3.2 million (in 2002/03 dollars) related to the duplication of the South Arm Crossing should be allowed in Hunter Water's capital program.

After Halcrow had completed its review of Hunter Water's proposed capital expenditure, the agency provided information on an additional capital project - the duplication of the South Arm crossing. This project will duplicate the major trunk watermain at the point where it crosses the South Arm of the Hunter River. Its aim is to reduce the risk of loss of water supply to customers in the event of a 1 in 200 year flood. Hunter Water expects the project to cost a total of $3.4 million ($0.5 million in 2002/03 and $3.35 million in 2003/04).

The Tribunal asked Halcrow to undertake a separate review of this project to determine whether it should be allowed in the cost base. Halcrow found that any failure of the South Arm crossing would have serious consequences for Hunter Water's customers, and that the risk of such a failure is significant. It believes that any prudent water utility would seek to mitigate this risk, and that duplication of the crossing is a reasonable way to do so. Halcrow also commented that Hunter Water's economic approach to justifying the project was sensible given the uncertainties.

For these reasons, Halcrow recommended that the Tribunal allow the additional capital expenditure related to this project. However, it also recommended that the Tribunal impose a 5 per cent efficiency savings to this expenditure. The Tribunal decided to accept both these

[24] At the time of Halcrow's review the Plan was still in draft form. It was finalised on 1 March 2003.

recommendations and has allowed for an additional $3.2 million in capital expenditure related to the duplication of the South Arm crossing.

4.4.5 Hunter Water's asset management practices improving

As part of its review of Hunter Water's proposed capital expenditure, Halcrow reviewed the agency's asset management practices. It assessed these practices against a checklist of eight primary factors,[25] with a series of secondary factors involved in asset management, and rated Hunter Water's performance for each factor on a scale of 1 to 5.

Halcrow rated Hunter Water's performance for forecasting, asset knowledge, service standards and planning asset maintenance as adequate or better. It rated its performance against the incorporation of efficiencies in asset planning, development of outputs, and tracking costs as poor. Halcrow found that Hunter Water's current capital expenditure on renewals may be too low.

Halcrow's conclusions on asset management practices were discussed with the Tribunal Secretarial and Hunter Water. Hunter Water indicated that it did not necessarily concur with all the conclusions reached by Halcrow. Overall Hunter Water believes that its approach to "asset management has resulted in it being recognised domestically and internationally as a leader in this field". Hunter Water also believes that it has a strong culture of continual improvements to push the boundaries of water industry asset management knowledge.[26]

Hunter Water raised particular concerns with Halcrow's conclusion that renewals expenditure may be too low.[27] Hunter Water believes that good asset management involves meeting agreed customer and environmental service levels at the lowest asset life cycle costs. It believes that it has an appropriate level of renewals expenditure that has resulted in improved customer and environmental service levels over the past 10 years, while at the same time reducing prices in real terms for customers.

The Tribunal notes Halcrow's concerns about the potentially low levels of renewals expenditure and Hunter Water's response to these concerns. The Tribunal considers sound asset management practice to be critical for maintaining long term system performance standards in the most efficient manner and, for this reason, will continue to take a close interest in the practices and performance of regulated businesses in this area.

At the 2005 price review the Tribunal will look for evidence that the agency's asset management practices are resulting in sufficient funds being allocated to essential renewals work. This evidence should include a documented risk assessment based on the condition and serviceability of assets, with a forward renewals program linked to this risk assessment. The Tribunal will also consider engaging a consultant at the 2005 review to conduct a detailed assessment of Hunter Water's asset management planning processes.

---

25 The primary factors are forecasting, asset knowledge, service standards, cost base and efficiencies, planning for growth and higher standards, planning asset maintenance, procurement strategy and program management.

26 Advice to IPART, 22 November 2002.

27 Advice to IPART, 5 May 2003.

4.5 Implications for financial viability and return to assets

The Tribunal believes that its pricing decisions will not adversely affect Hunter Water's financial position. Its analysis and financial modelling indicates that the maximum prices it has set should enable Hunter Water to maintain its currently strong financial position (even though the return is marginally below the WACC range) and pay reasonable dividends.

4.5.1 Strong financial position to be maintained

The Tribunal's analysis indicates that its pricing decisions will maintain Hunter Water's current investment category rating[28] for all of the key financial indicators (Table 4.8). The indicator expected to be most adversely affected is the internal financing ratio. This would become a concern if the ratio remained low over a long period of time. However, the internal financing ratio is influenced by increases in capital expenditure, dividend payments to NSW Treasury and the capital structure of the business, which are negotiated between Hunter Water and NSW Treasury.[29]

Table 4.8 Financial indicators and credit ratings for Hunter Water

	2001/02	2002/03	2003/04	2004/05
Ability to service debt				
1. EBITDA interest cover	11.49	8.34	13.02	9.91
NSW Treasury ratings (2002)	AAA	**AAA**	**AAA**	**AAA**
2. Funds from operations interest coverage	13.07	8.63	13.30	10.15
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
3. Pre-tax interest coverage	6.50	4.69	7.35	5.61
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
Ability to repay debt				
4. Funds flow net debt payback	0.93	0.75	1.24	1.66
NSW Treasury ratings (2002)	AA+	**AA+**	**AA+**	**AA+**
5. Funds from operations/total debt (%)	35%	30%	30%	23%
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
6. Debt gearing (regulatory value)	6%	10%	13%	16%
NSW Treasury ratings (2002)	AA+	**AA+**	**AA+**	**AA+**
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
Ability to finance investment from internal sources				
7. Internal financing ratio	-15%	7%	17%	15%
NSW Treasury ratings (2002)	<B	**B**	**B**	**B**
8. Net cash flow/capital expenditure (%)	42%	19%	19%	18%
Standard and Poors US ratings (1995)	BBB	**<BB**	**<BB**	**<BB**
NSW Treasury overall score and rating				
NSW Treasury total score (0-10)	7	7	7	7
Overall rating	A+	A+	A+	A+
9. Net debt ($m of the day)	59	95	135	184

Notes:

(i) The Tribunal particularly relies on indicators based on cash flows because these are not as subjective as indicators that use components derived from estimates (eg asset value and depreciation).

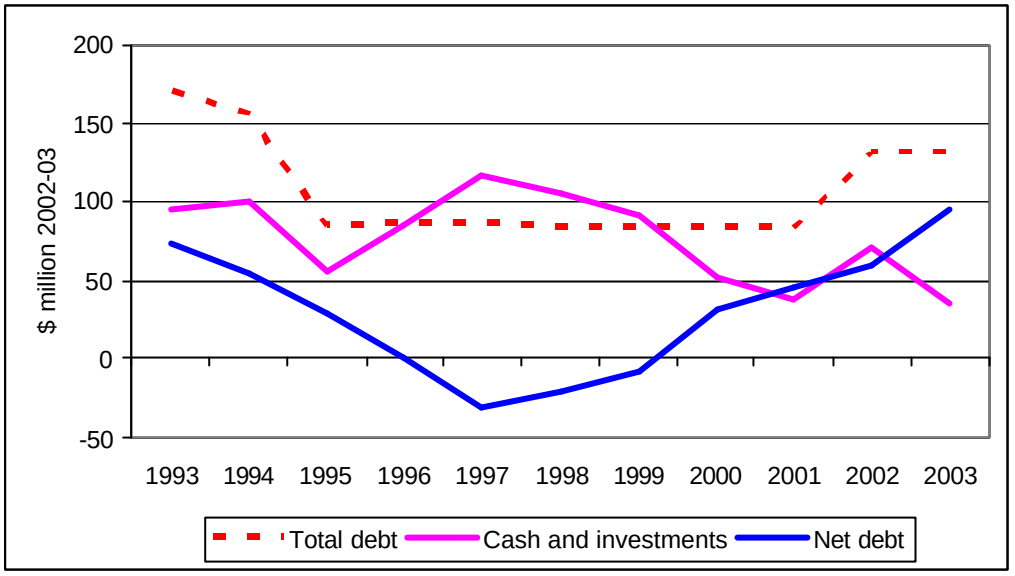
(ii) The information in this table should be read and understood only after reviewing Appendix 8 and the explanations and qualifications mentioned there.

28 Investment category is defined as a rating of BBB or better, meaning that the business has adequate or better capacity to meet its financial commitments.

29 A deterioration in the internal financing ratio due to increased debt levels following a capital restructure, may be a factor to be considered, but would not necessarily be translated into higher prices.

Hunter Water's net debt has remained steady up to 2001 and has been steadily increasing since then following NSW Treasury's 2001 review of Hunter Water's capital structure (Figure 4.1).

Figure 4.1 Net debt, Hunter Water



4.5.2 Rate of return expected to be marginally lower

Finding 11: The Tribunal found that Hunter Water should be expected to earn a pre tax real rate of return of 5.1 per cent in 2003/04 and 5.0 per cent in 2004/05.

Provided that the assumptions used in the Tribunal's modelling of the determination's financial impacts are correct and that Hunter Water achieves the efficiency targets the Tribunal has set, the rate of return to the regulatory asset base is expected to be around 5.1 per cent in 2003/04 and 5.0 per cent in 2004/05.[30]

Table 4.9 Expected and actual rates of return (% real pre-tax)

2000/01	2001/02	2002/03	2003/04	2004/05
5.6%	5.3%	5.2%	5.1%	5.0%

Source: IPART financial model for Hunter Water.

Although this rate of return is relatively low compared with some competitive industries and previous years for Hunter Water, the Tribunal believes it is appropriate for the current price path. The Tribunal also believes that it is financially sustainable for the current short term price path and is in line with the rate of return foreshadowed by Hunter Water based on a price adjustment in line with movements in the CPI. The Tribunal considered further increases in Hunter Water's prices to generate a higher return but believed that the price increases necessary to achieve the benchmark return within the current regulatory period would have unacceptable customer impacts. In the longer term the Tribunal will consider

30 The weighted average cost of capital (WACC) range for the metropolitan water agencies was estimated to be between 5.2 per cent and 6.7 per cent. The detailed assumptions used to generate this range are given in Appendix 7.

whether Hunter Water should earn a higher rate of return but this would need to be weighed against potential customer impacts of higher prices.

4.5.3 Return on capital and tax equivalent payments expected to be reasonable

Finding 12: The Tribunal found that sufficient revenue will be available to allow total combined dividend, net interest and tax equivalent payments of $120 million to be paid between 2003/04 and 2004/05.

The Tribunal estimates that Hunter Water will be able to pay $79 million in dividends and net interest combined and $41 million in tax equivalents during the two year price period. These estimates assume that Hunter Water will achieve the operating and capital expenditure efficiency targets the Tribunal has set for price setting purposes (see sections 4.3 and 4.4).

In making its findings on Hunter Water's revenue requirement, operating and capital expenditure, the Tribunal specifically considered the implications if these findings for the agency's rate of return to assets, its ability to pay dividends and meet its capital requirements. It also considered the social impact of these findings on customers, on Hunter Water's future standards of service quality, reliability and safety, and on ecologically sustainable development.

In regards each of the factors in section 15 of the IPART Act, the Tribunal placed equal weight on all factors. The Tribunal is satisfied that the implications of its findings for customers, service quality and ecologically sustainable development are well balanced against the rate of return, given the Tribunal's view that Hunter Water has further potential to achieve efficiency gains.

4.6 Issues Tribunal will consider going forward

The Tribunal is concerned that Hunter Water's regulated water business may not be appropriately ringfenced from its subsidiary HWA. It is also concerned Hunter Water does not appear to have established operating and capital efficiency targets based on the last price determination. These concerns and the steps it proposes to take to address them prior to the next price review are outlined below.

4.6.1 Ringfencing of subsidiary companies

As discussed in section 4.3.3, Halcrow was concerned that contracts between Hunter Water and HWA may not be at arms length. It noted that all the contracts between these parties would be renegotiated during the 2003/04 financial year, and this may be a good time for the Tribunal to undertake a ringfencing review.

The Tribunal also notes that the nature of contracts between Hunter Water and HWA allow for annual adjustments of labour cost increases based on actual cost movements. The Tribunal is not convinced that if the contracts were at arms length that cost movements would be automatically passed through into the contract price.

The Tribunal believes that Hunter Water should closely consider the Tribunal's Accounting Separation Code guidelines for the electricity industry,[31] and the ringfencing guidelines for subsidiary companies in the water industry prepared by the UK regulator OFWAT.[32] The Tribunal will consider the issue of ringfencing of HWA further at the next price review.

4.6.2 Incentives for operating efficiencies

By allowing Hunter Water to keep the benefits of every additional dollar saved during the period of this determination, the Tribunal provides an incentive for Hunter Water to achieve operating efficiencies. The Tribunal will expect the agency to demonstrate the gains it has made relative to the targets implied in this determination at the 2005 price review. The Tribunal will take any failure to achieve the expected efficiencies into consideration when formulating the base year operating expenditure to calculate efficient operating expenditure in the 2005 determination period.

4.6.3 Incentives for capital efficiencies

The Tribunal is concerned about the adequacy of incentives created by the current regulatory approach for improving capital efficiencies. These incentives appear to be small given that the water agencies have responded to the efficiency targets implied in the Tribunal's capital expenditure allocations principally by switching capital between projects[33], or delaying projects. It is not clear whether these actions result in genuine efficiency gains, or how they affect the agencies' overall service provision given the long lives of these assets.

To improve the incentives, Halcrow recommended establishing a series of output targets, such as length of water main renewed. The Tribunal is concerned that this approach may create perverse incentives, and has therefore decided to not adopt this recommendation. However, it will seek further information on these indicators from the agencies as part of the 2005 price review.

In addition, the Tribunal will investigate other changes to its approach to regulating capital expenditure prior to the 2005 price review. Its objectives are to create an incentive for water agencies to pursue capital efficiencies, encourage better long-term asset management planning and enhance the connection between drivers of expenditure and the capital expenditure program. These drivers include changes to environmental standards or demonstrated customer preferences.

As part of this investigation, the Tribunal will consider the use of a four year efficiency carryover mechanism. Under this mechanism, the difference between the capital expenditure forecast and approved at the time of a determination and the actual capital expenditure will be borne by the business for four years rather than until the next determination is made. In practice, this would mean that expected capital expenditure would be initially rolled into the RAB and actual capital expenditure would replace the expected capital expenditure after four years have passed. Prior to the actual capital expenditure being rolled into the RAB, it would be subjected to a prudency review.

---

31 IPART, *Regulatory Information Requirements for Electricity distributors in NSW*, May 1997.

32 OFWAT, *Guideline for classification of expenditure regulatory accounting guideline*, January 2003.

33 Switching capital expenditure away from proposed programs to new programs may reflect poor asset management planning, or changed priorities as new operating issues arise.

The effect of the four year efficiency carryover mechanism would be to allow Hunter Water to keep better than expected efficiency savings for the entire four year period. However, if it was unable to meet the efficiency savings targets, it would bear the cost for the entire four year period.

This kind of incentive mechanism could operate in several different ways:

- It may be based on an agreed program basis, whereby gains in one program could not be offset against over expenditure in another. This would limit expenditure flexibility, but would also create a strong incentive for Hunter Water to more effectively plan and manage its capital expenditure programs as the businesses would bear the heightened risks for inaccurate forward capital expenditure planning.
- Alternatively, it may be applied to the capital expenditure of the business in aggregate, allowing reallocation of capital expenditure during the course of a determination period without additional gain or penalty provided total expenditure matched forecasts.

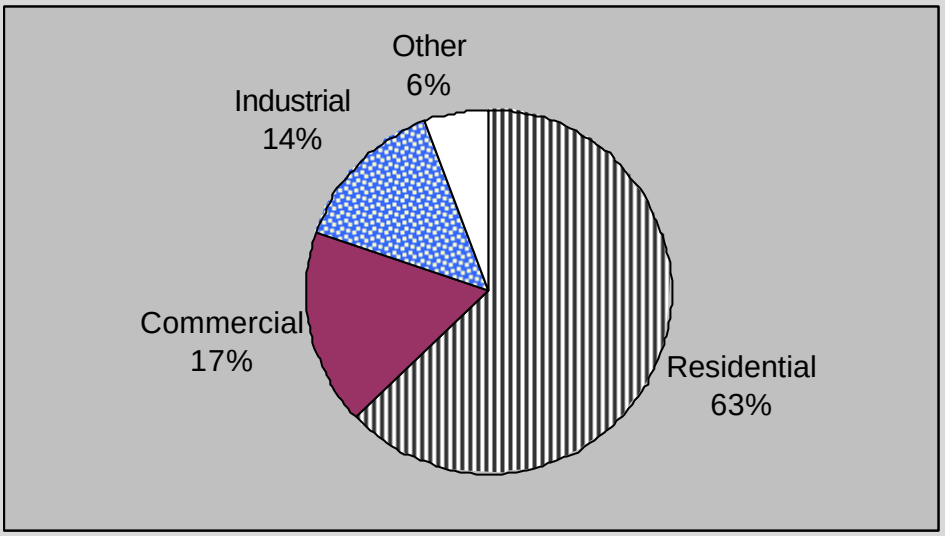
The Tribunal will consult with Hunter Water and other key stakeholders about this approach in the lead up to the next determination. The Tribunal is likely to require the water agencies to provide a higher level of specification and justification for their forward capital expenditure programs to enable such a mechanism to be implemented. It will also require this information to improve the link with agreed expenditure drivers (such as growth) and the meeting of mandatory standards. Where water businesses want to propose capital expenditure to meet performance standards in excess of those required by regulators such as the EPA they will need to clearly demonstrate that their customers are willing to pay for the enhancement of standards.

Hunter Water therefore has two years to develop adequate asset management planning processes to provide this information to a reasonable level of confidence.

Box 3 Hunter Water's customer base

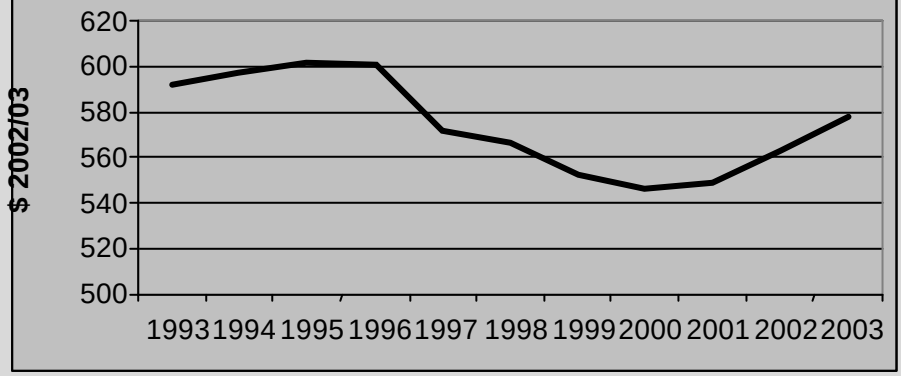
The number of single dwelling residential properties that Hunter Water services has grown at a rate of 1.1 per cent per annum since 1996. The number of flats/units has increased by 2.9 per cent per annum in the same period. On average, its residential, commercial and industrial customers use a total of more than 62GL[34] of water per annum. Residential customers represent 63 per cent of total metered water consumed, while commercial customers represent 17 per cent and industrial 14 per cent, (Figure 5.1).

Figure 5.1 Metered water consumption by customer type, 2002.



Since 1993, Hunter Water customers have had declining real water bills. During the same period, average residential consumption has risen from 193kL to 199kL. The water bill trend is projected to increase marginally in 2003/04 and 2004/05.

Figure 5.2 Average residential household bill (assuming annual consumption of 220kl)



[34] Average is based on the period 1993 to 2002.

5 IMPLICATIONS FOR CUSTOMERS

In reaching its pricing decisions, the Tribunal has carefully considered their likely impact on Hunter Water's residential, commercial and industrial customers. In particular, it considered their impact on the affordability of water services on high and low water users and pensioners, and on the quality of the services customers receive. The Tribunal's analysis indicates that these decisions are likely to have a varied impact on customers, depending on whether they live in a house or flat, and how much water they use. For most customers, they are likely to result in marginal real increases in annual bills.

The key implications of the determination for customers are as follows:

- Prices for water, wastewater and sewerage services have been restructured so that:
  - water usage charges make up a larger proportion of water bills
  - sewer usage charges make up a smaller proportion of wastewater charges
  - stormwater service charges make up a larger proportion and property based charges a smaller proportion of stormwater bills.
- For residential customers living in houses, this price restructuring is likely to increase an average water user's bill by about 5 per cent in both 2003/04 and 4 per cent 2004/05 in nominal terms.[35] Residential customers living in flats and units will incur a slightly higher increase as the Tribunal has continued to phase in the minimum sewer service charge.
- For commercial and industrial customers, the price restructuring is also likely to result in marginal real bill increases in 2003/04 and 2004/05. Some of these customers will also pay slightly more for trade waste services.
- Service standards are expected to be maintained over the price path, and the Tribunal will monitor Hunter Water's performance against these standards through the annual information return process and the 2003 audit of its operating licence.

While for most customers, the impact of this price review will be minimal, the Tribunal wants to improve its basis for assessing the impact of its decisions on customers, particularly in relation to household income. For the next review, it intends to seek further information from Hunter Water, the Australian Bureau of Statistics and, where relevant, use information obtained from the household survey for the Sydney region to be undertaken by the Tribunal over the next year. This will allow the Tribunal to undertake more comprehensive analysis of these issues, and consider more far-reaching price changes.

Each of these implications and issues going forward is discussed in more detail below.

[35] An inflation rate of 3.0 per cent was assumed in 2004/05.

