

**Review of 1996 Medium Term Price Path Determinations
for Sydney Water Corporation
and Hunter Water Corporation**

**Review of Sydney Water Corporation's
Stormwater Charges and Expenditures**

AN INFORMATION PAPER

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

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Submissions

Public involvement is an important element of the Tribunal's processes. The Tribunal therefore invites submissions from interested parties to all of its investigations.

Submissions should have regard to the specific issues that have been raised. There is no standard format for preparation of submissions but reference should be made to relevant issues papers and interim reports. Submissions should be made in writing and, if they exceed 15 pages in length, should also be provided on computer disk in word processor, PDF or spreadsheet format.

Confidentiality

Special reference must be made to any issues in submissions for which confidential treatment is sought and all confidential parts of submissions must be clearly marked. *However, it is important to note that confidentiality cannot be guaranteed as the Freedom of Information Act and section 22A of the Independent Pricing and Regulatory Tribunal Act provide measures for possible public access to certain documents.*

Public access to submissions

All submissions that are not subject to confidentiality will be made available for public inspection at the Tribunal's offices immediately after registration by the Tribunal and also via the Tribunal's website. Transcriptions of public hearings will also be available.

Public information about the Tribunal's activities

A range of information about the role and current activities of the Tribunal, including copies of latest reports and submissions can be found on the Tribunal's website at www.ipart.nsw.gov.au.

Submissions on the issues raised in this paper should be received no later than 27 March 1998.

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FOREWORD

Two reviews of urban water pricing are currently in progress. The first considers the mid-term pricing review for Sydney Water Corporation and Hunter Water Corporation. The second considers Sydney Water's stormwater charges and expenditures.

In June 1996, the Tribunal determined price paths for water, wastewater and drainage services for Sydney Water Corporation and Hunter Water Corporation for the four years 1996/97 to 1999/2000. At that time, the Tribunal announced that a mid term pricing review would be undertaken in 1998.

The focus of the mid term review is to ascertain whether the June 1996 price determinations remain appropriate. Because it is important to provide incentives for efficiency and a stable environment for the corporations, the Tribunal is reluctant to amend the determinations unless change is clearly necessary. The next major review of water prices will commence in the second half of 1999 and will establish a price path from 2000/01.

Higher health, environmental and customer service standards affect water, wastewater and drainage services. The water utilities' compliance with the designated standards is monitored by the Department of Health, the Environment Protection Authority (EPA) and the Licence Regulator. The outcomes of that monitoring are key inputs into the Tribunal's determinations. In some cases, higher standards will not significantly affect the corporations' prices until after 2000.

In recent years the corporations' capital expenditure and underlying operating expenses have declined and their overall financial position has improved. Now, they face a significant increase in environment-related expenditure. Their capacity to meet planned expenditure and any new requirements within the current price path needs to be carefully considered.

The key issues for the mid term review of Sydney Water Corporation's and Hunter Water Corporation's charges are:

- ***What has changed since the Tribunal released the four year price determinations in June 1996?***
- ***Are these changes material?***
- ***Do the changes necessitate a variation to the original determinations or can they be considered in the context of the next major review?***
- ***What matters need to be researched prior to the major review of prices commencing in 1999?***

Stormwater management is a major issue in the Sydney area. Stormwater collects waste and pollutants before discharging into natural water systems (harbour, oceans, and rivers). It can also infiltrate the sewerage system causing that system to overflow, releasing raw sewage. Responsibility for stormwater management is shared between Sydney Water, local government and various other government agencies (eg Roads and Traffic Authority).

Following a study of Sydney Water's proposals to construct a tunnel from Lane Cove to North Head, to reduce sewage pollution of the Harbour, the Premier has requested that the

Tribunal review Sydney Water's stormwater revenues and expenditures. The stormwater review is to be undertaken in conjunction with the mid term pricing review.

This review focuses only on Sydney Water's existing obligations and operation of the existing stormwater system. A major issue is whether adequate expenditure is planned by Sydney Water and local councils to achieve the community's expectations for improved stormwater management. A catchment-based stormwater planning process is presently underway under the auspices of the EPA. The Tribunal has decided to defer consideration of Sydney Water's possible new environmental obligations and their pricing implications to the next major review commencing in 1999.

The stormwater review will consider the scope of and expenditure on Sydney Water's stormwater drainage services. Key aspects of the stormwater review are:

- ***What are Sydney Water's stormwater responsibilities?***
- ***How does Sydney Water currently fund its stormwater drainage services?***
- ***Who should pay for stormwater services and on what basis should they pay?***
- ***What are the economic, environment, social and urban development impacts of different stormwater charging regimes?***
- ***Are there any issues arising from the interface between Sydney Water's and local government's stormwater systems?***
- ***What are the implications for total water management?***

The Tribunal looks forward to your participation in these two reviews.