5.1 Prices have been restructured

The Tribunal decided to restructure water, wastewater and sewerage charges

- **water usage charges** will increase by 1 per cent above inflation in each year of the price path, while fixed charges will change by 5 per cent below inflation during this period. This decision will improve the flexibility of all customers to manage their water bills. Most importantly, it may provide them with a greater incentive to reduce their overall water bills by adopting water saving technologies and controlling their water use.
- **wastewater usage charges** will change by 2 per cent below inflation in each year of the price path, while fixed charges will increase by 1 per cent above inflation during this period. The Tribunal has also continued to phase in the minimum sewer service charge for flats and units, to further achieve equity in pricing between all residential customers. In addition, it has introduced a wastewater usage charge for those customers that receive wastewater services but are not connected to a water main.
- **stormwater property based charges** will change by 5 per cent below inflation in 2003/04 and 16 per cent in 2004/05, while fixed charges will increase by 7.6 per cent in each year of the price path.

Table 5.1 provides overview of the key pricing decisions affecting Hunter Water's customers. In addition to the price restructuring, these include:

- increasing Tier 2 water usage prices by 1 per cent above inflation and Tier 3 water usage prices by between 0.1 to 1.6 per cent above inflation in each year of the price path, impacting on commercial and industrial customers
- increasing aggregate trade waste fees by 7.5 per cent above inflation (over the price path) for commercial and industrial customers (see section 7.4).

Table 5.1 Overview of pricing decisions for Hunter Water

$ of the day	2002/03	2003/04	2004/05*
Water			
- Tier 1 usage ($/kL)	0.94	0.98	1.02
- Tier 2 usage ($/kL)	0. 86	0.90	0.93
- Tier 3 usage ($/kL)	0.74 – 0.86	0.78 – 0.90	0.81 – 0.93
- service ($ per year)**	26.55	26.05	25.50
Wastewater			
- usage ($/kL)	0.41	0.42	0.42
- service – houses (20mm connection) ($ per year)**	222.36	231.48	240.74
- service – all other customers ($ per year)**	444.72	462.95	481.47
Stormwater			
- residential service ($ per year)	34.74	38.46	42.53
- non-residential property based charge (cent per $AAV)	1.48	1.45	1.26

* Assuming inflation rate of 3.0 per cent in 2004/05.

** Assuming 20mm water connection. A 50% discharge factor applies to all other residential customers (ie excluding houses with a 20mm connection). A variable discharge factor applies to non-residential customers, depending on the type of business.

5.2 Impacts on residential customers expected to be minimal

Overall, residential customers are likely pay slightly more for Hunter Water's services as a result of the Tribunal's price determination. The Tribunal's analysis indicates that the impact of this determination on customers will vary according to the type of home they live in, and their level of water consumption.

Residential customers who live in houses and are average water users can expect their bills to rise by between $19 to $22 per annum, assuming an inflation rate of approximately 3 per cent per annum. Those average water users who live in flats and units can expect their bills to rise by between $20 and $26 per annum, due to the phasing in of the minimum wastewater service charge. However, these customers will still pay substantially less than customers living in houses.

Table 5.2 Estimated impacts of prices on residential customers by type ($ of the day)

Customer Type	2002/03	2003/04		2004/05	
	Current	Actual	Increase*	Actual	Increase*
Flats / Unit					
- Low (60kL)	176	193	17	216	23
- Average (130kL)	256	276	20	302	26
- High (250kL)	393	418	25	449	31
House					
- Low (100kL)	406	424	18	438	14
- Average (210kL)	532	554	22	573	19
- High (400kL)	749	780	31	806	26

Represents the total bill paid by customers, including the Environment Improvement Charge, but excludes the stormwater service charge. Price impacts on units have been calculated assuming a block of 4 flats with a 25mm water meter connection.
* Increase is presented in dollars terms to the previous year.

The impact of the determination on annual residential bills will vary according to the customer's total water usage, and will range from $14 per year for customers who use less than 100kL per year) to $74 or more (for those who use 1000kL or more per year). For approximately 92 per cent of customers, the total increase in their annual water bill for 2003/04 will be $32 or less (Table 5.3).

Table 5.3 Tribunal decision - annual residential water and wastewater bills by water usage level ($ of the day)

Water usage (kL per year)	% of res	2002/03	2003/04		2004/05	
	customers		Actual	Increase	Actual	Increase
<100	21%	377	394	17	408	13
100-150	18%	434	454	19	469	15
150-200	17%	492	513	21	530	17
200-250	14%	549	572	23	592	19
250-300	10%	606	631	25	653	21
300-400	12%	692	720	28	745	25
400-500	5%	807	839	32	868	29
500-1000	3%	1,150	1,195	45	1,236	41
1000<	0%	1,971	2,045	74	2,066	21

* Increases represent absolute increases or decreases relative to the previous year.
* An inflation rate of 3.0 per cent was assumed over the period 2003/04 to 2004/05.
* The impact was calculated using the mid-point of water usage, 1500kL was used for >1000kL and 75kL was used for <100kL.
* Includes the Environmental Improvement Charge but excludes stormwater charges.

The impact on pensioners that own and occupy their property will be different to those shown in the table above, due to the rebates they receive through the community service obligations paid by the Government to Hunter Water. Under this policy, these pensioners get a maximum rebate of $175 per annum on their total water, wastewater and stormwater bill. They also do not pay the Environment Improvement Charge.

The Tribunal's analysis indicates the annual bill for a pensioner living in a house and with average water use is likely to rise by $16 in 2003/04 and $18 in 2004/05 (Table 5.4). This is slightly less than an average non-pensioner's bill, which is likely to rise by between $19 and $22 in these years (Table 5.2).[36]

Table 5.4 Impact of prices on a pensioner with average water usage

$ of the day	2002/03	2003/04		2004/05	
	Actual	Actual	Increase	Actual	Increase
Bill before rebate, per annum	532	554	22	573	19
less					
- Environment Improvement Charge	42	48	na	49	na
- Rebates	175	175	na	175	na
Pensioners' Bill	315	331	16	349	18

* Based on an average single dwelling household that uses 210kL per annum.
* Excludes stormwater charges.

[36] The average impact on pensioners may be overstated due to the assumption that pensioners use 'on average' the same quantity of water as other water users.

The typical bills calculated in Tables 5.2, 5.3 and 5.4 above exclude the stormwater service charge ($35 in 2002/03). This is because only 28 per cent of Hunter Water's residential customer base pays the stormwater service charge. Therefore, the majority of household's will not be affected by any increases in stormwater charges.

The Tribunal has specifically considered the impacts of its pricing decisions on residential water customers in line with section 15 of the IPART Act. It believes that the differential impacts are appropriate, given the other matters it is required to consider under section 15. In particular, it believes that these impacts are warranted given the need to encourage water conservation.

5.3 Impacts on commercial and industrial customers expected to be minimal

As for residential customers, the impact of the Tribunal's decision to restructure water prices on commercial and industrial customers will vary depending on their level of water usage. Higher water users are likely to experience higher increases in their annual water bills than lower water users. However, because commercial and industrial customers are much more diverse in terms of their water usage patterns than residential customers, it is difficult to draw general conclusions about impact of this decision on these customers.

The Tribunal's decisions to increase trade waste charges in line with Hunter Water's proposal, and to increase Tier 2 and Tier 3 water usage prices for large industrial customers is expected to result in slightly higher bills for business customers. A detailed explanation of the charges is contained in Chapter 7.

The impact of these expected increases will be partially off-set by the Tribunal's decision to reduce property based stormwater charges over the price path. For some commercial and industrial customers, this decision may result in substantial savings.

The Tribunal has considered these different customer impacts in line with its requirements under section 15 of the IPART Act, and considers that the price increases are warranted.

5.4 Service standards expected to be maintained

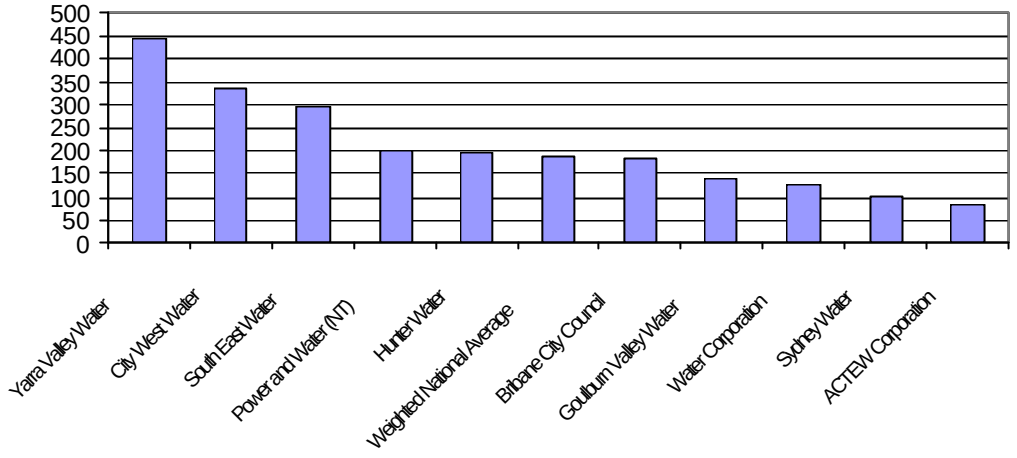
When considering the impact of its pricing decisions on service quality, the Tribunal seeks to ensure that they do not have an adverse impact on the standards of service Hunter Water delivers to its customers. It believes that this determination should not adversely affect Hunter Water's ability to meet these standards, and so expects that they will be maintained during the period of the price path. It will monitor the agency's performance against these standards, through its annual information return process and its 2003 audit of the operating licence.

In assessing Hunter Water's service standards for this review, the Tribunal considered Hunter Water's own monitoring of its customer service performance, its compliance with the terms of its operating licence.[37] It found that Hunter Water has performed reasonably well compared with other similar water businesses within Australia in recent years. For

[37] Recent changes have allowed customer complaints regarding Hunter Water to be made through the Energy and Water Ombudsman for New South Wales (EWON). This will provide additional information to assess Hunter Water's performance in the future.

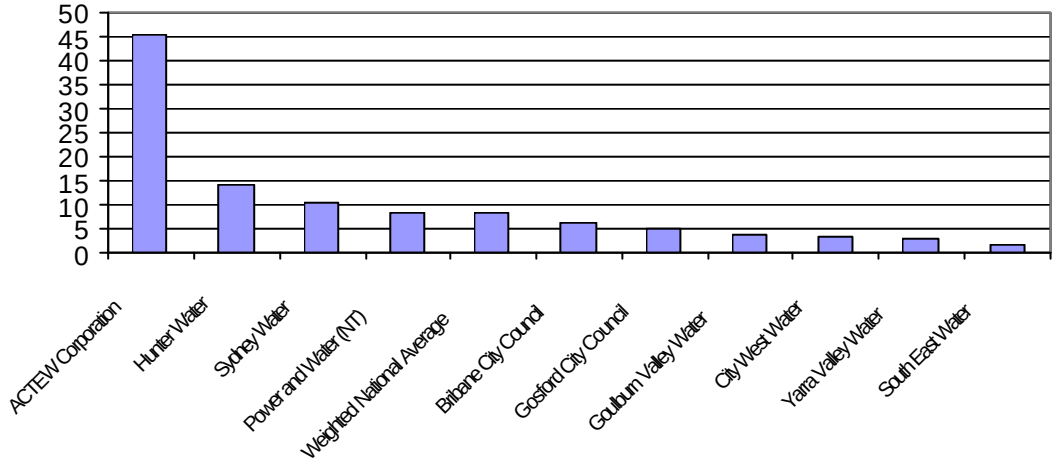
example, unplanned water interruptions have decreased from around 440 per 1000 properties in 1997/98 to 195 per 1000 properties in 2000/01.

Figure 5.3 Unplanned water interruptions (2000/01)



Source: WSAA facts 2001, p 48.

Figure 5.4 Unplanned wastewater main interruptions (2000/01)



Source: WSAA facts 2001, p 54.

The 2002 audit of Hunter Water's performance against the operating licence indicated that in general Hunter Water had improved its performance since the previous audit.

Hunter Water, in consultation with the Tribunal, is currently in the process of developing a new Customer Contract which is expected to be in place by 1 July 2003. This will ensure that customers and Hunter Water have clearer information as to the rights and responsibilities of each party.

5.5 Issues for the Tribunal going forward

The Tribunal wants to further improve its assessment of the impacts of pricing decisions on customer groups, especially vulnerable groups. While the existing approach of analysing impacts by water usage groups provides a general indication of the likely impacts on a customer's bill, it gives a limited understanding of the impact within the overall household's income.

The Tribunal will seek further information from Hunter Water and the Australian Bureau of Statistics to assist in the assessment of the impact of customer's bills. The Tribunal has also decided to conduct a survey of households in the Sydney region to link water usage information to household income. The Tribunal expects that this will provide useful information to analyse the customer impacts from pricing decisions for Hunter Water to be undertaken in time for the 2005 price review.

6 IMPLICATIONS FOR THE ENVIRONMENT

Section 15 of the IPART Act requires the Tribunal to explicitly consider the impact of its pricing decisions on ecologically sustainable development.

For this price review, the key environmental issue related to Hunter Water's activities is the need to improve wastewater services, both to cope with population growth and to prevent overflows (particularly during wet weather). For future price reviews, the pressure on the area's water supplies is likely to be a significant issue, particularly if the population continues to grow.

The key implications of this price determination for the environment are as follows:

- the Tribunal has allowed most of the environment-related capital spending proposed by Hunter Water, where this was in line with priorities set by the Environmental Protection Agency of New South Wales (EPA)
- water prices have been restructured by increasing usage charges and decreasing fixed charges to send a better conservation signal to water users
- although demand management is not a critical concern for Hunter Water at present, the Tribunal supports the agency's efforts to strengthen its demand management program.

6.1 All environment-related capital spending allowed

Finding 13: The Tribunal found that all of Hunter Water's proposed environment-related capital spending was sufficiently justified to be included in the regulatory asset base for calculating its revenue requirement.

Hunter Water's environment-related capital expenditure program is driven by the mandatory requirements imposed on it by the EPA and by requirements in the Hunter Water Act. The program is designed to achieve the agency's key environmental objectives, and reflect the priorities established by the EPA.

Hunter Water proposed a total capital expenditure of $137 million over the pricing period. Around $75 million of this expenditure is for projects considered to be environment related. These projects aim to improve wastewater transport and treatment, extend the sewer system and augment the Grahamstown Dam, and will deliver key environmental benefits (as well as other benefits).

In relation to wastewater treatment, Hunter Water proposed to construct new plants at Kurri and Cessnock, for a total expenditure of $15 million over the pricing period.[38] In addition, Hunter Water proposed to upgrade the coastal plant at Belmont, to cope with the increased wet weather flows that will result from the upgrade of the Lake Macquarie wastewater transport system and population growth in this area.

In relation to wastewater transport, Hunter Water proposed to upgrade its major systems to reduce the impact of overflows on both customers and the environment. At this stage, upgrades have been proposed for the major transport components of the systems at Newcastle-Burwood Beach ($13.0 million in 2003-05) and Warners Bay-Valentine ($11 million in 2003-05).

Hunter Water also proposed to undertake Fern Bay backlog sewerage project, which will deliver sewer services to homes in the area at a cost of $4.1 million over the pricing period. The project has been given a high priority status by the EPA on the basis of the environmental and health benefits it will deliver.

In relation to Grahamstown Dam, Hunter Water proposed to augment its storage capacity, as part of its Integrated Resources Management Plan. Hunter Water has already spent $350,000 on this project, with a further $10 million forecast for this price path and $8 million in 2005/06 (in 2002/03 dollars). This project is expected to increase the dam's capacity by 50 per cent (from 180GL to 286GL) and thus significantly improve the region's water supply security. The project will also reduce the likelihood that other augmentation options will need to be pursued, thereby avoiding more extensive environmental impacts.

The Tribunal has considered Hunter Water's proposed environment-related capital program and Halcrow's recommendations in relation this program. It decided to allow for this capital expenditure in Hunter Water's revenue requirement, with minor adjustment for efficiency savings in line with Halcrow's recommendations.

In evaluating the appropriateness of environment-related capital expenditure projects, the Tribunal relies heavily on advice from the EPA (representing the Government's environmental priorities), and other environmental stakeholders including the Total Environment Centre and the Nature Conservation Council of New South Wales. Although these stakeholders provided considerable advice on price structures for environmental purposes, the Tribunal received limited assistance on evaluating specific projects proposed within Hunter Water's program. The Tribunal hopes that greater assistance may be provided for future price reviews to help it address its ecological sustainable development considerations.

---

38 The new wastewater treatment plants being constructed at Kurri Kurri and Cessnock, under the Inland Environmental Improvement Plan, will incorporate higher treatment standards to meet Environmental Protection Agency (EPA) requirements and cater for future population growth.

By allowing for most of Hunter Water's proposed environment-related capital expenditure in the revenue requirement, the Tribunal has explicitly internalised in water and wastewater prices the environmental costs that these capital projects are designed to mitigate, in line with the pricing principles established by COAG. Some stakeholders argued that the broader environmental costs associated with Hunter Water's services should also be internalised in water prices. However, the Tribunal does not believe a sufficient case for this has been made for incorporating these costs into prices. Arguably, they are more of an environmental taxation issue for Government, than a pricing issue.

In addition, given the challenges of quantifying these broader costs, the Tribunal believes that internalising them at this stage would be inappropriate and would result in high impacts on customers that cannot currently be justified. To the extent that these broader costs become better understood (and quantified), and responses to alleviate their impacts become available, the Tribunal will consider internalising them within water prices at future price reviews.

6.2 Water usage prices have been increased to better signal the need for demand management

The Tribunal's decision to restructure water prices, so that the variable usage charge comprises an increasing proportion of most customers' water bills, will have a positive impact on ecologically sustainable development. This decision will mean that 54 per cent of an average customer's water and wastewater bill will now be driven by water usage charges, compared with 53 per cent in the previous determination.

This decision is intended to strengthen the incentive for water users to adopt water saving appliances and practices, and give them greater control over their overall water bills. This is expected to have some impact on total water use, but it is likely to be relatively small. Empirical evidence from a range of countries suggests customer water use patterns do not change significantly in response to changes in water prices,[39] although it may be that pricing has more impact on discretionary water use (such as watering gardens). However, it is important to remember that price is not the only policy response to curb excessive water demand.

The Tribunal is aware of work being undertaken by other agencies within the Government on this issue. It hopes that a coordinated policy response will be available by the time of 2005 price review, to allow it to examine the impact of prices on water demand in more detail.

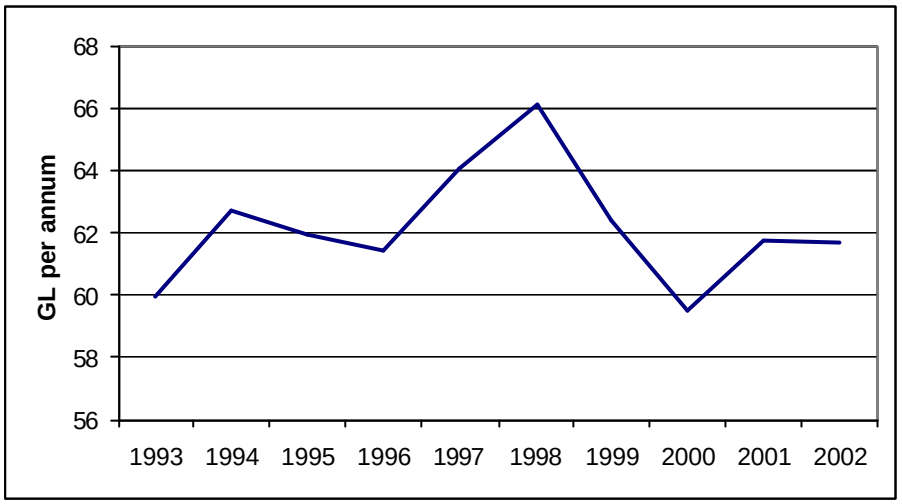
[39] See for example summary in OECD, *The price of water trends in OECD Countries*, OECD, Paris, 1999.

6.3 Tribunal supports Hunter Water's demand management efforts

Hunter Water's likely demand management performance over the pricing period is an important consideration in a price review. This performance affects the water use assumptions the Tribunal used in its financial modelling.

For Hunter Water, the balance between supply and demand was not a major issue. The total demand for water in Hunter Water's area of operation has remained relatively constant for the last 10 years. This is mainly because increased demand due to population growth has been offset by decreased demand due to large industrial customers leaving the area.

Figure 6.1 Historical water demand – Hunter Water



Hunter Water's Integrated Water Resources Plan indicates that the agency's sustainable yield from all its sources is currently 73GL per annum. This compares to the current demand of 72GL per annum, including 64GL of metered consumption.

Although Hunter Water's security of supply was not threatened in the 2002/03 drought, and its level of water consumption per customer already appears to be lower than that of other major Australian water authorities, Hunter Water believes that it is vital to continue to lower demand to offset the likely continuation in population growth.[40] It has a demand management strategy in place, with key initiatives aimed at:

- improving leakage management
- increasing the use of recycled water
- promoting water efficient technologies among households.

Hunter Water proposed additional funds of $0.4 million in both 2003/04 and 2004/05 to support this strategy. Halcrow found that the strategy was appropriate. The Tribunal decided to allow this expenditure.

---

40 The key drivers influencing water demand include changes in the composition of water users; population growth; the weather (both rainfall and temperature); and the adoption of water saving technologies and practices. Drivers affecting water supply include rainfall; environmental flow rules; security of supply conditions; reliability criteria, and inter basin transfers.

6.4 Billing tenants to give appropriate water conservation signals

The Department of Housing and several other stakeholders suggested that Hunter Water should bill tenants rather than owners, to ensure that all water users receive appropriate water conservation signals.[41] This issue has also been raised at previous price reviews.[42]

Hunter Water argued it would incur substantial additional costs if it billed tenants directly, including those related to additional bad debts,[43] additional meter readings when tenants move homes, and modifications to its customer billing systems.[44] It also argued that these cost increases would need to be passed through to customers as the revenue base would remain unchanged. In addition, it noted that for multiple-dwelling properties (such as units and flats) the individual dwellings are not separately metered which limits the water conservation signals to tenants. While this is true, the Tribunal notes that multiple-dwelling properties only make up 15 per cent of Hunter Water's residential customer base.

The Tribunal believes further work is required to understand whether the cost of billing tenants outweighs the conservation signal benefits. It is also unclear whether it is more appropriate for property owners (rather than the water agency) to bill their tenants for metered water use. The Tribunal understands that this is currently possible under the *Residential Tenancies Act 1987*, provided it is in the terms of the lease agreement.

The Tribunal recommends that Hunter Water explores the direct billing of tenants as part of its demand management strategies. It understands that similar approaches are already in place in Victoria and Western Australia, and should be readily transferable to the New South Wales context.[45]

6.5 Issues the Tribunal will consider going forward

Halcrow noted that, in relation to leakage, Hunter Water has not identified the optimal balance between operating and capital costs. Halcrow found that Hunter Water should identify the economic level of leakage: that is the point at which the marginal value of water saved equals the additional costs of further leakage reduction activity. The Tribunal supports Halcrow's finding and requires Hunter Water to provide evidence on the economic level of leakage at the next price review.

---

41 Department of Housing submission, 15 November 2002, pp 2-3. Submission from Mr Rick Banyard.

42 The Tribunal has previously commented on these issues in the October 1993 report *Inquiry into Water and Related Services* and in its October 1999 Issues Paper *Pricing of Water, Sewerage and Stormwater Services*.

43 Hunter Water argues that unlike other utilities that charge individual tenants, water utilities do not have the option of disconnection of water and sewer services for non-payment of accounts due to public health concerns. See correspondence from Hunter Water, *Review of Hunter Water Corporation Prices*, 20 December 2002.

44 According to ABS census information, 25 per cent of properties in Hunter Water's area of operations are tenanted, with 80 per cent of tenants moving homes within the last five years. See letter from Mr David Evans dated 20 December 2002.

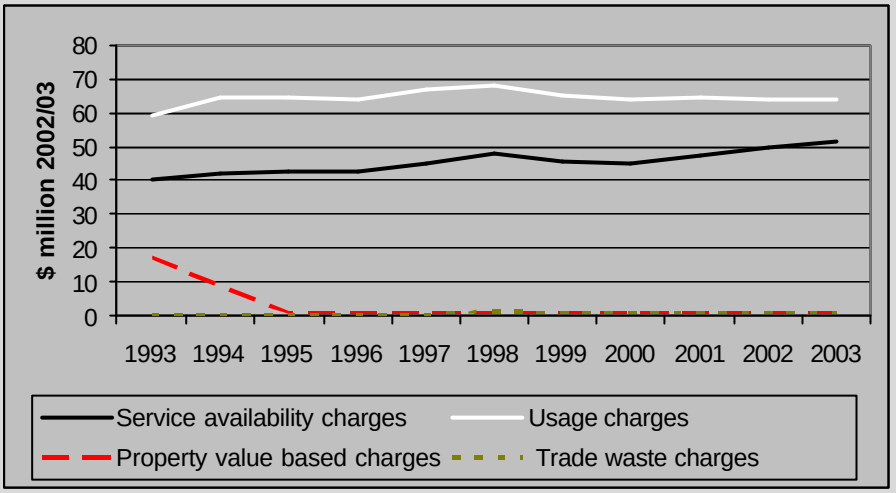
45 Problems with the direct billing of tenants in unmetered apartments and units may arise. In these instances alternative approaches may need to be considered, or exceptions made.

Box 4 Historical, water, wastewater and stormwater charges

Since its establishment in 1992, the Tribunal has been actively working to achieve efficient prices within Hunter Water, reflective of costs and with appropriate pricing incentives. This has led to maintaining the already high proportion of revenue from water usage charges and decreasing revenue from property value based charges, (see Figure 7.1). In 2002, 53 per cent of total regulated revenue was based on water and wastewater usage charges, the remainder from fixed charges.

The Tribunal's pricing decisions is expected to increase the proportion of revenue earned from usage charges to 54 per cent.

Figure 7.1 Total revenue from tariffs and charges



7 SUMMARY OF PRICING DECISIONS

The Tribunal has carefully considered Hunter Water's proposal in relation to prices for water, wastewater and stormwater services for the period 1 July 2003 to 30 June 2005. The Tribunal has decided to, on average, increase prices by 1 per cent in real terms in both 2003/04 and 2004/05.

In making its pricing decisions the Tribunal has:

- increased water usage charges and decreased water fixed charges
- increased wastewater fixed charges and decreased the wastewater usage charge
- increased minimum wastewater fixed charge for flats and units
- decreased the property based charges for stormwater and increased the fixed stormwater charge
- maintained the discount for raw water
- increased the Environmental Improvement charge to recover the costs associated with the Fern Bay backlog project
- maintained the Sewer Service Access Charge in line with the consumer price index
- accepted Hunter Water's proposals for trade waste charging increases, including a 7.5 per cent real increase in Biological Oxygen Demand (BOD) and Non-Filtrable Residue (NFR) charges over the price path
- maintained miscellaneous charges in line with the consumer price index, but disallowed two charges related to non-payment of accounts.

This chapter provides an overview of Hunter Water's pricing proposals and the Tribunal's pricing decisions.

7.1 Water charges

Water tariffs are charged to residential and non-residential customers based on a fixed service charge and a charge that varies according to the level of water used. Large customers are charged a different water usage rate than other customers for the consumption above 50,000 kilolitres per annum.[46] Customers that receive untreated water are also charged a different water usage rate.

7.1.1 Water charges for residential customers and small non-residential customers

Decision 1: The Tribunal decided to set maximum water charges for 2003/04 and 2004/05 as set out in Table 7.1.

Hunter Water currently charges residential and non-residential customers a fixed water service charge and a usage charge. Hunter Water proposed a 1 per cent per annum increase above inflation in the water usage charge and a 10 per cent reduction in the water service charge.

[46] Large customers pay the same water usage rate as other customers for their consumption below 50,000kL per annum.

The Tribunal notes that Hunter Water's price structure for water charges is already weighted toward usage prices. However the Tribunal believes that providing a further conservation signal is justified for residential and non-residential customers. It has therefore allowed a 1 per cent real increase in the usage price for Tier 1 and Tier 2 customers. This increase has been offset by a 5 per cent real reduction per annum in the water service charge. The water charges set by the Tribunal are presented (in nominal dollars) in Table 7.1 below.

Table 7.1 Hunter Water's current and Tribunal determined water charges

$ of the day	2002/03	2003/04	2004/05
Usage charge – Tier 1 ($ per kL)	0.94	0.98	0.98 x (1.01 +ΔCPI)
Usage charge – Tier 2 ($ per kL)	0.86	0.90	0.90 x (1.01 +ΔCPI)
Service charge ($ per annum)	26.55	26.05	26.05 x (0.95 +ΔCPI)

The water service charge is based on the size of the meter connection to the property. This charge is calculated for a 20mm connection.

7.1.2 Water charges for large industrial customers

Decision 2: The Tribunal decided to set maximum water charges for 2003/04 and 2004/05 as set out in Table 7.2.

Industrial customers who consume more than 50,000kL per annum and are located in specific 'zones' are charged Tier 3 water usage prices. Tier 3 prices are lower than Tier 1 and 2 prices because the Tier 3 zones are located closer to the source of supply, which lowers the costs to supply them. The Tier 3 prices are calculated using Hunter Water's model of supply assets in each zone.

Hunter Water proposed to increase zone-specific prices in line with increases in its costs to supply. Under the proposal prices would increase by between 0.1 and 1.6 percent per annum above inflation in 2003/04 and 0.7 to 0.9 per cent per annum above inflation in 2004/05. Hunter Water also proposed to amalgamate the Kooragang and Tomago zones and include Edgeworth-West Wallsend as a new Tier 3 zone. It determined its proposed prices based on its supply assets model in each zone and the costs of providing water to each zone.

The Tribunal decided to increase zone-specific prices in line with Hunter Water's proposal, to ensure that these prices remain cost reflective. The prices that will apply in each zone (including the new Edgeworth-West zone) are outlined in Table 7.2.

However, the Tribunal decided not to accept Hunter Water's proposal to amalgamate the Kooragang and Tomago zones. If the zones were amalgamated, customers in the Kooragang zone will experience relatively large price increases. The Tribunal believes that, at this stage, the zones should be kept separate, consistent with the last determination, and that prices should be set to reflect the cost of supplying each zone separately. It will give further consideration to amalgamating the two zones at the next determination, when it has had an opportunity to examine Hunter Water's modelling and the assets in each zone in more detail.

Table 7.2 Hunter Water's current and Tribunal determined Tier 3 water usage charges

$ per kL	2002/03	2003/04	2004/05
Kooragang	0.742	0.777	0.777 x (1.008+ΔCPI)
Tomago	0.780	0.813	0.813 x (1.008+ΔCPI)
South Wallsend	0.747	0.783	0.783 x (1.007+ΔCPI)
Warner's Bay/valentine	0.780	0.813	0.813 x (1.008+ΔCPI)
Seaham Hexham	0.816	0.846	0.846 x (1.007+ΔCPI)
Newcastle Highfields	0.824	0.855	0.855 x (1.008+ΔCPI)
Raymond Terrace	0.839	0.868	0.868 x (1.008+ΔCPI)
Port Stephens	0.843	0.870	0.870 x (1.009+ΔCPI)
Kurri Cessnock	0.846	0.873	0.873 x (1.009+ΔCPI)
Lookout	0.846	0.873	0.873 x (1.008+ΔCPI)
Edgeworth West Wallsend	0.864	0.896	0.896 x (1.008+ΔCPI)
All other locations (Tier 2 price)	0.864	0.900	0.900 x (1.01+ΔCPI)

Tier 3 prices are location based water usage charges for industrial customers for their consumption above 50,000kL/year.

7.1.3 Water charges for Dungog Council

Decision 3: The Tribunal decided to set maximum water charges for Dungog Council for 2003/04 and 2004/05 as set out in Table 7.3.

Hunter Water has an agreement with Dungog Shire Council to supply bulk water to the Council. Hunter Water proposed that its Tier 1 and Tier 2 water usage charges that apply to Dungog Council should be the same as those that apply to all other customers, consistent with the last determination. Hunter Water also proposed a 0.8 per cent per annum real increase in the Tier 3 rate for Dungog Council.

The Tribunal decided to accept this proposal. It has set the Tier 1 and 2 water usage prices that apply to Dungog Council so they are the same as these prices for all other customers, to maintain equity across all customers. It has increased Tier 3 prices for Dungog Council in line with Hunter Water's proposal, to ensure these prices remain cost reflective.

Table 7.3 Hunter Water's current and Tribunal determined water charges for Dungog Council

$ of the day	2002/03	2003/04	2004/05
Usage charge – Tier 1 ($ per kL)	0.94	0.98	0.98 x (1.01 + ΔCPI)
Usage charge – Tier 2 ($ per kL)	0.86	0.90	0.90 x (1.01 + ΔCPI)
Usage charge – Tier 3 ($ per kL)	0.511	0.531	0.531 x (1.008 +ΔCPI)
Service charge ($ per annum) *	4,407.30	4,324.30	4,324.30 x (0.95 + ΔCPI)

* Dungog has 4 water connections: an 80mm, 2 x 100mm and a 200mm pipe diameter.

7.1.4 Raw water charges

Decision 4: The Tribunal decided to set a discount of 7 cents per kilolitre on the usage charge for raw water purchased.

Hunter Water currently has around 60 raw water customers, most of whom are rural landowners who use raw water for domestic and livestock purposes. The Tribunal accepts that there is a lower cost of supplying untreated water and that this should be reflected in a lower price for the water. At the last determination, it set a discount of 7 cents per kilolitre on the usage price for this water.

Hunter Water proposed that this discount be maintained at the current level, as there has been no significant change in the cost of treating water. The Tribunal decided to accept this proposal, as it is not aware of any factors that warrant altering the level of discount at this stage.

7.2 Wastewater charges

Wastewater tariffs are charged to residential and non-residential customers based on a fixed service charge and a charge that varies according to the level of water used. Residential and non-residential customers pay an Environment Improvement Charge associated with backlog sewerage projects in key areas. Owners of vacant land in the Hunter Sewerage Project backlog sewerage areas that choose to develop their land are also charged a separate fee for the cost of connecting to the sewer. As part of this determination the Tribunal has also approved a wastewater usage charge for those customers connected to the sewer but not the water main.

7.2.1 Wastewater charges for residential and non-residential customers

Decision 5: The Tribunal decided to set wastewater usage and service for 2003/04 and 2004/05 as set out in Table 7.4.

Hunter Water currently charges residential and non-residential customers a fixed sewer service charge and a charge based on the metered water usage. Hunter Water proposed a 1 per cent per annum increase above inflation in the wastewater service charge, and a 2 per cent decrease in wastewater usage charge. The Total Environment Centre opposed this proposal, and argued that that wastewater usage prices provide a demand management signal even if it was not direct.[47]

The Tribunal is not convinced that a two-part tariff for wastewater is an effective demand management tool. Although it is a de facto water usage charge it is not clear whether this is well understood by customers.[48] Further, customers are likely to respond to their total usage bill which is dominated by the water usage charge.[49] The Tribunal, therefore, believes that the water usage charge is the more appropriate tariff for conservation signals.

---

47 Total Environment Centre's Submission to 2003/04 metropolitan water pricing decision, p 6.

48 Although Hunter Water's bills do specify both the water usage and wastewater usage charges, this is outlined in the 'fine print' on the bill.

49 For example, for a household consuming 400kL per annum, 82 per cent of its total usage bill is attributed to the water usage charge.

The Tribunal is also not convinced that a two-part tariff for wastewater is cost reflective, and believes that a reduction in the emphasis on the wastewater usage charge would result in more cost reflective pricing.

For these reasons, the Tribunal decided to accept Hunter Water's proposal to increase the wastewater service charge by 1 per cent in both 2003/04 and 2004/05, and reduce the wastewater usage charge by 2 per cent per annum in both these years.

Table 7.4 Hunter Water's current and Tribunal determined wastewater charges

$ of the day	2002/03	2003/04	2004/05
Wastewater service charge for houses (with 20mmm water meter connection) ($ per annum)	222.36	231.48	231.48 x (1.01+ ΔCPI)
Wastewater service charge for all other customers ($ per annum)*	444.72	462.95	462.95 x (1.01+ ΔCPI)
Wastewater usage charge ($ per kL)	0.41	0.42	0.42 x (0.98+ ΔCPI)
Minimum service charge for flats/units ($ per annum)	80	100	120

Based on 20mm wastewater service connection.
* For all other residential customers a 50 per cent discharge factor is applied to the service and usage charges. For non-residential customers a variable discharge factor is applied to the service and usage charges, depending on the type of business.

7.2.2 Minimum service charge residential customers living flats and units

Decision 6: The Tribunal decided to set minimum wastewater service charges for flats and units to $100 per annum in 2003/04 and $120 per annum in 2004/05 as set out in Table 7.4.

Hunter Water currently charges residential customers in flats and units a minimum wastewater service charge. This charge was introduced at the last determination,[50] to ensure greater equity in wastewater charges between customers in single dwelling properties and residents in flats and units.[51] Therefore, if a premises' proportionate share of the service charge applying to the multi-premises property is less than the minimum charge, the owners of the premises would be required to pay the minimum charge.[52] The charge was introduced in 2001/02 at $60 and increased to $80 in 2002/03.

Hunter Water proposed that the charge be increased by a further $20 per annum over this price path, resulting in a minimum charge of $100 in 2003/04 and $120 in 2004/05.[53] Hunter Water's intention is that the charge will eventually be equivalent to two-thirds of the wastewater service charge that applies to separate residential dwellings. Based on the current level of this charge, the minimum wastewater charge for multiple-dwelling occupancies would need to be $140 per annum to reach the two-thirds goal.

50 Customers in flats and units pay the wastewater usage charge in addition to the minimum wastewater service charge.

51 Residents in units and flats pay a lower wastewater service charge compared to single dwelling properties, even though they place a similar load on the sewer system. This is because their service charge is generally calculated as a proportionate share of the single service charge applying to the block.

52 For strata units, the proportionate share is calculated based on the service charge applied to the water connection for the entire multi-dwelling property, divided by the number of units in the property.

53 Hunter Water also proposes that the total sewer service charge for each unit and flat must not increase by more than $20 each year (in nominal dollars).

The Tribunal decided to increase the minimum wastewater service charge by $20 per annum in both 2003/04 and 2004/05, in line with Hunter Water's proposal. This will ensure greater equity in wastewater charges between customers in multiple and single dwelling residential properties. The Tribunal notes that $120 is still less that two-thirds of the current wastewater service for separate residential dwellings. It also notes that it is still substantially below the wastewater service charge of $328 per annum paid by all flats and units in Sydney Water's area of operation.

The Tribunal considered the potential impact of the proposed changes and believes that only a small proportion of customers will be affected by this increase. For the next determination, it expects Hunter Water to provide additional information on the ability of residents in flats and units to pay higher charges.

7.2.3 Wastewater usage charge for customers with no water connections

Decision 7: The Tribunal decided to set the wastewater usage charge for sewer only customers at $10 in 2003/04 and $20 in 2004/05 as set out in Table 7.5.

There are currently 42 customers that only receive sewer services from Hunter Water. These customers receive water from alternative sources such as rainwater tanks. They do not receive a wastewater usage bill as there is no metered water usage on which to base the wastewater usage charge.

Hunter Water argued that these residents place a similar load on the sewer system as residents who are connected to the water main, and should therefore pay an equivalent wastewater bill, consisting of an access and a usage component. Hunter Water proposed that these residential customers be charged a wastewater usage charge based on what they would have paid if they were connected to the water main. Hunter Water estimated these households' notional water consumption based on an average single dwelling household connected to the water main, and as result proposed to introduce a $40 wastewater usage bill for these households.

The Tribunal supports the principle of equity in charging customers when they place a similar load on the sewer system. However, Hunter Water has not provided evidence to the support its assumption that sewer only customers would use the same amount of water as a 'typical' household connected to the water main. The Tribunal is concerned that households who rely on tank water may use considerably less than households connected to a water main.

For the current determination, the Tribunal believes that sewer only customers should be charged a lower notional wastewater usage charge than proposed by Hunter Water. It considers a charge of $20 is appropriate, and that this charge should be phased in over the two year price path at $10 per annum.

At the next determination, the Tribunal will consider these charges further in light of further evidence provided by Hunter Water of the load placed on the sewer system by these customers.

Table 7.5 Hunter Water's current and Tribunal determined wastewater service charge for sewer only residential customers

$ of the day	2002/03	2003/04	2004/05
Wastewater service charge for houses ($ per annum)	222.36	231.48	231.48 x (1.01+ ΔCPI)
Wastewater usage charge ($ per annum)		10	20

Based on 20mm wastewater service connection.

7.2.4 Environment Improvement Charge and Sewer Service Access Charge

Decision 8: The Tribunal has decided to increase the Sewer Service Access Charge and the Environment Improvement Charge in line with the consumer price index. It has also decided to increase the Environmental Improvement Charge by a further $4 in 2003/04, to recover the costs of the Fern Bay backlog sewer program. These prices are set out in Table 7.6.

Hunter Water provides a backlog sewer program (known as the Hunter Sewerage Program) to fringe areas in its area of operations. Under this program, the capital costs involved in this program had been shared between the owners of the vacant land in the relevant area (who pay a Sewer Service Access Charge (SSAC) upon connection) and the community (generally through the Environmental Improvement Charge (EIC)).

In December 2001, the Government announced that sewerage connections would be provided to Fern Bay under the Priority Sewerage Scheme (PSP). Under the PSP the Government contributes 25 per cent of the capital costs (up to a maximum of $3,000) with the balance funded through the common sewerage charge paid by all Hunter Water's customers.

Hunter Water proposed that this customer contribution should be recovered through the existing EIC, and estimated that a $4 increase to the EIC in 2003/04 would be required. It argued that the EIC is the most simple and transparent way of sharing the costs of the backlog projects, and that this approach will:

- provide a clear signal to the community that the environmental, health and urban amenity benefits related to sewerage come at a cost to the community, which the community itself must partly bear in order to obtain these benefits
- clearly communicate what these costs and associated environmental benefits are.

The Tribunal accepts that the EIC provides a transparent means to recover the community's share of the Fern Bay backlog sewer projects, and has decided to increase the EIC by $4 in 2003/04, in line with Hunter Water's proposal. The Tribunal also decided to increase the EIC and SSAC in line with inflation, so these charges are maintained in real terms.

However, the Tribunal notes that the EIC is likely to be discontinued by 2009. This may cause difficulties if additional backlog sewer projects are included under the PSP. For example, Hunter Water may need to find an alternative means to recover the costs for additional PSP projects, or the EIC would need to be increased significantly to enable the agency to recover the costs before 2009.

If this situation does occur, the Tribunal will consider the best options for recovering the costs of additional sewer projects, taking into account the transparency benefits of continuing to use the EIC and the potential customer impacts of doing so. One alternative approach is to include the capital costs of the projects into the Regulatory Asset Base and recover these costs over the life of the asset (generally 20 to 30 years) through the general water and sewerage charges. This would help spread the costs over a longer period of time and reduce the bill impact on customers.

Table 7.6 Hunter Water's current and Tribunal determined Environment Improvement Charge and Sewer Service Access Charge

$ of the day	2002/03	2003/04	2004/05
Environment Improvement Charge ($ per annum)	42.36	47.80	47.80 x (1+ ΔCPI)
Sewer Service Access Charge ($ per annum) *	2,943	3,034	3, 034 x (1+ ΔCPI)

* The SSAC only applies to backlog sewerage areas defined under the Hunter Sewerage Project.

7.3 Stormwater charges

Stormwater tariffs are charged to all property owners where Hunter Water owns and operates stormwater drains within the property owners' catchment. Residential and non-residential customers are currently charged a fixed service charge. Some non-residential customers are also charged an additional tariff based on the value of their property.

7.3.1 Stormwater service charge

Decision 9: The Tribunal decided to set maximum stormwater charges for 2003/04 and 2004/05 as set out in Table 7.7.

Currently, property value based charges are levied on non-residential stormwater customers whose properties were developed before March 1991, and are calculated based on the assessed annual value (AAV). In line with the COAG water pricing principles, the Tribunal is reducing property value based charges within the Hunter Water region. These charges will be reduced over the two year price path, but will not be phased out completely.

The Tribunal has increased fixed stormwater prices to compensate for the removal of property based charges. Given that the institutional arrangements for managing stormwater are currently under review, the Tribunal does not see any benefit in further significantly increasing stormwater prices and revenue at this stage. The prices determined do reflect some adjustment to compensate for the removal of property based charges.

Table 7.7 Hunter Water's current and Tribunal determined stormwater charges

	2002/03	2003/04	2004/05
Residential service charge ($ per annum)	34.74	38.46	38.46 x (1.076+ ΔCPI)
Non-residential service charge ($ per annum)	34.74	38.46	38.46 x (1.076+ ΔCPI)
Property based charge (cents/$AAV)	1.48	1.45	1.45 x (0.84+ ΔCPI)

7.4 Trade waste charges

Decision 10: The Tribunal decided to accept Hunter Water's proposed trade waste charges.

Hunter Water proposed an overall real increase of 7.5 per cent (over the price path) in its Biological Oxygen Demand (BOD) and Non-Filtrable Residue (NFR) trade waste and heavy metals charges. It also proposed to increase tankered waste fees and introduce a new sulphate charge. It did not propose real changes to phosphorous charges and waste permit fees.

The Tribunal engaged GHD Ltd to review Hunter Water's and other water agencies' trade waste submissions and provide advice on the reasonableness of the proposals made. Overall GHD concluded that "the policy and charges regime for trade proposed by Hunter Water is reasonable and of the right order of magnitude".[54] It noted that Hunter Water has substantiated its proposed increases by providing a detailed explanation of current and forecast wastewater treatment costs. In addition, it noted that Hunter Water's charges vary significantly depending on which wastewater treatment plant processes the waste. However, GHD considered that Hunter Water has demonstrated a high level of analysis to justify the differences in charges between the treatment plants.

The Tribunal accepts the views of GHD and decided to adopt the approach to trade waste charges proposed by Hunter Water.

7.5 Miscellaneous charges

Decision 11: The Tribunal found that there was no justification for the miscellaneous charges No. 25 and No. 27 relating to debt and disconnection for non-payment of accounts. It decided to set all other miscellaneous service charges as detailed in Table 17 of the Determination, to apply for the period 1 July 2003 to 30 June 2005.

The Tribunal sets miscellaneous charges for the range of ancillary services that Hunter Water provides, including special meter readings, statements of available pressure and flows and an application for water service connection. Although these services do not contribute a large proportion[55] of Hunter Water's total revenue, they can be a significant cost for the customers who pay for them.

Since the last determination, the Tribunal established a working group of representatives from each of the water agencies and the Tribunal's Secretariat to draw up and agree on a list of the 20 main miscellaneous services. This list formed the basis for the miscellaneous charges proposals for each of the agencies.

The Tribunal has not attempted to align the prices of each of these service charges across the four water agencies. This is because there may be significant cost justifications for the services being priced differently. Where prices varied substantially between the agencies, the agency was asked to provide a justification for the variation.

---

54 GHD, *Review of trade waste pricing proposals by Sydney Water Corporation, Hunter Water Corporation, Gosford Council and Wyong Council*. March 2003, p 25.

55 In 2001/02, miscellaneous charges accounted for 1.8 per cent of total revenue, or approximately $2.4 million.

Hunter Water has a total of 51 categories of miscellaneous charges, with real increases proposed in 29 of these charges and decreases in 5 of the charges.

The Tribunal is concerned about Hunter Water's proposed miscellaneous charges related to debt and disconnection. Under Hunter Water's debt and disconnection policy if an account is not paid on time, Hunter Water charges interest on the overdue amount from the due date of the reminder notice.[56]

If the customer does not pay the overdue account (or make alternative arrangements) with Hunter Water after the receipt of the proposed recovery notice, Hunter Water will contact the customer (generally by telephone) to discuss payment options. Hunter Water proposed that this contact will attract a new miscellaneous charge (Service No.27) of $8.00.[57]

At this point, if the customer is unable to make suitable arrangements with Hunter Water, then in most cases the water supply to the property will be restricted. This attracts a miscellaneous charge (Service No. 25) which Hunter Water proposed to increase from $16.00 to $24.00.[58]

Once disconnected, reconnecting the water supply also attracts an additional miscellaneous charge (Service No. 7) of $32.00 or $74.00 (after normal business hours).

In total under Hunter Water proposal its debt recovery, disconnection and reconnection process will cost the customer at least $64 in miscellaneous charges.[59] The Tribunal concerned that this total could have an unreasonably high impact of Hunter Water's low income and disadvantaged customers. Given that at least some of these customers simply cannot pay within the necessary timeframe, it is questionable whether these additional charges will assist the customer or Hunter Water in securing payment of outstanding amounts.

The Tribunal also notes that Hunter Water's charges are levied on property owners and that debts are secured against the property itself and can ultimately be recovered when the property is sold or via the estate. This means that Hunter Water recovers a significant proportion of all debt.

The Tribunal has rejected the miscellaneous charges:

- No. 25 ($24) to attend a property to disconnect water for non-payment of accounts and
- No. 27 ($8) associated with the phone to customers who have not paid accounts to discuss payment options.

---

56 Currently 9 per cent per annum is charged, based on the Supreme Court judgement rate.

57 Hunter Water predicts that it will make 1,100 such calls per year generating revenue of $8,800.

58 Hunter Water estimates 1,000 such visits will be made, generating $24,000 in revenue.

59 Hunter Water has indicated that where a customer is genuinely experiencing financial hardship these miscellaneous charges are waived.

8 ISSUES ARISING FROM THIS DETERMINATION FOR HUNTER WATER TO CONSIDER PRIOR TO THE 2005 REVIEW

The 2003 review of prices for Hunter Water's water, wastewater and stormwater services has raised a number of broader regulatory policy issues that the Tribunal wishes to consider in more detail during the next two years, prior to the 2005 price review. The most significant of issues include:

- the approach taken to regulating capital expenditure
- developing a robust and auditable suite of service level and environmental indicators
- developing an appropriate customer preference approach to justify discretionary capital expenditure projects
- considering further reductions in the wastewater usage charges and removal of property based stormwater charges and the customer impacts of alternative structures
- the effect of alternative pricing structures on demand
- reviewing developer charging methodology, including auditing development servicing plans and their relationship to annual charging
- examining long run asset management and renewals funding.

The Tribunal hopes, that through a consultative process, it can settle its approach in each of these areas before it reviews proposals for the 2005 price review. It intends to establish a reference group that comprises representatives of each agency, to allow the formal discussion of proposals as they are developed. Where needed, it will also release issues papers or undertake further consultation.

The Tribunal recognises that it may not be able to resolve all of these issues by the next price review, and will try to prioritise the list and tackle the most important issues first. Many of the recommendations that result from this process may, if implemented, require the water agencies to develop their information reporting capabilities. Where this is the case, the Tribunal will specifically discuss the requirements with each agency to identify how feasible meeting the information reporting needs will be.

In addition, this report has raised a number of items that the Tribunal requires Hunter Water to consider and report back on prior to the 2005 price review. These include:

- the appropriate ringfencing of Hunter Water's subsidiary company
- the economic level of leakage
- the achievement of the operating efficiency target set by the Tribunal
- the modelling of water usage prices for Tier 3 customers
- the ability of residents in flats/units to pay higher prices for water and wastewater services
- the load placed on the sewerage system by customers with no water connection
- the development of an approach to ensure that proposed growth capital expenditure is consistent with capital projects contained within the development service area plans

- The development of robust asset management planning processes to justify capital expenditure projects and demonstrate that sufficient expenditure is being made on essential infrastructure renewals and maintenance.

GLOSSARY

AAV	Assessed annual value
CPI	Consumer price index
EPA	Environment Protection Authority of NSW
Halcrow	Halcrow Pacific Pty Ltd
IPART	Independent Pricing and Regulatory Tribunal of New South Wales
IPART Act	*Independent Pricing and Regulatory Tribunal Act, 1992*
kL	Kilolitre (1000 litres)
STP	Sewerage treatment plant
Sydney Water	Sydney Water Corporation
Tribunal	Independent Pricing and Regulatory Tribunal
WACC	Weighted average cost of capital

APPENDIX 1 LIST OF SUBMISSIONS

Submissions in relation to the Issues Paper of June 2002

Australian Water Association
Central Coast Community Environment Network
Colong Foundation for Wilderness
Economic Planning Advocacy
Environment Protection Agency of New South Wales
Energy and Water Ombudsman
Gosford City Council
Gosford Wyong Joint Water Authority
Hornsby Shire Council
Department of Housing
Hunter Water Corporation
Incitec Pty Ltd
National Standards Commission
Nature Conservation Council of New South Wales
National Parks and Wildlife Service of New South Wales
Public Interest Advocacy Centre
Stormwater Industry Association
Sydney Catchment Authority
Sydney Water Corporation
Total Environment Centre
Urban Development Institute of Australia
Warringah Council
Wingecarribee Shire Council
Wyong Shire Council

Mr R Banyard
Mr F Keep
Mr Walter Wood

APPENDIX 2 PRESENTERS AT THE PUBLIC HEARING

The list of presenters at the public hearing on 9 December 2002 were:

Mr David Evans, Hunter Water Corporation
Mr Andrew Amos, Hunter Water Corporation

Mr Leigh Martin, Total Environment Centre

Mr Jim Wellsmore, Public Interest Advocacy Centre

Ms Mary Goodwin, Incitec Pty Ltd
Ms Christine Ip, Incitec Pty Ltd

APPENDIX 3 IPART ACT REQUIREMENTS

Section 15 of the IPART Act 1992 details the matters to be considered by the Tribunal when making a determination. The section is reproduced in full below.

15 Matters to be considered by Tribunal under this Act

(1) In making determinations and recommendations under this Act, the Tribunal is to have regard to the following matters (in addition to any other matters the Tribunal considers relevant):

(a) the cost of providing the services concerned,

(b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services,

(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,

(d) the effect on general price inflation over the medium term,

(e) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers,

(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,

(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,

(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,

(i) the need to promote competition in the supply of the services concerned,

(j) considerations of demand management (including levels of demand) and least cost planning,

(k) the social impact of the determinations and recommendations,

(l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).

(2) In any report of a determination or recommendation made by the Tribunal under this Act, the Tribunal must indicate what regard it has had to the matters set out in subsection (1) in reaching that determination or recommendation.

(3) To remove any doubt, it is declared that this section does not apply to the Tribunal in the exercise of any of its functions under section 12A.

(4) This section does not apply to the Tribunal in the exercise of any of its functions under section 11 (3).

Table A4.1 indicates where the matters have been considered throughout the report by the Tribunal in making this determination.

Table A4.1 Consideration of section 15 matters by Tribunal for Hunter Water determination

Section 15(1)	Report reference
(a) – cost of providing the service	Sections 4.2, 4.3 and 4.4
(b) protection of consumers from abuse of monopoly power	Sections 5 and 7
(c) appropriate rate of return and dividends	Sections 4.5.2 and 4.5.3
(d) affect on general price inflation	Section 5.1
(e) improved efficiency in supply of services	Sections 4.3 and 4.4
(f) ecologically sustainable development	Section 6
(g) impact on borrowing, capital and dividend requirements	Section 4.5
(h) additional pricing policies	Section 7.4
(i) need to promote competition	Section 7.5
(j) considerations of demand management	Section 6.3
(k) the social impact on customers	Section 5
(l) standards of quality, reliability and safety of the services	Section 5.4

Section 16 requirements

Section 16 of the IPART Act requires the Tribunal to report on the likely impact to the Consolidated Fund if the price was not increased to the maximum permitted.

As a result of this determination, revenue in 2003/04 is expected to increase for Hunter Water by $5 million and a further $4 million in 2004/05 compared with 2002/03 levels in nominal terms (assuming 3.1 per cent inflation in 2003/04 and 3.0 per cent in 2004/05 and similar consumption levels across all years). If the price was set below the maximum allowable under this determination, then the level of dividends paid to the Consolidated Fund would fall. The extent of this fall would depend on Treasury's application of its financial distribution policy and how the change affects post-tax profit.

The Tribunal's financial modelling projects tax equivalent and dividend payments. The Tribunal's financial model calculates dividends payable from Net Profit after Tax and Interest (NPAT)[60]. A dividend payout rate of 85 per cent of NPAT was assumed, which means that every one dollar decline in post-tax profit would result in a loss of revenue to the consolidated fund of 85 cents.

60 The calculation of interest payments is based on Hunter Water's current capital structure.

APPENDIX 4 BUILDING BLOCK METHODOLOGY AND INCENTIVE REGULATION USING CPI ± X

Building Block Methodology

The Tribunal has adopted a building block approach to calculate the revenue requirement of the metropolitan water agencies. The revenue requirement for a particular year in the price path can then be expressed as:

Revenue Requirement = Operating Expenditure + Depreciation + Return on Assets

The return on assets can be further broken down into:

Return on Assets = Rate of Return x Regulatory Asset Base

Each element of the building block revenue requirement is considered in detail below.

Operating expenditure

Operating expenditure is determined by reviewing the proposals of the water agency to determine what an efficiently operating business could be expected to need to operate the business effectively, without compromising service quality.

For this review, Halcrow was engaged to review operating expenditure for efficiency, which was a key input to the Tribunal's operating expenditure allowance decision. Halcrow's approach to reviewing operating expenditure involved starting with a base year (2001-02) actual operating expenditure. Efficient operating expenditure in subsequent years was calculated by increasing base year operating expenditure for reasonable uncontrollable cost rises, such as real wage increases, electricity cost rise, growth allowances, while assuming a degree of efficiency attainment by the business during the same period. The subsequent operating expenditure was Halcrow's view as to what an efficiently run water business in Hunter Water's position could be expected to operate the business for.

On the basis of Halcrow's review and comments by the agency, the Tribunal decided upon an allowance for operating expenditure for the periods of the price review.

Capital Maintenance

An allowance is made for capital maintenance, also referred to as depreciation, recognising that during the provision of services to customers, the water agencies capital infrastructure will wear out. An efficiently operating water business will therefore allow for the cost of maintaining the financial capital base within current revenue requirements.

Capital maintenance is calculated on a straight line basis, over the average life of the assets. This means that the total value of the regulatory asset base is recovered within that period, which is assumed to be 70 years for water assets.

It is the combination of an allowance for capital maintenance, and a return of assets which ensures that the existing investment in the water business is maintained in perpetuity.

Return on assets

The return on assets is an allowance for a return to the capital investor in the water business. It ensures that efficient investment in capital continues into the future for the maintenance and growth of the infrastructure system.

It is calculated as a percentage of the regulated asset base, reflecting a commercial return to the financial assets of the business. All new investment is rolled into the regulatory asset base resulting in it earning a commercial rate of return, set by the Tribunal. The rate of return is determined with reference to the weighted average cost of capital – a measure of the cost to the business for investing in capital.

The building block methodology is an important part of the Tribunal's considerations when determining prices for the regulated agencies. However, it is not used in isolation from the exercise of the Tribunal's regulatory judgement, and may be modified reflecting the Tribunal's considerations of the social or environmental impacts of its pricing decisions.

Incentive regulation using CPI±X

The determination of the revenue requirement using the building block methodology gives the Tribunal an indication of the amount of revenue which an efficiently operated water business requires. An important part of regulation however, is to encourage the regulated water businesses to achieve the efficiency targets implied in the building block approach. This is what is known as incentive regulation, and the Tribunal's preferred approach is the use of CPI±X.

CPI±X means that once the revenue requirement is determined within a year, subsequent years prices are increased by general price inflation measured by the CPI index, modified by an X factor. The X factor represents positive or negative adjustments to prices, above or below general price rises.

The CPI±X approach provides an incentive to the business to pursue efficiencies because for the regulatory period they retain the benefits in full of any efficiency gains through higher profits (compared to their profits if they had not achieved these efficiencies). If the agency betters the efficiency target allowed in the revenue build-up, actual profits will be higher than the rate of return allowed in the revenue build-up. If the agency does not achieve the expected efficiency improvements the reverse applies.

It is through the separation of actual revenues from actual costs and profits once the CPI±X price path has been set that provides the incentives for the achievement of efficiency improvements in the delivery of the business' services to customers.

APPENDIX 5 PROVISION OF SUFFICIENT REVENUE FOR ESSENTIAL RENEWALS AND MAINTENANCE EXPENDITURE

The provision of infrastructure by regulated utilities, especially for water, electricity, gas and rail transport, is an integral part of the delivery of these services to customers. Infrastructure related costs account for a large proportion of the total annual costs for delivery of these services.

IPART, like many price regulators, allows funding of infrastructure related costs through its use of the building block revenue approach to calculating the revenue requirements of regulated utilities. Any annual operating costs relating to infrastructure, for example repairs and maintenance, is allowed for directly in the building block revenue. Capital expenditure to replace worn out infrastructure and due to an increase in customers is funded through an allowance for capital maintenance (depreciation) and a return on capital. This is calculated indirectly as capital expenditure is included in the regulatory asset base (RAB) which subsequently earns a rate of return and is depreciated.[61]

While this existing approach ensures that sufficient revenue is provided to fund capital expenditure and ongoing infrastructure operating expenditure, it relies on a number of key assumptions which have implications for the operation of the regulated utility.

First, it assumes that the utility can fund capital expenditure through debt or equity financing. Once the capital expenditure has been incurred, by inclusion in the regulatory asset base, it attracts a rate of return and is depreciated which should provide sufficient revenue to pay any debt or equity financing costs.

The ability of the utility to fund capital expenditure, through debt financing especially, depends on its overall financial viability and cash flow. If debt levels are already high, then the utility's inability to debt finance may become a limiting factor to the provision of infrastructure especially when unexpected capital expenditure is required to maintain the system. In a workably competitive market, it would be expected that in these circumstances the injection of additional equity from the owners may be required. For a regulated business, the regulator may also need to consider whether a temporary increase in prices to increase cash flows is appropriate.

Second, the building block approach to funding capital expenditure relies on an estimate of the average asset life of the assets. To the extent that this estimate is incorrect, then revenue shortfalls could occur unless significant price increases are allowed. For this reason the Tribunal uses conservative average asset lives of 70 years for water infrastructure. As the actual average asset life of these assets are likely to be well in excess of 70 years, the existing approach should amply provide for asset replacement.

Third, the utility may reduce investment in renewing infrastructure or reduce expenditure in essential repairs and maintenance, as an easy short term way of achieving cost efficiencies. The regulatory approach assumes that the utilities' capital expenditure priority setting process and operating budget allocation process assesses the risk to the business of reducing renewals related expenditure to achieve cost savings. To the extent that these risks

61 See Appendix 4 for further details on the building block approach and incentive regulation.

are not considered by the business when reducing renewals expenditure, this may lead to problems in the medium to long term.

Finally, there appears to be general concern amongst regulated utilities about the need to fund renewals capital expenditure through existing depreciation allowances, reflecting an adversity to debt or equity finance renewals capital expenditure. As depreciation reflects past capital expenditure - many of which have been considered sunk costs by regulators - it need not equal current renewals capital expenditure requirements. Looking forward however, future renewals capital expenditure will be funded through depreciation allowances for the life of these new replacement assets rendering any comparisons with current depreciation allowances of limited value.

The validity of each of these assumptions can affect the regulated utilities ability to in practice ensure the continued maintenance of the infrastructure of their businesses. Where the availability of capital is limited, there is considerable uncertainty surrounding asset lives and where the business culture results in efficiency gains resulting in a reduction in expenditure on key repairs and maintenance then infrastructure may not be properly maintained.

The impact of regulation on the provision of sufficient revenue is of critical concern to the Tribunal. Assessing the use of asset management plans will increasingly become an approach adopted by the Tribunal to address this concern at future price reviews.

APPENDIX 6 REGULATORY ASSET BASE AND RATE OF RETURN

Table A6.1 FORECAST REVENUE REQUIREMENTS (pre-tax and excluding capital contributions and unregulated income , $ millions, nominal)

Financial year ending 30 June	1999	2000	2001	2002	2003	2004	2005
Opening fixed asset value	-	-	790.0	858.1	908.8	964.1	1,029.2
plus net capital expenditure(1)	-	-	32.1	38.5	41.0	49.0	59.7
less disposals	-	-	-	-	-	-	-
less depreciation	-	-	(12.1)	(12.8)	(13.7)	(14.5)	(15.5)
plus indexation	-	-	48.1	25.1	27.9	30.6	32.8
Closing fixed asset value	-	790.0	858.1	908.8	964.1	1,029.2	1,106.3
Working capital (closing balance)	182	18.9	18.0	18.7	19.3	20.4	21.4
Total regulatory asset base	**182**	**808.9**	**876.0**	**927.5**	**983.3**	**1,049.6**	**1,127.6**
Operating expenditure	675.2	53.7	55.2	56.1	60.1	60.7	62.4
Depreciation	68.5	11.2	12.3	13.0	13.7	14.5	15.5
Tax payable (less franking credits)	-	-	-	-	-	-	-
Expected return on assets	372.3	48.1	48.1	48.4	50.3	52.5	54.3
Expected revenue	1,116.0	112.9	115.6	117.5	124.1	127.7	132.1
Indexation of working capital [2]	2.4	0.4	1.1	0.5	0.6	0.6	0.6
Return on assets (%, real pre-tax) [2,3]	**nc**	**nc**	**5.6%**	**5.3%**	**5.2%**	**5.1%**	**5.0%**

1. Net capital expenditure is capital expenditure net of all capital contributions.
2. The indexation of working capital ($ value) is subtracted from the total expected return on assets to calculate the real return. The opening balance plus half of the change during the year is indexed, if working capital is included in the RAB.
3. The real return on assets is calculated on the average asset base for the year.

What is the regulatory asset base, and how is it rolled forward?

The regulatory asset base (RAB) is a measure of the financial value invested in the water business and bears no relationship to the value of the physical assets. It represents the value a market would place on the business if it was to be sold, given its potential to earn revenue and profits under existing prices.

The RAB exists as the basis for determining the return of and on capital in the revenue requirement calculation based on the building block approach. The reason for adopting a financial capital base for regulatory purposes is to ensure that an appropriate rate of return is given to the shareholder value of the business. It also ensures that efficient investment is made in the refurbishment and enhancement of existing assets, by allowing new financial investment to attract a commercial rate of return, reflecting risks associated with the business.

The regulatory asset base is rolled forward by adding new, prudent capital expenditure from the closing value of the previous year. The RAB is modified to account for inflation, disposal of assets and depreciation.

APPENDIX 7 WEIGHTED AVERAGE COST OF CAPITAL PARAMETERS

The parameters used to generate the weighted average cost of capital are presented in Table A7.1 below.

Table A7.1 Parameters used to generate the weighted average cost of capital

Parameter	Value
Nominal risk free rate	5.1%[1]
Real risk-free rate	2.9%
Inflation	2.2%[2]
Market risk premium	5 - 6%
Debt margin	0.7 - 1%
Debt to total assets	60%
Dividend imputation factor (Gamma)	0.5 - 0.3
Tax rate	30%
Asset Beta	0.3 - 0.45
Debt Beta	0.06 - 0.14
Equity Beta	0.65 - 0.90
Cost of equity (nominal post tax)	8.4 - 10.5%
Cost of debt (nominal pre tax)	5.8 - 6.1%
WACC (nominal post tax)	5.2 - 6.3%
WACC (real post tax)	3.0 - 4.1%
WACC (real pre tax)	**5.2 - 6.7%**

1. The nominal risk free rate is based on 20 days average of the 10 year Commonwealth bond rate up to 15 April 2003.
2. The inflation rate used in the WACC calculation is based on observed differences in nominal and real 10 year bond rate indexes. These differences reflect market expectations of the long term inflation rate.

The Tribunal reviewed its methodology for calculating the WACC range in 2002, and sought stakeholder comments on whether the WACC range should be presented in real or nominal terms - pre or post-tax. Additionally, it considered the advantages and disadvantages of using a statutory or effective tax rate.[62]

As the regulatory asset base is rolled forward in real terms, it is appropriate to report the WACC in real terms. Additionally, for consistency with previous water price determinations, the Tribunal has maintained the pre-tax WACC range, using a statutory tax rate for this price review.

The Tribunal has reviewed the WACC parameters used at the 2000 determination. This has resulted in a reduction in the upper bound of the equity beta to 0.9, reflecting a view that water utilities in general are likely to have lower than market risk characteristics. Additionally, the lower bound of the debt margin was reduced to 0.7, reflecting information on the debt margins charged by Treasury Corporation to the Government owned water businesses.

62 For details of the alternative approaches see the Tribunal's discussion paper, *Weighted Average Cost of Capital*, DP56, August 2002.

The Tribunal is undertaking a comprehensive review of all of the parameters used to calculate the WACC range prior to the forthcoming distribution network service price review. This is expected to lead to additional revisions to the WACC parameters, and these will form the basis of a metropolitan water WACC range for the next price determination.

The combined impact of these parameter changes, including an update of the long term market inflation rate and 20 day average 10 year bond rate, resulted in the WACC range being 5.2 to 6.7 per cent.

APPENDIX 8 FINANCIAL VIABILITY AND CREDIT RATINGS

	2001/02	2002/03	2003/04	2004/05
Ability to service debt				
1. EBITDA interest cover	11.49	8.34	13.02	9.91
NSW Treasury ratings (2002)	AAA	**AAA**	**AAA**	**AAA**
2. Funds from operations interest coverage	13.07	8.63	13.30	10.15
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
3. Pre-tax interest coverage	6.50	4.69	7.35	5.61
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
Ability to repay debt				
4. Funds flow net debt payback	0.93	0.75	1.24	1.66
NSW Treasury ratings (2002)	AA+	**AA+**	**AA+**	**AA+**
5. Funds from operations/total debt (%)	35%	30%	30%	23%
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
6. Debt gearing (regulatory value)	6%	10%	13%	16%
NSW Treasury ratings (2002)	AA+	**AA+**	**AA+**	**AA+**
Standard and Poors US ratings (1995)	AA	**AA**	**AA**	**AA**
Ability to finance investment from internal sources				
7. Internal financing ratio	-15%	7%	17%	15%
NSW Treasury ratings (2002)	<B	**B**	**B**	**B**
8. Net cash flow/capital expenditure (%)	42%	19%	19%	18%
Standard and Poors US ratings (1995)	BBB	**<BB**	**<BB**	**<BB**
NSW Treasury overall score and rating				
NSW Treasury total score (0-10)	7	7	7	7
Overall rating	A+	A+	A+	A+
9. Net debt ($m)	59	95	135	184

Notes:

(i) The Tribunal particularly relies on indicators based on cash flows because these are not as subjective as indicators that use components derived from estimates (eg asset value and depreciation).

(ii) The information in this table should be read and understood only after reviewing Appendix 9 and the explanations and qualifications mentioned there.

1. EBITDA interest cover	(EBITDA excl capital contributions)/ net interest
2. Funds from operations interest coverage	(Pre-tax funds flow + net interest) / (net interest)
3. Pre-tax interest coverage	(EBIT - capital contributions) / net interest
4. Funds flow net debt payback	(Debt - cash assets) / (NPAT + depreciation + tax expense - tax paid)
5. Funds from operations/total debt (%)	see note below for definition of funds from operations
6. Debt gearing (regulatory value)	(Debt - cash assets) / (regulatory value of fixed assets + working capital)
7. Internal financing ratio	(NPAT - cap cons + depreciation - dividends payable / net capex)
8. Net cash flow/capital expenditure (%)	(Funds from operations - dividends) / (capex net of capital contributions)
9. Net debt	Total debt less cash, short-term and long-term investments

APPENDIX 9 FINANCIAL INDICATORS

The indicators of financial performance include notional credit ratings of regulated businesses. Indicative benchmarks supplied by Standard and Poor's (S&P) ratings group that are published from time to time[63] are used to estimate these ratings. The indicative ratios are used by S&P as one of its analytical tools in setting overall ratings, and the Tribunal uses the indicators in a similar manner, ie as part of the overall financial analysis of the regulated business. The overall ratings that have been or may be derived by S&P for a business cannot be derived from simple inspection of these ratios.

Indicative ratios for each ratio for each year during the medium term price paths set in 2000 were published in the Tribunal's Determinations for each of the regulated water businesses. In Tables 3.2 and 5.3, the Tribunal has

- calculated various financial ratios for the one year of results considered in this report in accordance with the methodologies used by S&P and
- indicated the rating applicable for each ratio based on the bands published by S&P.

The calculation and assessments are those of the Tribunal and not S&P.

The actual rating process used by S&P is very broad, involving subjective judgements of industry risk and cost structures, not just financial ratios. S&P use both qualitative and quantitative analyses in determining an entity's rating. The ratios used by the Tribunal in its financial analysis are part of the latter – they should be used as a guide rather than as blanket reasons for giving a certain rating. The overall ratings that have been or may be derived by S&P for a business cannot be derived from simple inspection of these ratios.

S&P divide its analysis into:

- business risk - including market position, technology, efficiency and management capabilities, the prospects for growth in the industry, and vulnerability to technological changes or labour unrest or regulatory changes and
- financial risk - looking at financial management policies, cash flow protection, capital structure and profitability.

S&P's analysis incorporates an evaluation of a company's business and financial risks. In its guideline ratios, S&P provided financial indicator ranges for each of 'above average' business position, 'average' business position and 'below average' business position. During the analysis undertaken in 2000 as part of the determination process, the Tribunal decided that each of the regulated water businesses had an 'excellent' risk profile.

An acceptable range of financial ratios for each rating category will differ from time to time according to the unique characteristics of the business. There may not be a perfect match between the ratios and the indicator rating; the ratios represent midpoints of ranges, and vary during an investment cycle, particularly the internal financing ratio. In addition, S&P's credit ratings are prospective, with ratings reflective of a company's expected financial

63 Two sets of ratios have been used, for consistency with the financial analysis undertaken by the Tribunal during the 2000 determination process. The 'NSW Treasury Rating' indicators are from *The Capital Structure for NSW Government Trading Enterprises* report produced in August 1994 by NSW Treasury as part of its financial policy framework for GTEs, and are based on ratios provided to Treasury by S&P. The "S&P" criteria are from S&P's Corporate Finance Criteria for 1995.

profile. For this reason, the ratings indicated by the ratios for each of the regulated businesses based on one year's financial results may not be the same as the actual rating given by S&P.

APPENDIX 10 COMPARISON STATISTICS FOR KEY FINANCIAL AND PERFORMANCE DATA FOR METROPOLITAN WATER AGENCIES

The information following is for the period up to 30 June 2002 and is mainly taken from Annual Information Returns provided by the water agencies (Gosford City Council, Hunter Water Corporation, Sydney Water Corporation, Wyong Shire Council) to the Tribunal. Wherever possible, the information relates to the monopoly elements of each water business. Although the Tribunal regulates the Sydney Catchment Authority, this attachment does not analyse the Authority's performance. The Authority is a bulk supplier of water to Sydney Water without the large retail customer base of the four water retailers. These differences make performance comparisons inappropriate.

The four retail water agencies are similar in that they provide water, wastewater and stormwater services to large numbers of retail customers. However they vary in their size and in their operating environments and this can often explain differences in individual performance. Table A10.1 below provides an insight into those variations. When setting prices, of particular interest is the two corporations' obligation to pay tax equivalents and dividends and to have Operating Licences with the State Government. The licences are regulated by the Tribunal. While the councils currently do not pay tax equivalents or dividends, legislation has been proposed which, if passed, will allow the water business area of local councils to pay dividends to the general council area. This may affect prices in future determinations.

Sydney Water differs in one important respect to the other three water retailers. While Hunter Water, Gosford Council and Wyong Council are responsible for their own bulk water supplies, Sydney Water purchases water in bulk from the Sydney Catchment Authority. The creation of the Catchment Authority has influenced the trend in Sydney Water's costs since 2000. The cost of supplying bulk water has increased because the Authority is required to perform a greater range of activities in the catchment area than Sydney Water did when it had that responsibility.

Table A10.1 Agency characteristics (for 2001/02)

	Gosford	Hunter	Sydney	Wyong
Operating area (kms^2)	1,028	5,400	13,000	827
Number of residential customers/properties	60,000	195,000	1,526,000	53,000
Number of employees	161	526	3,556	157
Metered consumption (GLs)	16	62	535	15
Gross tariff revenue ($million)	39	115	1,247	35
Dividend/tax payments?	No	Yes	Yes	No
Operating licence?	No	Yes	Yes	No

PRICING

Figure A10.1 shows the change in the combined water and wastewater bill for a residential customer consuming 250kL per annum. The elimination of property based charges has heavily influenced the reductions in bills, while the wastewater portion of bills has reduced more than the water portion.

Figure A10.1 Residential water and wastewater bills (250kL consumption)

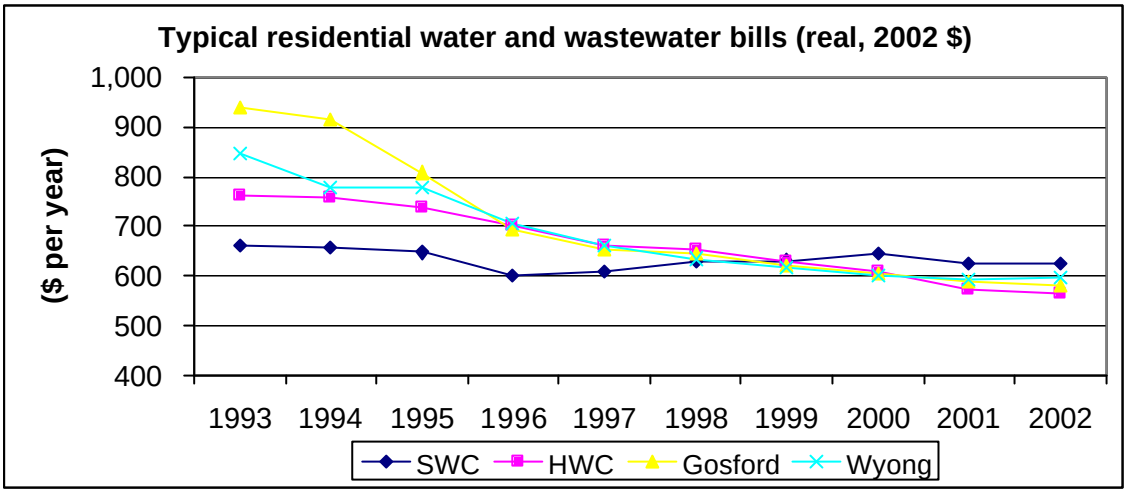
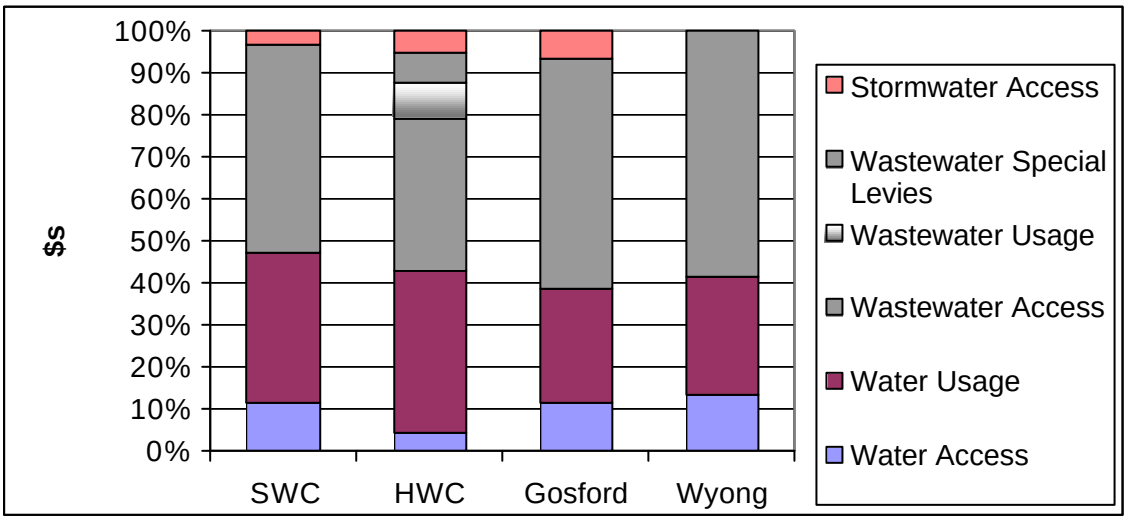


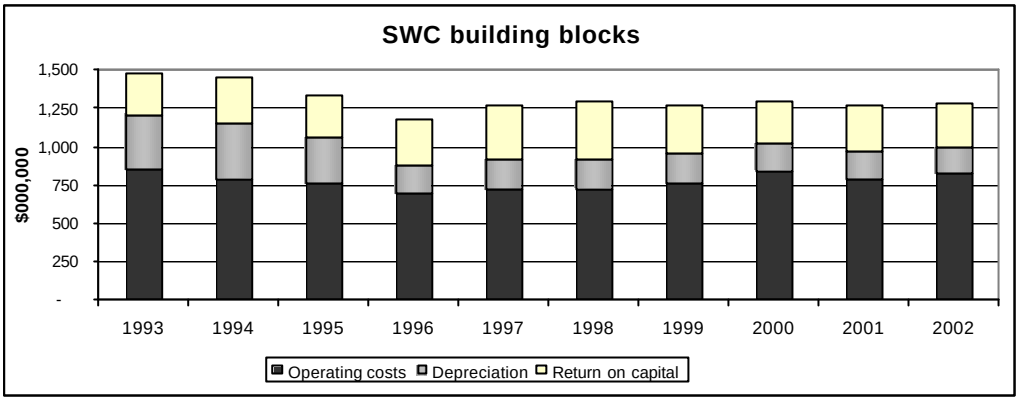
Figure A10.2 breaks the bill of a residential customer consuming 250kLs per annum into the various types of charges levied by the water agencies. The corporations' customers pay a significantly higher percentage of the water portion of their bills through usage charges than the councils' customers.

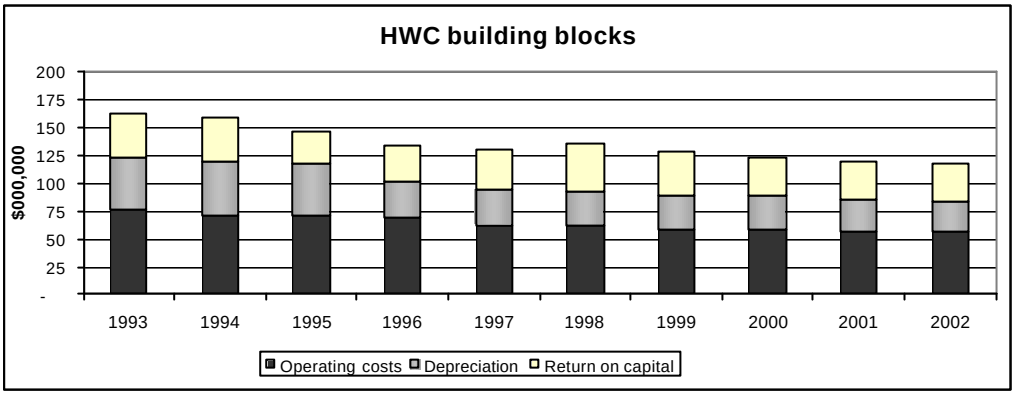
Figure A10.2 Residential bill components (2002)

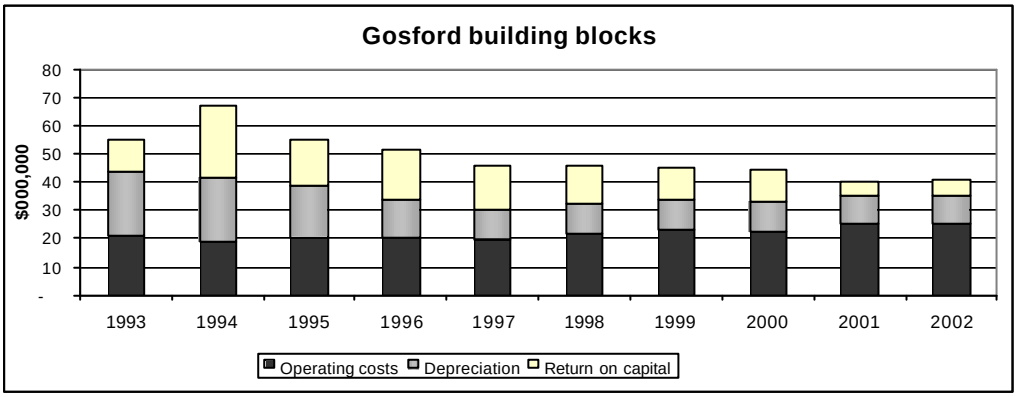


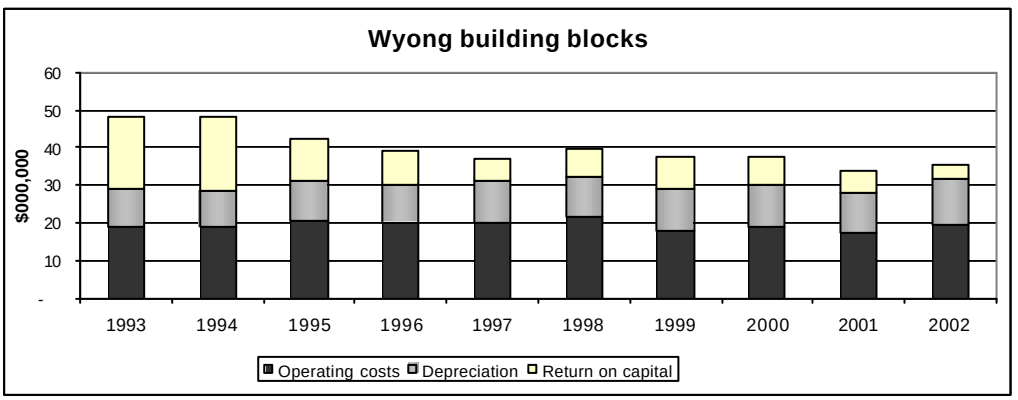
The Tribunal uses a methodology to determine prices known as the building block method. Prices are formulated to provide levels of revenue calculated by adding forecast operating expenditure, forecast return of capital (sometimes measured by depreciation), and a return on capital. Figure A10.3 shows the movement in those building blocks since 1993.

Figure A10.3 Building block components (real, 2002$s)









CONSUMPTION

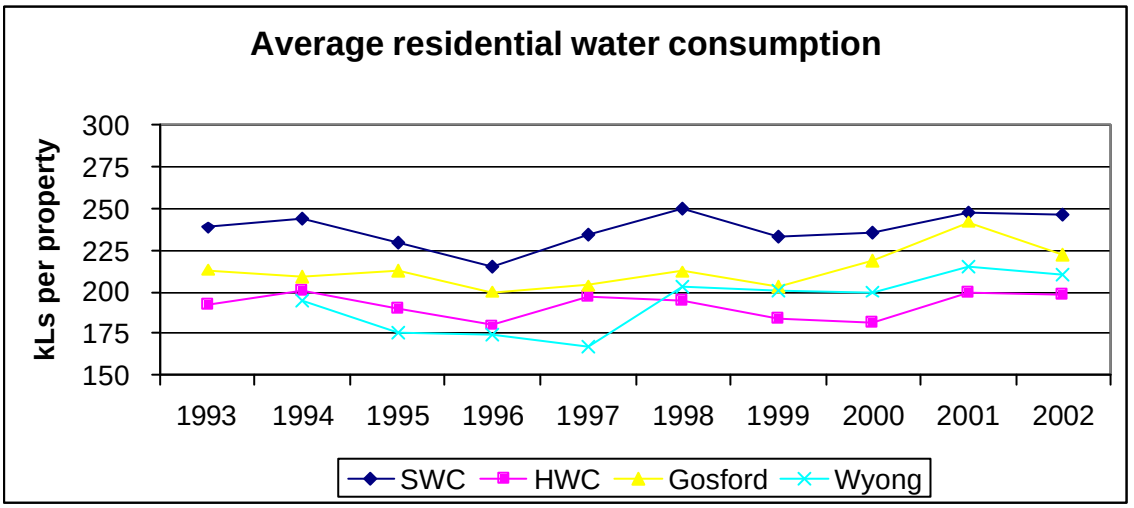
Table A10.2 shows the volume of water delivered to residential and non-residential properties.

Table A10.2 Total metered water consumption (GLs)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Sydney Water	477	495	472	447	480	516	495	508	537	535
Hunter Water	60	63	62	61	64	66	62	61	64	62
Gosford Council	14	14	15	14	15	16	15	16	17	16
Wyong Council	-	12	12	12	11	13	14	14	15	15

Figure A10.4 shows the change in water consumption on a per property basis for residential customers. Seasonal weather conditions and the introduction of usage pricing in the early part of the review period influenced interim reductions, but current average consumption levels are still at 1993 levels.

Figure A10.4 Average metered residential water consumption (kLs/property)



REVENUE

Figure A10.5 shows that total tariff revenue in real terms has declined since 1993. This has occurred while customer numbers have increased.

Figure A10.5 Change in total tariff revenue (1993 as the base year)

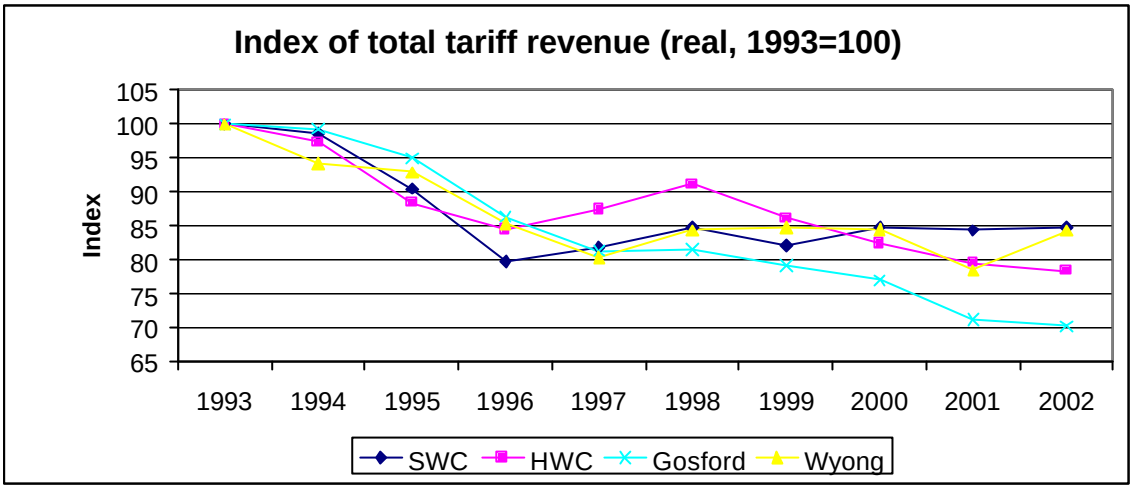


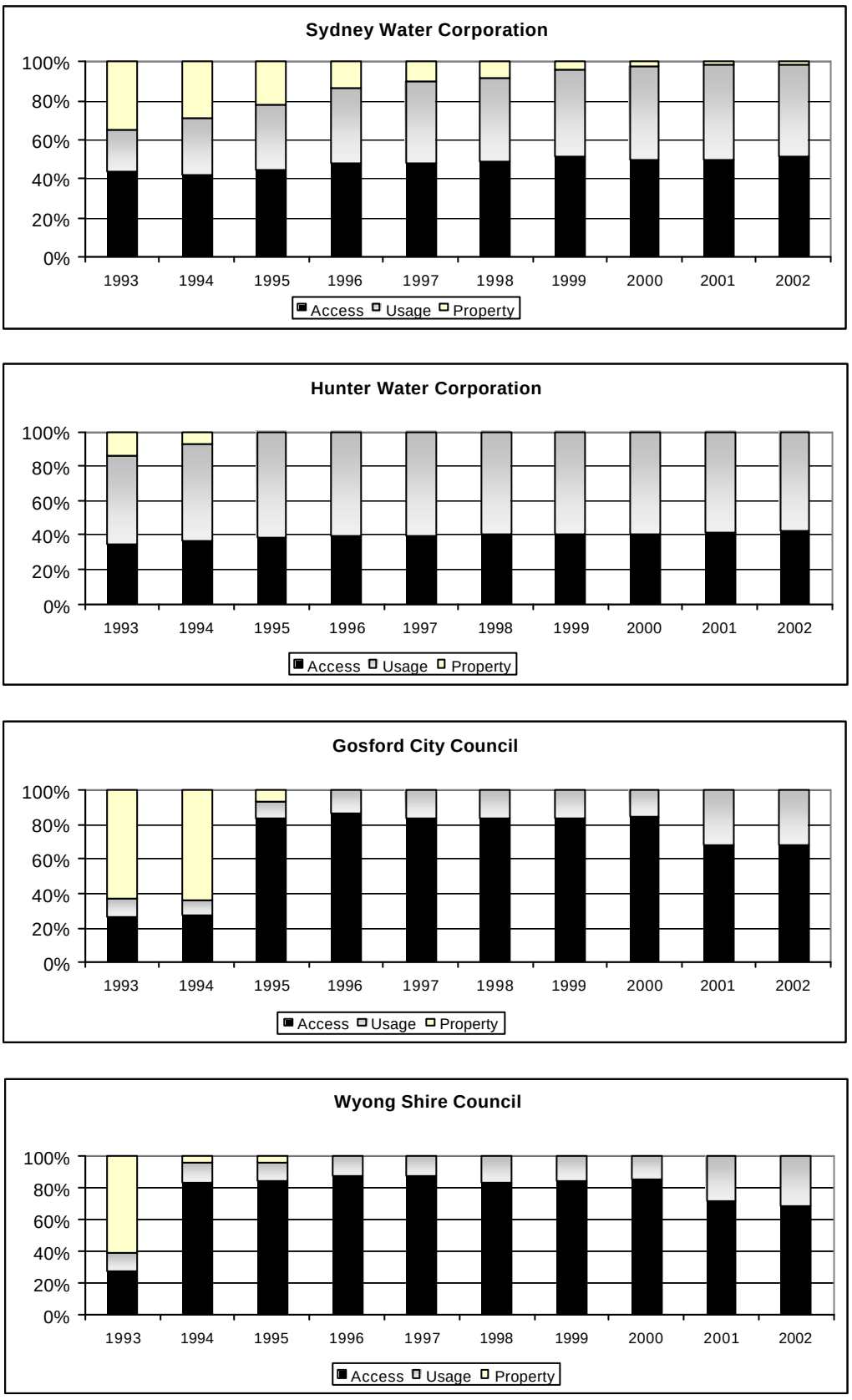
Table A10.3 shows the trend in residential and non-residential tariff revenue per property. Of note is that cross-subsidisation to residential in the early part of the review period has been progressively reduced.

Table A10.3 Average water and wastewater sales revenue per property (real, 2002 $s)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Sydney Water										
Residential	565	601	610	553	570	599	587	605	591	597
Non-residential	7,434	6,475	4,880	3,859	3,748	3,575	3,148	3,084	2,999	2,809
Hunter Water										
Residential	542	548	515	460	489	478	461	439	430	424
Non-residential	4,938	4,299	3,358	3,520	3,637	3,031	2,892	2,831	2,514	2,383
Gosford Council										
Residential	938	907	822	719	648	625	620	597	571	546
Non-residential	2,551	2,530	2,885	3,006	2,937	3,199	2,537	2,390	1,905	2,081
Wyong Council										
Residential	836	739	711	647	595	625	621	601	539	565
Non-residential	3,414	4,097	3,773	3,046	2,750	2,350	2,193	1,554	1,431	1,659

Figure A10.6 shows how changes in agency pricing structures have changed revenue patterns over time. Property value based charges have been progressively replaced by service and usage charges. Removal of the councils' pre paid water allowances in 2001 has led to an increase in usage charges revenue.

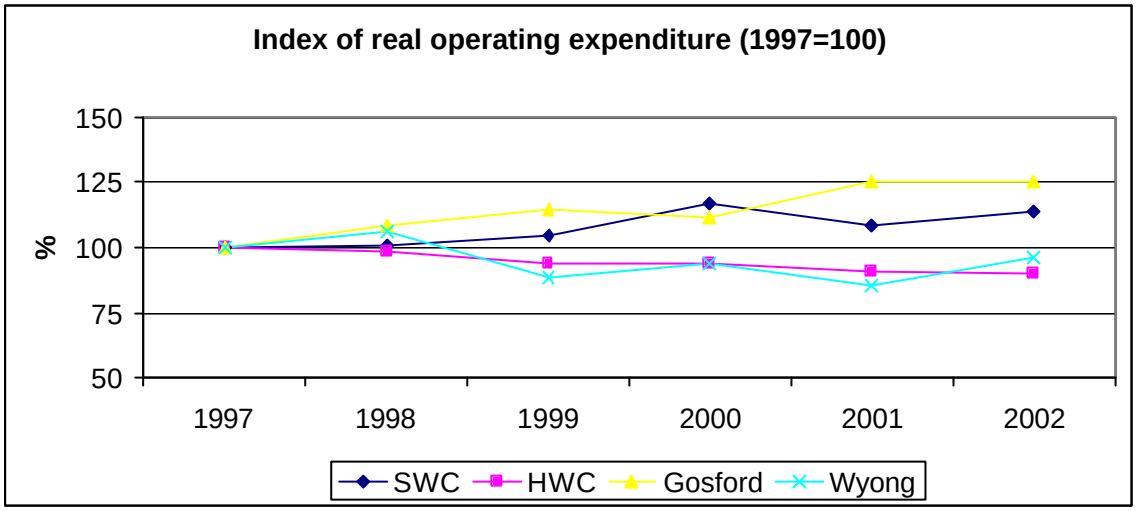
Figure A10.6 Sources of revenue (water and wastewater)



OPERATING EXPENDITURE

Operating costs are one of the most controllable areas of an agency's operations. The Tribunal uses an incentive based process for price setting based on forecast levels of operating costs, return of capital and return on capital (ie building blocks). If agencies can control their operating costs, they can achieve a higher return on capital during the price path. Figure A10.7 shows the trends in operating expenditure.

Figure A10.7 Index of operating costs



Because each agency operates in its own unique environment, measuring performance is best achieved by analysing the trend in each agency's performance over time rather than comparing one agency to another. Figure A10.8 shows those trends on a per kilolitre basis.

Figure A10.8 Operating costs per volume sold (c/kL)

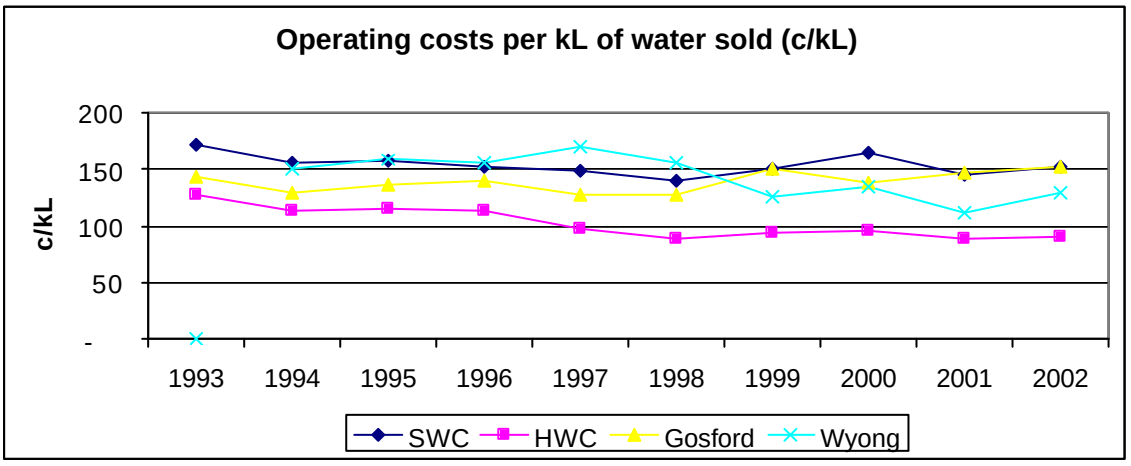
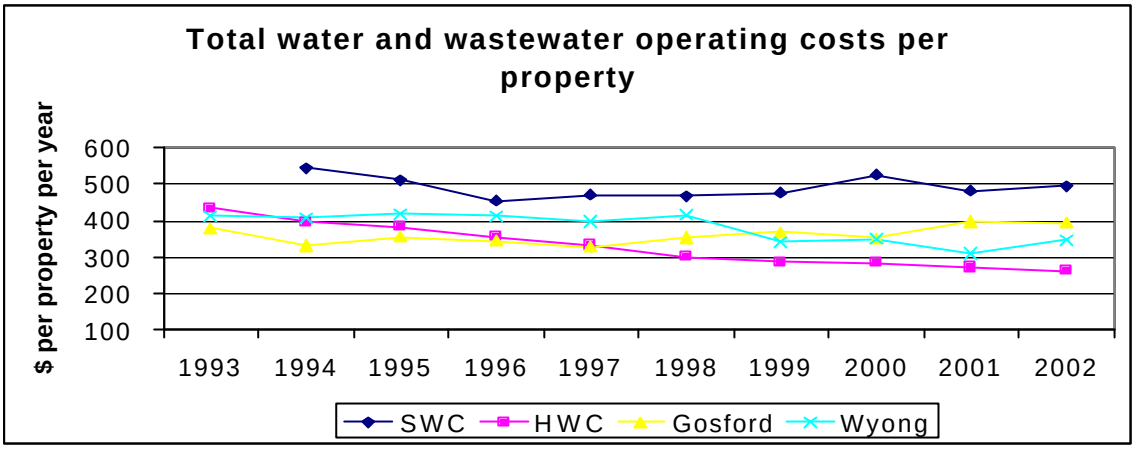
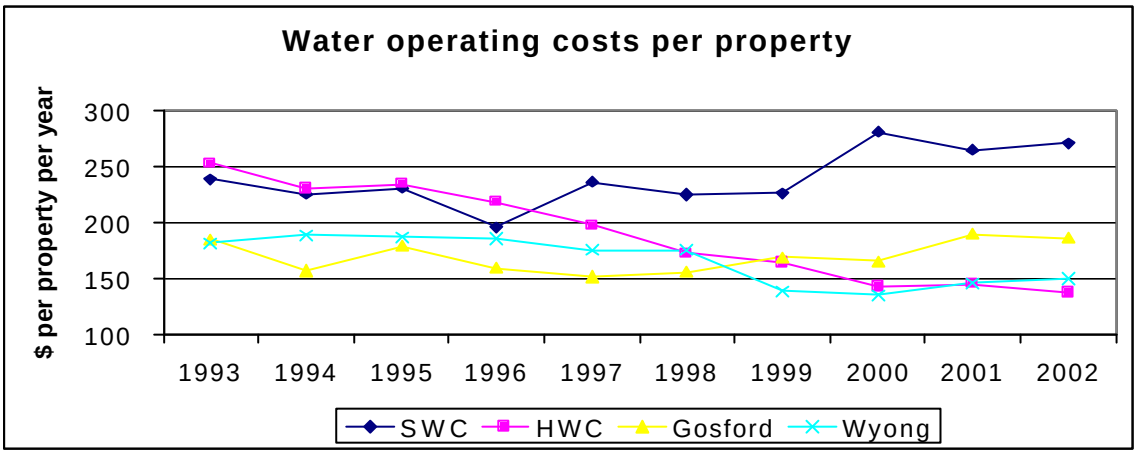
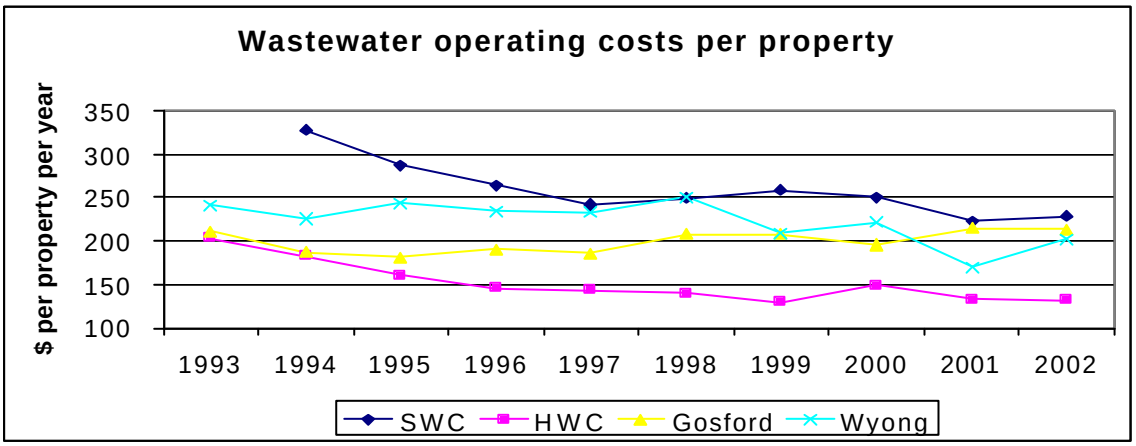


Figure A10.9 shows costs on a per property basis. This shows how costs have moved without the impact caused by increasing customer numbers. Note the increase in Sydney Water's costs in 2000 after the creation of the Sydney Catchment Authority.

Figure A10.9 Water and wastewater operating costs per property (real, 2002 $s)







CAPITAL EXPENDITURE

Capital expenditure measures the expenditure needed to replace existing assets and purchase new assets. Figure A10.10 shows the trend in capital expenditure of the water agencies compared to 1993 levels.

Figure A10.10 Index of capital expenditure

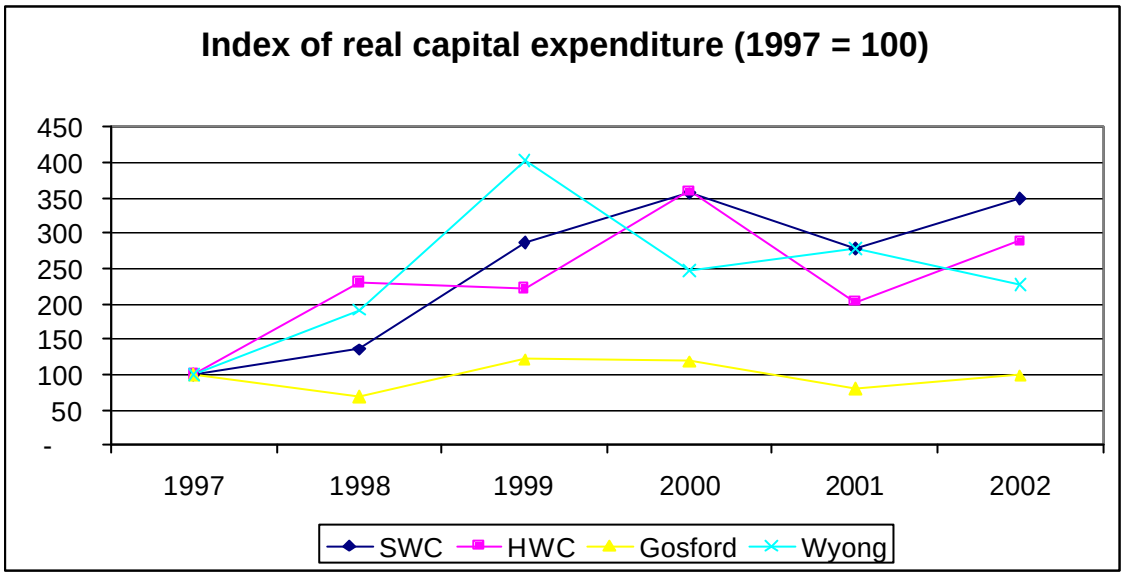
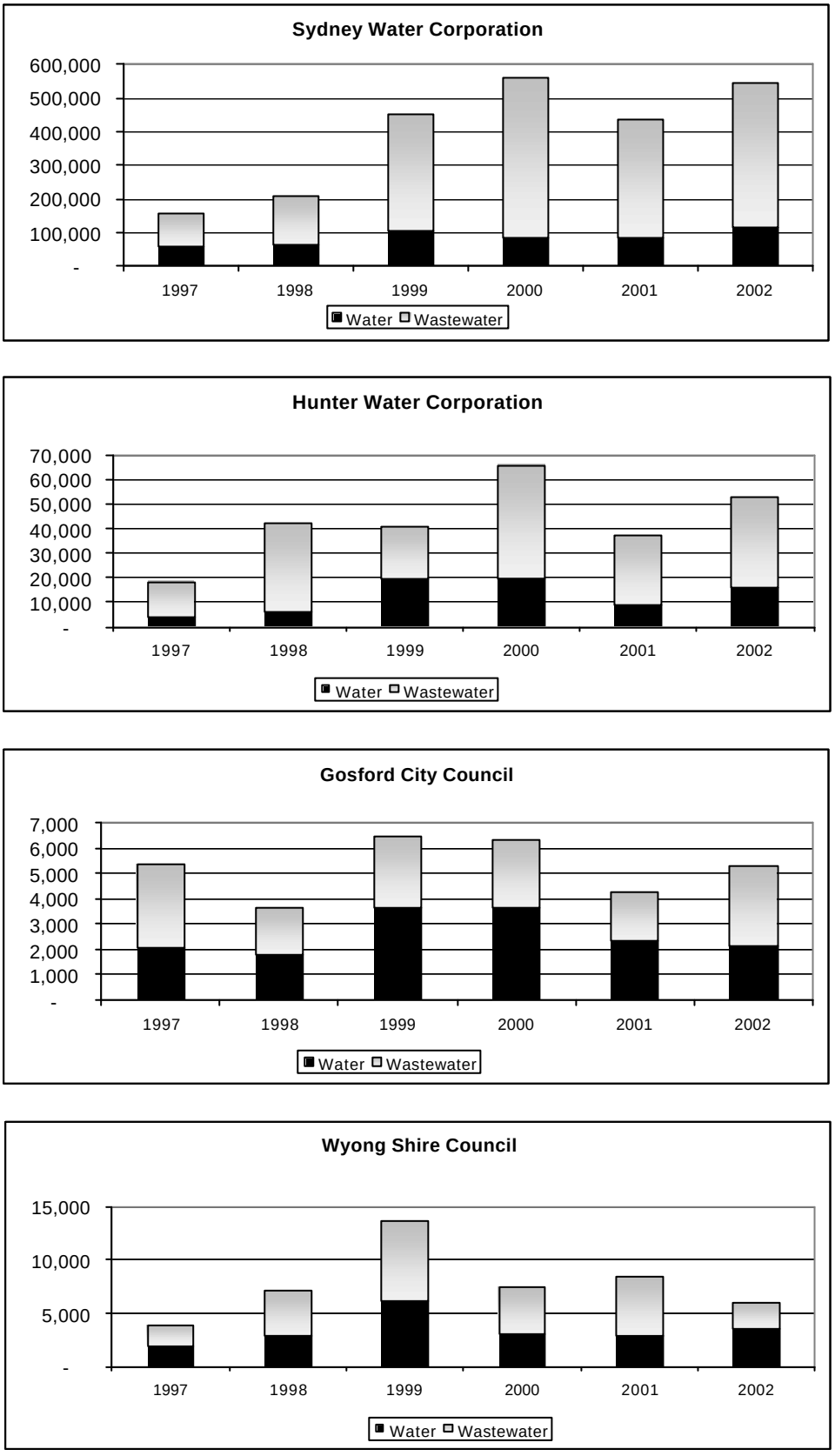


Figure A10.11 shows that SWC and HWC have directed the majority of their expenditure towards wastewater assets. The two councils are currently undertaking a study to determine the needs of their water supply system, the study initiated because of continuing low dam levels and influenced by the current drought conditions. With the potential introduction of environmental flow regimes, greater expenditure may soon be needed in the water areas of all agencies. In the Sydney area, capital expenditure on water supply assets will be incurred mainly by the Sydney Catchment Authority. The impact on Sydney Water will be as a result of increases in the cost of bulk water and will actually be recorded as increases in operating expenditure.

Figure A10.11 Water and wastewater capital expenditure (000, 2002 $s)



APPENDIX 11 PRINCIPLES FOR TRADE WASTE CHARGES

The application of appropriate pricing principles to trade waste requires that:

- Standards for acceptance should be set on the basis of the capacity of current systems to transport, treat and dispose of the wastes, having regard to the health and safety of wastewater workers.
- Trade waste charges should at least cover the costs to the water supplier of handling these wastes.
- Charges should vary to reflect differences in the cost of treating waste to the required standards at particular locations.
- Water suppliers should set charges and standards in a manner that is transparent and accurate. The method of measurement should be reliable and the basis for setting charges should reflect costs incurred as far as possible.

Where environmental reasons are made for variations from the pricing principles detailed above then sufficient evidence needs to be available to justify these variations. The basis for calculating greater than cost charges where environmental justifications exist should also be justified.

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: 02/33

Determination: No 3, 2003

Agency: Hunter Water Corporation

1. Preamble

Section 11 of the *Independent Pricing and Regulatory Tribunal Act 1992* (the IPART Act), provides the Tribunal with a standing reference to conduct investigations and make reports to the Minister on the determination of the pricing for a government monopoly service supplied by a government agency specified in Schedule 1 of the IPART Act.

The Hunter Water Corporation (the Corporation) is a Schedule 1 government agency and therefore a standing reference agency under the IPART Act. Accordingly the Tribunal may determine the prices for the Corporation's monopoly services.

The services of the Corporation that have been declared a monopoly service under the *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997* are:

(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.

In investigating and reporting on the pricing of the Corporation's monopoly services, the Tribunal has had regard to a broad range of matters, including the criteria set out in s.15(1) of the IPART Act. The s.15 criteria and other matters the Tribunal have considered are addressed in the Report to this Determination.

In accordance with s.13A of the IPART Act, the Tribunal has fixed a maximum price for the Corporation's monopoly services or established a methodology for fixing the maximum price.

By s.18(2) of the IPART Act, the Corporation may not fix a price below that determined by the Tribunal without the approval of the Treasurer.

Operative Provisions

1. Application

This Determination is made under section 11 of the IPART Act.

This Determination sets the maximum prices that the Corporation may charge for the declared monopoly listed in the Order and specified in this Determination.

2. Term of determination

This determination commences on the later of 1 July 2003 and date that it is published in the NSW Government Gazette.

This Determination will apply until it is replaced or revoked. If this Determination continues after 30 June 2005, the prices in this Determination for the period 1 July 2004 to 30 June 2005 will continue to apply.

3. Continuation of Determination No. 9 of 2000 and Determination No. 4 of 1997

Nothing in this Determination affects determination No. 9 of 2000 and determination No. 4 of 1997, which continue to apply within its terms to the services listed in paragraph (e) and paragraph (b) of the Order respectively.

4. Repeal of Determination No. 3 of 2000

Tribunal Determination No. 3 of 2000 is repealed from the commencement of this Determination. The repeal does not affect anything done or omitted to be done, or rights and obligations accrued, under that determination prior to its repeal.

5. Schedules

Schedules 1- 7 apply.

Schedule 1

Water Supply Services

1. Application

This Schedule sets the maximum prices that the Corporation may charge for services under paragraph (a) of the Order (water supply services).

2. Categories for pricing purposes

Prices for water supply services have been determined for 3 categories:

- metered properties
- unmetered properties
- water supplied to the Dungog Council.

3. Charges for water supply services to metered properties

The maximum price that may be levied by the Corporation on a metered property is the sum of the following:

(a) the water service charge set out in Table 1 corresponding to the applicable meter size and period; and

(b) a water usage charge which will be:

(i) for each kL of consumption up to and including 1000kL per year – the Tier 1 charge in Table 2 for the applicable volume of consumption and period; and

(ii) for each kL of consumption in excess of 1000kL per year and up to and including 50,000kL per year – the Tier 2 charge in Table 2 for the applicable volume of consumption and period; and

(iii) for each kL of consumption above 50,000kL per year – the charge in Table 3 corresponding to the applicable location of the property and for applicable volume of consumption and period

less any discount for calculated under clause 4 for raw water supplied to that property

Table 1 Water service charge for metered properties

Basis of Charge Meter size/diameter pipe size*	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 July 2004 to 30 June 2005 $
20mm	$26.05	$26.05 x (0.95+ ΔCPI)
25mm	$40.37	$40.37 x (0.95+ ΔCPI)
32mm	$66.42	$66.42 x (0.95+ ΔCPI)
40mm	$104.18	$104.18 x (0.95+ ΔCPI)
50mm	$162.78	$163.78 x (0.95+ ΔCPI)
80mm	$416.73	$416.73 x (0.95+ ΔCPI)
100mm	$651.14	$651.14 x (0.95+ ΔCPI)
150mm	$1,465.06	$1,465.06 x (0.95+ΔCPI)
200mm	$2,604.56	$2,604.56 x (0.95+ΔCPI)
250mm	$4,069.62	$4,069.62 x (0.95+ΔCPI)
300mm	$5,860.25	$5,860.25 x (0.95+ΔCPI)
350mm	$7,976.45	$7,976.45 x (0.95+ΔCPI)
400mm	$10,418.22	$10,418.22 x (0.95+ΔCPI)
500mm	$16,278.47	$16,278.47 x (0.95+ΔCPI)

* The pipe size refers to the size of the service pipe connecting the property to the water main.

Table 2 Maximum water usage charge for consumption of 50,000kL or less

Basis of charge Per kL of metered water used per year	Maximum charge for the period 1 July 2003 to 30 June 2004 $/kL	Maximum charge for the period 1 July 2004 to 30 June 2005 $/kL
Tier 1 water usage charge		
for each kL of metered consumption up to and including 1,000kL per year	$0.98	$0.98 x (1.01+ ΔCPI)
Tier 2 water usage charge		
for each kL of metered consumption in excess of 1,000kL per year and up to and including 50,000kL per year	$0.90	$0.90 x (1.01 + ΔCPI)

Table 3 Water usage charge where consumption exceeds 50,000kL

Basis of charge Per kilolitre of metered water used above 50,000kL	Maximum charge for the period 1 July 2003 to 30 June 2004 $/kL	Maximum charge for the period 1 July 2004 to 30 June 2005 $/kL
Kooragang/Stockton	$0.777	$0.777 x (1.008+ΔCPI)
Tomago	$0.813	$0.813 x (1.008+ΔCPI)
South Wallsend	$0.783	$0.783 x (1.007+ΔCPI)
Warners Bay/Valentine	$0.813	$0.813 x (1.008+ΔCPI)
Seaham/Hexham	$0.846	$0.846 x (1.007+ΔCPI)
Newcastle/Highfields	$0.855	$0.855 x (1.008+ΔCPI)
Raymond Terrace	$0.868	$0.868 x (1.008+ΔCPI)
Port Stephens	$0.870	$0.870 x (1.009+ΔCPI)
Kurri/Cessnock	$0.873	$0.873 x (1.009+ΔCPI)
Lookout	$0.873	$0.873 x (1.008+ΔCPI)
Edgeworth West Wallsend	$0.896	$0.896 x (1.008+ΔCPI)
All Other Locations	$0.90	$0.90 x (1.01+ΔCPI)

4 Discount to the water usage charge for the consumption of raw water

Where raw water is supplied the water usage charge will be the charge in Table 2 and Table 3, corresponding to the applicable volume of consumption and period, discounted by 7 cents for each kilolitre of raw water supplied.

5 Charges for water supply services to unmetered properties

The maximum charge that may be levied by the Corporation on an unmetered property for water supply services is the water service charge set out in Table 1 corresponding to the applicable period and the size of the service pipe connecting the property to the water main.

6 Water charges for the Dungog Council

The maximum price that may be levied by the Corporation for water supplies to the Dungog Council is the sum of the following:

(a) the water service charge set out in Table 1 corresponding to the applicable meter size and period; and

(b) the water usage charge set out in Table 4 corresponding to the applicable volume consumed and period.

Table 4 Water charges for Dungog Council

Basis of Charge Per kL of water used	Maximum charge for the period 1 July 2003 to 30 June 2004 $/kL	Maximum charge for the period 1 July 2004 to 30 June 2005 $/kL
Tier 1 water usage charge		
for each kL of metered consumption up to and including 1000kL per year	$0.98	$0.98 x (1.01 + ΔCPI)
Tier 2 water usage charge		
for each kL of metered consumption in excess of 1000kL per year and up to and including 50,000kL per year	$0.90	$0.90 x (1.01+ΔCPI)
Tier 3 water usage charge		
for each kL of metered consumption in excess of 50,000kL per year	$0.531	$0.531 x (1.008+ΔCPI)

7 Levying charges on multiple premises properties

Charges in this Schedule levied by the Corporation, in relation to a multiple premises (residential or non-residential) property is to be on the following basis:

- a strata title unit with a common water meter, the water service charge in Table 1 applicable to each of the common water meters that service the property and the water usage charge in Table 2 or Table 3 applicable to the water usage recorded by the common water meter may be apportioned equally or by unit entitlement or as otherwise agreed by the owners' corporation;
- a strata title unit or community title with its own water meter is deemed a single property for the purposes of levying charges in this Schedule;
- a multi premises non strata property, the water usage charge in Table 2 or Table 3 applicable to the water usage recorded by the common water meters that service the property and the water service charges in Table 1 applicable to each common water meter may be levied on the relevant multi premises body (unless the separate premises has its own meter).

Schedule 2

Sewerage Services

1. Application

This Schedule sets the maximum prices that the Corporation may charge for services under paragraph (b) of the Order (sewerage services).

2. Categories for pricing purposes

Prices for sewerage services have been determined for 4 categories:

- metered properties (other than residential single premises property with a 20mm water meter)
- residential single premises properties with a 20mm water meter
- unmetered properties
- residential single premises properties not connected to the Corporation's water system.

3. Charges for sewerage services to metered properties (other than residential single premises properties with a 20mm water meter)

The maximum price that may be levied by the Corporation for sewerage services to a metered property (other than residential single premises properties with 20mm water meters) connected to the Corporation's sewerage system, is the sum of the following:

(a) the sewerage service charge, set out in Table 6, corresponding to the applicable meter size and period; and

(b) the sewerage usage charge, set out in Table 7, corresponding to the applicable period.

4. Charges for sewerage services to residential single premises properties with a 20 mm water meter

The maximum price that may be levied by the Corporation for sewerage services to a single premises residential property with a 20mm meter size, connected to the Corporation's sewerage system, is the sum of the following:

(a) the sewerage service charge set out in Table 5, corresponding to the applicable period and;

(b) the sewerage usage charge set out in Table 7, corresponding to the applicable period.

Table 5 Sewerage service charge for metered residential (single premises) properties with a 20mm water meter

Basis of charge Meter size	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 July 2004 to 30 June 2005 $
20mm	231.48	231.48 x (1.01+ ΔCPI)

Table 6 Sewerage service charges for metered properties (other than residential single premises properties with a 20mm water meter)

Basis of Charge Meter size/diameter pipe size*	Maximum charge for the period 1 July 2003 to 30 June 2004 $ x df%**	Maximum charge for the period 1 July 2004 to 30 June 2005 $ x df%**
20mm	$462.95	$462.95 x (1.01+ΔCPI)
25mm	$717.58	$717.58 x (1.01+ΔCPI)
32mm	$1,180.53	$1,180.53 x (1.01+ΔCPI)
40mm	$1,851.81	$1,851.81 x (1.01+ΔCPI)
50mm	$2,893.46	$2,893.46 x (1.01+ΔCPI)
80mm	$7,407.26	$7,407.26 x (1.01+ΔCPI)
100mm	$11,573.84	$11,573.84 x (1.01+ΔCPI)
150mm	$26,041.14	$26,041.14 x (1.01+ΔCPI)
200mm	$46,295.35	$46,295.35 x (1.01+ΔCPI)
250mm	$72,336.49	$72,336.49 x (1.01+ΔCPI)
300mm	$104,164.54	$104,164.54 x (1.01+ΔCPI)
350mm	$141,779.52	$141,779.52 x (1.01+ΔCPI)
400mm	$185,181.41	$185,181.41 x (1.01+ΔCPI)
500mm	$289,345.95	$289,345.95 x (1.01+ΔCPI)

* The pipe size refers to the size of the service pipeconnecting the property to the water main.

** A discharge factor of 50% is applied for residential properties. For non-residential properties the discharge factor is determined by Hunter Water for each individual property.

Table 7 Sewerage usage charge for metered properties

Basis of Charge	Maximum charge for the period 1 July 2003 to 30 June 2004 $/kL x df%	Maximum charge for the period 1 July 2004 to 30 June 2005 $ /kL x df%
Per kL of water used multiplied by discharge factor	$0.42	$0.42 x (0.98+ΔCPI)

* A discharge factor of 50% is applied for residential properties. For non-residential properties the discharge factor is determined by Hunter Water for each individual property.

5. Charges for sewerage services to unmetered residential single premises properties not connected to the Corporation's water system

The maximum price that may be levied by the Corporation for sewerage services to a single premises residential property not connected to the Corporation's water services but connected to the Corporation's sewerage system is the sum of the following:

(a) the sewerage service charge set out in Table 5, corresponding to the applicable period; and

(b) the sewerage usage charge, set out in Table 8, corresponding to the applicable period.

Table 8 Sewerage usage charge for residential single premises properties not connected to the Corporation's water system

Basis of charge Type of service	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 July 2004 to 30 June 2005 $
Sewerage usage charge	10	20

6. Charges for sewerage services to unmetered properties connected to the Corporation's water system

The maximum price that may be levied by the Corporation for sewerage services to an unmetered property connected to the Corporation's water and sewerage system is the sewerage service charge set out in Table 6 corresponding to the applicable period and size of the service pipe connecting the property to the water main, multiplied by a discharge factor for the property.

7. Levying sewerage service charges on multiple premises properties

7.1 The charges in this Schedule levied by the Corporation on a residential strata title unit with a shared common water meter is to be on the following basis:

(a) the sewerage usage charge in Table 7 applicable to the water usage recorded by the common water meters may be apportioned equally or by unit entitlement or as otherwise agreed by the owners' corporation and

(b) which ever is the greater of:

(i) the sewerage service charge set out in Table 6 applicable to each common water meter that services the property which is apportioned equally or by unit entitlement or as otherwise agreed by the owners' corporation or

(ii) the sewerage service charge set out in Table 9.

7.2 The charges in this Schedule levied by the Corporation on a non residential strata title property with a shared common water meter is to be on the following basis:

- the aggregate sewerage usage charge in Table 7 applicable to the water use recorded by the common meters and the sewerage service charge in Table 6 is to

be apportioned equally or by unit entitlement or as otherwise agreed by the owners' corporation.

7.3 Each strata title unit or community title that has its own water meter, is deemed a single property for the purposes of levying charges in this Schedule.

7.4 The charges in this Schedule levied by the Corporation on a non strata title property is to be on the following basis:

- for a non residential property the sewerage usage charge in Table 7, and sewerage service charge in Table 6 is to be levied on the relevant multi premises body (unless the separate premises has its own meter),
- for a residential property, the sewerage usage charge in Table 7 and which ever is the greater of:
  (i) the sewerage service charge set out in Table 6 or
  (ii) the charge in Table 9 multiplied by the number of premises
  is levied on the relevant multi premises body (unless the separate premises has its own meter).

Table 9 Sewerage service charge for multiple premises residential properties

Basis of charge **Minimum sewerage service charge**	**Maximum charge for the period 1 July 2003 to 30 June 2004** **$**	**Maximum charge for the period 1 July 2004 to 30 June 2005** **$**
Minimum sewerage service charge for each separate premises in a multi premises residential property (ie unit or flat)	100	120

7.4 Where the minimum sewer service charge in Table 9 applies, under clause 7.1 and clause 7.4, the increase in the sewer service charge for each premises in a multi premises property is to be no more than $20 per year in nominal terms.

Schedule 3

Stormwater Drainage Services

1. Application

This Schedule sets the maximum prices that the Corporation may charge for services under paragraph (c) of the Order (stormwater drainage services).

2. Categories for pricing purposes

Prices have been determined for 2 categories:

- residential properties
- non-residential properties.

3. Stormwater drainage charges for residential properties

The maximum price that may be levied by the Corporation for stormwater drainage services to a residential property is the stormwater drainage service charge set out in Table 10 corresponding to the applicable period.

4. Stormwater drainage charges for non-residential properties

The maximum price that may be levied by the Corporation for stormwater drainage services to a non-residential property constructed after March 1991 is the stormwater service charge set out in Table 10, corresponding to the applicable period.

The maximum price that may be levied by the Corporation for stormwater drainage services to a non-residential property constructed before March 1991 is the sum of the following:

(a) the stormwater service charge set out in Table 10, corresponding to the applicable period; and

(b) the property valuation charge set out in Table 11, corresponding to the applicable period.

Table 10 Stormwater service charge for residential properties or non residential properties

Basis of charge	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 June 2004 to 30 June 2005 $
stormwater service charge	$38.46	$38.46 x (1.076+ΔCPI)

Table 11 Stormwater valuation-based charge for a non-residential property developed before March 1991

Basis of charge Assessed annual value of property	Maximum charge for the period 1 July 2003 to 30 June 2004 cents	Maximum charge for the period 1 June 2004 to 30 June 2005 cents
Property valuation charge (cents per $Assessed property value)	1.45	1.45 x(0.84+ΔCPI)

Schedule 4

Trade Waste Services

1. Application

This Schedule sets the maximum prices that the Corporation may charge for services under paragraph (d) of the Order (Trade Waste services).

2. Categories for pricing purposes

Prices have been determined for 2 categories:

- trade waste permits and inspections
- trade waste services

3. Charges for trade waste permits or inspection fees

3.1 The maximum price that may be levied by the Corporation for a trade waste permit (a major permit or a minor permit) or for inspection fees is the charge set out in Table 12 corresponding to the applicable period.

3.2 For the purposes of Table 12, the terms 'major permit' and 'minor permit' are defined in the Corporation's Trade Waste Policy.

Table 12 Trade waste permit and inspection fees

FEE	Description	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 July 2004 to 30 June 2005 $
Major Permit	Yearly fee and establishment	379.23	379.23 x (1+ΔCPI)
	Extra establishment fee for negotiations in excess of 10 hours required to finalise permit conditions	86.51 per hour	86.51 x (1+ΔCPI) per hour
Minor Permit	Establishment fee	114.30	114.30 x (1+ΔCPI)
	Yearly fee	91.86	91.86 x (1+ΔCPI)
Inspection Fees	Equal to or less than 30 minutes	66.00	66.00 x (1+ΔCPI)
	For each additional 30 minutes or part there of	38.32	38.32 x (1+ΔCPI)

4. Charges for trade waste services

The maximum price that may be levied by the Corporation for trade waste services is the charge set out in Table 13 and/or Table 14 corresponding the applicable period.

Table 13 BOD/NFR Trade Waste Charges

Wastewater treatment catchment	Maximum charge for the period 1 July 2003 to 30 June 2004 $/kg	Maximum charge for the period 1 July 2004 to 30 June 2005. $/kg
Belmont	2.24	2.26 x (1+ΔCPI)
Boulder Bay	2.36	2.38 x (1+ΔCPI)
Branxton	3.48	3.50 x (1+ΔCPI)
Burwood Beach	1.86	1.88 x (1+ΔCPI)
Cessnock	2.05	2.07 x (1+ΔCPI)
Dora Creek	2.74	2.76 x (1+ΔCPI)
Edgeworth	2.26	2.27 x (1+ΔCPI)
Farley	2.18	2.20 x (1+ΔCPI)
Karuah	10.64	10.09 x (1+ΔCPI)
Kearsley	3.25	3.27 x (1+ΔCPI)
Kurri Kurri	2.74	3.07 x (1+ΔCPI)
Morpeth	2.31	2.33 x (1+ΔCPI)
Paxton	6.60	6.62 x (1+ΔCPI)
Raymond Terrace	2.86	2.88 x (1+ΔCPI)
Shortland	2.57	2.58 x (1+ΔCPI)
Tanilba Bay	2.30	2.31 x (1+ΔCPI)
Toronto	2.23	2.25 x (1+ΔCPI)

Table 14 Charges for trade waste services

	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 July 2004 to 30 June 2005 $
Phosphorous > 11mg/L ($/kg)	3.71	3.71 x (1+ΔCPI)
Sulphate charge ($/$SO_4$ concentration)	0.107 x SO_4/2000	0.107 x (1+ΔCPI) x SO_4/2000
Heavy metals		
Burwood Beach ($/kg)	35.61	35.61 x (1+ΔCPI)
All other WWTW catchments ($/kg)	23.13	23.29 x (1+ΔCPI)
Tankering (all treatment plants)		
Portable toilet ($/kL)	13.20	13.31 x (1+ΔCPI)
Septic effluent ($/kL)	3.24	3.25 x (1+ΔCPI)
Septic sludge ($/kL)	36.15	36.39 x (1+ΔCPI)
Sludge is septic waste which has a BOD > 10,000 mg/L		
High Strength Waste* .volume ($/kg) all catchments	2.69 *plus*	2.69 x (1+ΔCPI) *plus*
plus .mass ($/kg)	BOD/NFR strength charge from Table 13	BOD/NFR strength charge from Table 13

[Note: High Strength Waste (including greasy waste) is calculated as a volume plus mass charge. The mass charges is the BOD/NFR charge from Table 13 for the relevant wastewater treatment plant at which the high strength waste is accepted].

Schedule 5

Environmental levies and other sewerage charges

1. Application

This Schedule sets the maximum prices that the Corporation may charge to recover the capital costs of backlog sewerage (under the Hunter Sewerage Project and the Priority Sewerage Program) services under paragraph (b) of the Order (sewerage services).

2. Categories for pricing purposes

Prices have been determined for 1 category:

- residential properties or non-residential properties.

3. Environmental improvement charge for residential and non-residential properties

3.1 The maximum price that may be levied by the Corporation on a residential property or non-residential property to recover the Corporation's capital costs related to backlog sewerage programs (under the Hunter Sewerage Project and the Priority Sewer Program) is the Environmental Improvement Charge set out in Table 15 for the applicable period.

3.2 For the purposes of clause 3.1, the Environment Improvement Charge in Table 15 does not apply where:

- the property is not currently connected to the sewerage service and will not be provided with a connection point to the sewerage system; or
- the property is owned and occupied by an eligible pensioner.

Table 15 Environmental Improvement Charge

Basis of Charge	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 July 2004 to 30 June 2005 $
EIC per year	47.80	47.80 x (1+ΔCPI)

4. Sewer service access charge for residential properties located in an area serviced by the Hunter Sewerage Project

The maximum price that may be levied by the Corporation at the time an existing vacant property is subdivided or a vacant residential property (located in an area serviced by the Hunter Sewerage Project) connects to the Corporation's sewerage is the charge set out in Table 16, corresponding to the applicable period.

Table 16 Sewerage service access charge

Basis of charge	Maximum charge for the period 1 July 2003 to 30 June 2004 $	Maximum charge for the period 1 July 2004 to 30 June 2005 $
One off charge at time of connection	3,034	3,034 x (1+ΔCPI)

Schedule 6

Ancillary and miscellaneous customer services

1. Application

This Schedule sets the maximum prices that the Corporation may charge services under paragraph (g) of the Order (ancillary and miscellaneous customer services for which no alternative supply exists).

2. Categories of charges

Prices have been determined for the services listed in Table 17.

3. Ancillary and miscellaneous charges

3.1 The maximum charge that may be levied by the Corporation for ancillary and miscellaneous services set out in Table 17 are the amounts listed in the Table corresponding to the service.

3.2 A reference in Table 17 to "NA" means that the Corporation does not provide the relevant service.

Table 17 Charges for ancillary and miscellaneous services

Service No.	Description	Maximum price / service for the period 1 July 2003 to 30 June 2005
		$
1	**Conveyancing Certificate** **Statement of Outstanding Charges**	
	a) Over the Counter	14.00
	b) Electronic	9.20
2	**Property Sewerage Diagram – Up to and including A4 size (where available)** *Diagram showing the location of the house-service line, building and sewer for a property*	
	a) Certified	NA
	b) Uncertified	
	1. Over the Counter	10.00
	2. Electronic	NA
3	**Service Location Diagram** *Location of sewer and/or Water Mains in relation to a property's boundaries*	
	a) Over the Counter	10.00
	b) Electronic	9.20
4	**Special Meter Reading Statement**	45.00
5	**Billing Record Search Statement - Up to and including 5 Years**	37.00
6	**Building Over or Adjacent to Sewer Advice** *Statement of Approval Status for existing Building Over or Adjacent to a Sewer*	20.00
7	**Water Reconnection**	
	a) During business hours	32.00
	b) Outside business hours	74.00
8	**Workshop Test of Water Meter** *Removal and full mechanical test of the meter by an accredited organisation at the customer's request to determine the accuracy of the water meter. This involves dismantling and inspection of meter components*	
	20mm	186.40
	25mm	186.40
	32mm	220.50
	40mm	220.50
	50mm	243.60
	60mm	NA
	80mm	268.60
	100mm	313.70
	150mm	313.70
9	**Application for Disconnection – All Sizes**	24.00
10	**Application for Water Service Connection (up to and including 25mm)** *This covers the administration fee only. There will be a separate charge payable to the utility if they also perform the physical connection*	24.00

Service No.	Description	Maximum price / service for the period 1 July 2003 to 30 June 2005
		$
11	**Application for Water Service Connection (32-65mm)** *This covers administration and system capacity analysis as required*	217.00
12	**Application for Water Service Connection (80mm or greater)** *This covers administration and system capacity analysis as required*	363.00
13	**Application to Assess a Water Main Adjustment** *(Moving a fitting and/or adjusting a section of water main up to and including 25 metres in length)* *This covers preliminary advice as to the feasibility of the project and will result in either:* *1. A rejection of the project in which cases the fee covers the associated investigation costs* *Or* *2. Conditional approval in which case the fee covers the administrative costs associated with the investigation and record amendment.*	322.00
14	**Standpipe Hire**	
	Security Bond (20mm)	300.00
	Security Bond (32 & 50mm)	700.00
15	**Standpipe Hire** *Hire of a portable metered standpipe to extract water from water mains*	
	Tri-annual Fee	
	(20mm)	34.00
	(32mm)	66.00
	(50mm)	71.00
	Monthly Fee	
	(20mm)	21.00
	(32mm)	29.00
	(50mm)	31.00
16	Standpipe Water Usage Fee (All usage)	As per water usage charges in Schedule 1
17	**Backflow Prevention Device Application and Registration fee** *This fee is for initial registration of the backflow device*	10.00
18	**Backflow Prevention Application Device Annual Administration Fee** *This fee is for the maintenance of records including logging of inspection reports*	16.00
19	**Major Works Inspection Fee** *This fee is for the inspection, for the purposes of approval of water and sewer mains, constructed by others, that are longer than 25 metres and/or greater than 2 metres in depth*	
	Water Mains ($ per metre)	6.10
	Gravity Sewer Mains ($ per metre)	9.30
	Rising Sewer Mains ($per metre)	6.10
20	**Statement of Available Pressure and Flow** *This fee overs all levels whether modelling is required or not*	176.00

Service No.	Description	Maximum price per service for the period 1 July 2003 to 30 June 2005 $	
		Fixed	**Hourly**
21	**In-Situ Testing of Water Meters** *On site testing of meters for accuracy by Hunter Water*	126.00	NA
22	**Application to Connect or Disconnect Sewer** *Process applications to connect a new sewer service or to disconnect an existing sewer service.*	26.00	NA
23	**Application to Connect or Disconnect Water & Sewer Services (combined application)** *Process combined application to connect a new water and sewer service or to disconnect an existing water and sewer service.*	28.00	NA
24	**Cutting Off or Reconnecting Water Supply at the Meter Upon Request** *Cut off or reconnect water supply at the meter upon request by a customer.*		
	Between 9am and 5pm	52.00	NA
	Between 5pm and 9am	151.00	NA
25	**Disconnection Visit** *Attend property to disconnect/restrict water for non-payment of accounts.*	0.00	NA
26	**Irregular & Dishonoured Payments** *Functions relating to cheques returned by banking authorities or payment agency as irregular or dishonoured, credit card payment declines and direct debit payment declines.*		
	Banking Authority:		
	- Cheques	26.00	NA
	- Credit Card decline	16.00	NA
	- Direct Debit decline	19.00	NA
	Australia Post:		
	- Cheques	31.00	NA
27	**Disconnect/Restrict Contact** *Personal contact with Customer to review payment options to avoid proceeding to disconnection or restriction of services.*	0.00	NA
28	**Request for Separate Metering of Strata Units** *Process a request from a Body Corporate for separate sub-metering of individual units within a registered Strata Plan*		
	Up to 4 units	54.00	NA
	5 to 10 units	62.00	NA
	> 10 units	70.00	NA

Service No.	Description	Maximum price per service for the period 1 July 2003 to 30 June 2005 $	
		Fixed	Hourly
29	**Water Meter Re-Read** *Re-read a water meter because a Customer has not returned a self read card left during the normal reading cycle because the meter was inaccessible.*	33.00	NA
30	**Application to Connect to Corporation Stormwater Channel** *New developments unable to drain to the street drainage system maybe serviced by a Hunter Water stormwater channel if available. The fee covers the cost of assessment.*	140.00	NA
31	**Hydraulic Design Assessment** *The NSW Code of Practice: Plumbing and Drainage requires developments with large domestic or fire water demands and/or trade waste discharges to lodge hydraulic designs for Hunter Water's approval. This service is normally provided to redevelopments using an existing meter.*	193.00	NA
32	**Pump Station Design Assessment** *Pump station designs prepared by consultants are audited to ensure compliance with Hunter Water standards.*		
	Water Pump Station	2,407.00	NA
	Sewer Pump Station	2,643.00	NA
33	**Application to Assess Sewer main Adjustment** *(Moving a fitting and/or adjusting a section of sewer main up to and including 25 metres in length)*	322.00	NA
34	**Application for Preliminary Developer Charge** *This fee covers assessment of the proposed development and determination of developer charges.*	134.00	NA
35	**Fee for Revision of Notice of Requirements** *The revision fee covers the cost of recalculating the developer charge and reviewing the construction requirements.*	286.00	NA
36	**Bond Assessment & Lodgement Fee** *This fee covers the lodging and release of a bond, and an estimation of the cost of outstanding works, where a developer wishes to provide security in lieu of constructing works to facilitate early release of Hunter Water compliance certificates.*	658.00	NA
37	**Application to Vary a Bond** *This charge covers Hunter Water's administration cost for adjustment of securities.*	147.00	NA

Service No.	Description	Maximum price per service for the period 1 July 2003 to 30 June 2005 $	
		Fixed	Hourly
38	**Application Processing Fee** *The application fee covers the basic processing of each application to determine if there are any requirements such as devdoper charges or the construction of works.*	322.00	NA
39	**Application for Water/Sewermain Extensions** *Unserviced property owners can apply for approval to extend water and/or sewermains. Hunter Water calculates appropriate developer charges and extension options based on system capacity and topographical constraints.*	322.00	NA
40	**Assessment of Minor Works** *Some applications required relatively minor works - typically 1 into 2 lot subdivisions in urban areas where water and sewer facilities are connected to the lot being subdivided. The resources required to assess minor works designs are considerably less than those required for large developments.*	474.00	NA
41	**Assessment of Major Works** *This category consists principally of large subdivisions or 'greenfield' sites. As a result of the works being large scale, including not only reticulation systems but also lead-in works, pump stations and rising mains, applicants are required to engage consultants to prepare the designs. Following approval of the designs, construction is supervised by Hunter Water which also carries out the work-as-executed survey and connections to live watermains. These fees are separately charged.*	1,783.00	NA
42	**Connection to Existing Water System (major works)** *This fee covers shut down to allow connections to existing fittings and recharging the main.*	555.00	NA
43	**Insertion or Removal of Tee & Valve** *Hunter Water is required to identify the shutdown area, issue pre-shutdown notices to affected customers, shutdown the water system to allow the contractor to connect new water systems and restore the water supply following connection.*		
	Shutdown and charge up only	555.00	NA
	Shutdown, insert tee & valve, and charge up	695.00	NA
	Quote - Operations to do whole job	See Note 1	See Note 1
44	**Application for Additional Sewer Connection** *Development requiring alternative sewer connection points must make an application to Hunter Water. Review of options and assessment of drawings or designs.*	140.00	NA

Service No.	Description	Maximum price per service for the period 1 July 2003 to 30 June 2005 $	
		Fixed	Hourly
45	**Application for Large Watermain Connection (tee & valve)** *Water services greater than 80mm diameter require special connection arrangements to Hunter Water's mains and are covered by an agreement and technical specification prepared on application.*	146.00	NA
46	**Minor Works Inspection Fee** *Auditing of works constructed under minor works contracts to ensure that specified quality is being achieved.*	147.00	NA
47	**Major Works Inspection and WAE Fee** *Comprises inspection/audit of works constructed under major works contracts to ensure that specified quality is achieved. Work-as-executed comprises survey of the constructed work and modifying plans to detail the precise location of the work for inclusion in Hunter Water information systems.*		
	Water Pump Stations	3600.00	NA
	Sewer Pump Stations	5150.00	NA
48	**Application to Assess Encroachment on Hunter Water Land, Easement Rights or Assets** *This fee if for a first pass review of an application, to allow Hunter Water to advise requirements to be met and a quote for additional, more detailed assessment.*	203.00	NA
49	**Technical Services (Fee per hour)** *This fee provides an hourly rate for additional technical work to be undertaken as agreed upfront with the client/applicant.*	NA	101.00 per hour
50	**Wyee East Water Contribution** *Special charge to connect to Wyee East water reticulation system*	1293.00	NA
51	**Determining Requirements for Building Over/Adjacent to Sewer** *Statement of conditional requirements to Council approved building plans to safeguard Hunter Water's sewer assets.*	49.00	NA

Note 1: This service is contestable and can be provided by Hunter Water or other service providers based on market rates. As such these charges are not regulated by the Tribunal.

Schedule 7

Definitions and Interpretation

DEFINITIONS

1 Definitions

1.1 Expressions used in this determination

In this determination:

Corporation means the Hunter Water Corporation constituted as a corporation under the *Hunter Water Act 1991.*

community association has the same meaning given to the term in the *Community Land Development Act, 1989.*

community title property has the means a community parcel as defined in the *Community Land Development Act, 1989.*

company title building means a multi-occupancy building (usually home units), where a company owns the building, and the company's shares are divided into the number of blocks or classes, entitling the owner of the shares to exclusive occupation of a portion of the building.

Determination means this determination, including all appendices, attachments, schedules, tables and documents forming part of this determination.

df% or **discharge factor** means in relation to a property, the percentage of water supplied to that property which the Corporation assesses or deems to be discharged into the Corporation's sewerage system.

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

Hunter Sewerage Project means the program established in 1988 by the NSW Government to provide sewer services to specific unsewered areas in Hunter Water's area of operation

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

kL means kilolitre or one thousand litres.

meter means a meter or other apparatus for the measurement of water, including any pipes and like fittings ancillary to such devises.

metered property means a residential property or non residential property (as the case may be) that :

(a) has a meter; and

(b) is connected either directly or jointly with other properties to the Corporation's water supply system.

non-residential property means a property that is not a residential property.

[Note: the main land uses that fall within the 'non-residential' property category are commercial, industrial, and includes the holder of council or government property].

Order means the *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997* made on 5 February 1997 and published in Government Gazette No. 18 dated 14 February 1997.

owners' corporation has the meaning given to that term under the *Strata Schemes Management Act 1996.*

premises means each of the following within a multi premises property:

(a) a strata unit,

(b) a company title unit,

(c) a community development lot, or

(d) or part of a building lawfully occupied or available for occupation,

each of which has a direct or indirect connection to the Corporation's water main (in the case of water supply charges) or the Corporation's sewerage system (in the case of sewerage charges).

Priority Sewerage Program means the program established in 1998 by the NSW Government to provide sewer services to unsewered areas based on a priority ranking developed by the Environment Protection Authority and NSW Health.

property means:

(a) premises used for any purpose, or

(b) land, whether built on or not. (However, if there are one or more premises on the land, then the land does not constitute a separate property in addition to those premises).

raw water means water that has not been treated or filtered by the Corporation.

relevant multi premises body, in respect of a multi premises property, means:

(a) an owners' corporation (in respect of a strata title building)

(b) a company (in respect of a company title building)

(c) a community association (in respect of a community parcel)

(d) an owner (in respect of a building lawfully occupied or available for occupation).

residential property means a property where:

(a) the dominant use is residential or

(b) in the case of each premises in a multi premises property that is deemed to be a property for any purpose under this Determination.

(i) the land upon which the premises are located is categorised as residential under section 516 of the *Local Government Act*, or

(ii) the dominant use of those premises is residential.

[Note: section 516 of the *Local Government Act 1993* defines how land is categorised as residential. Under that section, hotels, motels, guest-houses, backpacker hostels or nursing homes or any other form of residential accommodation (not being a boarding house or a lodging house) prescribed by the regulations), are not included in this definition].

strata title building means a building that is subject to the a strata scheme under the *Strata Schemes (Freehold Development) Act 1973.*

strata title unit means a lot as defined under the *Strata Schemes (Freehold Development) Act 1973.*

Trade Waste Policy means Hunter Water Corporation's Trade Waste Policy and Management Plan (as amended from time to time).

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

vacant property means a property that:

(a) has no capital improvements, and

(b) for the purposes of Schedule 5, is not connected to the Corporation's sewerage system but is reasonably available for connection to the Corporation's sewerage system.

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

1.2 Consumer Price Index

In this determination:

(a) **CPI** means the consumer price index All Groups index number for the, weighted average of eight capital cities, 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.

(b) $$\Delta\mathbf{CPI} = \left(\frac{CPI_{Jun2003} + CPI_{Sep2003} + CPI_{Dec2003} + CPI_{Mar2004}}{CPI_{Jun2002} + CPI_{Sep2002} + CPI_{Dec2002} + CPI_{Mar2003}} \right) - 1$$

(c) The subtext (for example $_{\text{Jun 2003}}$) when used in relation to CPI means the CPI for the quarter and year indicated (in the example the June quarter for 2003).

2. Interpretation

2.1 Prices exclusive of GST

Prices or charges specified in this determination are exclusive of GST.

2.2 Billing cycle of Corporation

For the avoidance of doubt:

(a) the Corporation must not issue a bill which exceed a maximum price or charge for a period specified in this determination; and

(b) where the bill traverses more than one period specified in this determination, the bill must be pro rated between those periods by reference to the price or charge specified in this determination applying to each period.

2.3 General provisions

(a) A schedule means a schedule to this Determination.

(b) A clause means a clause in this Determination and when used in a schedule means a clause in that schedule, unless otherwise indicated.

(c) Words importing the singular include the plural and vice versa.

(d) The explanatory notes do not form part of this Determination, but in the case of uncertainty may be relied on for interpretation purposes.