Thomas G Parry
Chairman
January 1998

GLOSSARY AND ACRONYMS

AAV	Assessed annual value. AAV is used in Sydney Water's property-value based charges. AAV relates to the rental value of the property determined by the NSW Valuer General at a base date of 1 July 1980.
BOO	Build Own Operate
CMA	Catchment management authorities
COAG	Council of Australian Governments
EIC	Environment Improvement Charge
EIS	Environment Impact Statement
EPA	Environment Protection Authority
HWC	Hunter Water Corporation
IPART	Independent Pricing and Regulatory Tribunal of NSW
KL	Kilolitre
LBL	Load based licensing
ML	Megalitre
NCC	National Competition Council
NCP	National Competition Policy
NMU	Non-metropolitan urban water authorities
NSOOS	Northern Suburbs Ocean Outfall Sewer
OFWAT	Office of Water Services, the UK water services regulator
RTA	Road and Traffic Authority
RWA	Rural water authorities
SCI	Statement of Corporate Intent
STP	Sewage treatment plant
SVA	Shareholder value added
SWC	Sydney Water Corporation

INTRODUCTION

In June 1996, the Independent Pricing and Regulatory Tribunal (IPART) determined the price path for charges by Sydney Water Corporation (SWC) and Hunter Water Corporation (HWC) for water, sewerage and drainage services for the four year period from 1996/97 to 1999/2000.

Issues have arisen and developments occurred since the June 1996 determination. This mid-term review in 1998 provides an opportunity to consider any significant new issues and to decide whether service quality and other fundamental parameters underpinning the determinations have or are likely to change to such an extent that the determinations need to be amended.

In addition, the Premier, under section 12(1)(a) of the IPART Act, has referred to the Tribunal a review of Sydney Water Corporation's stormwater charges and expenditures.

This information paper is intended to help the corporations and interested parties to prepare submissions to these two reviews. This paper:

- outlines the scope of the two reviews and review procedures
- identifies issues on which IPART seeks comments and information.

The review process and timetable are outlined in the following section. Background to the two reviews and key issues are discussed in section A (mid-term review) and section B (stormwater) respectively.

REVIEW PROCESS AND TIMETABLE

The review process involves:

- releasing this information paper
- placing on public record the submissions of the corporations
- receiving written responses to these submissions from the public
- holding public hearings
- consulting with stakeholders
- releasing the Tribunal's report and determinations.

The inquiry timetable for the mid term pricing review and the stormwater review is as follows:

Timetable for mid-term pricing and stormwater reviews

Actions	Timing
<i>Advertising terms of reference ⁽¹⁾</i>	<i>19 December 1997</i>
<i>Releasing information paper</i>	<i>January 1998</i>
<i>Receiving agency submissions</i>	<i>3 March 1998</i>
<i>Receiving public submissions</i>	<i>27 March 1998</i>
<i>Holding public hearings in Sydney ⁽²⁾</i>	<i>2 & 3 April 1998</i>
<i>Releasing IPART reports</i>	<i>June/July 1998</i>

Note:

1. The terms of reference for the stormwater review were finalised in December 1997 following a public consultation process.
2. The actual hearings will be held over 1-2 days, depending on the issues and the number of submissions. At this stage, two days in total have been set aside for the hearings. The hearings will be held at IPART offices, at Level 2, 44 Market Street, Sydney.

Section 15 of the IPART Act requires IPART to consider various matters in making a determination. These matters may be grouped as follows:

- **Consumer protection**
 - *Prices, pricing policies and standards of service.*
 - *General price inflation.*
 - *Social impact of decisions.*
- **Economic efficiency**
 - *Greater efficiency in the supply of services.*
 - *Effect of functions being carried out by another body.*
 - *The need to promote competition.*
- **Financial viability**
 - *Rate of return on public sector assets.*
 - *Impact of borrowing, capital and dividend requirements.*
- **Environmental and other standards**
 - *Protection of environment by appropriate pricing policies.*
 - *Considerations of demand management.*
 - *Standards of quality, reliability and safety.*

Submissions to IPART may address any of these matters.

The principles of stakeholder consultation and transparency continue to guide IPART's work. IPART and its Secretariat are actively seeking public input.

**PART A: MID-TERM PRICING REVIEW FOR
SYDNEY WATER CORPORATION AND HUNTER WATER CORPORATION**

A1 SUMMARY OF THE 1996 DETERMINATION AND OF THE FOUR YEAR PRICE PATHS FROM 1996/97 TO 1999/2000

Principal aspects of the determinations released in June 1996 are:

Sydney Water Corporation

- A four year price path has been set from 1996/97 to 1999/2000 with a mid term review to take place in early 1998.
- Overall periodic water, sewerage and drainage charges are to be reduced by 2.3 percent in real terms in 1996/97¹ and by an average of 0.8 percent a year in the subsequent three years.
- Existing non-residential property value based charges are to be reduced by \$20m a year in each of the four years, 1996/97 to 1999/2000. The remaining non-residential property value based charges (\$61m in 1999/2000) are to be considered in the next major review.
- Water charges are to increase to reflect the filtration costs of higher drinking water quality:
 - * water usage charges (residential and non-residential) for retail filtered water to increase by 6 cents to 76 cents per kilolitre in 1996/97 and to increase progressively to 90 cents in 1999/2000
 - * water service charge are to remain at the current level (\$80 a year) in nominal terms until 1999/2000.
- Sewerage charges
 - * the annual sewerage service charge is to increase by \$8.60 to \$271.60 for residential and non-residential properties (with 20mm water meters) in 1996/97 and then to increase progressively to \$290.40 in 1999/2000
 - * the non-residential sewerage usage charge is to increase by 4 cents to 87 cents per kilolitre in 1996/97 and to increase progressively to 96 cents in 1999/2000.
- Stormwater drainage area charges are to remain at the current level in nominal terms over the next four years. Drainage property value based revenue is also to remain at the current level in nominal terms.
- Overview of future charges – see table A1.

IPART is to introduce a new charge for “sewer mining” for Sydney Water. The initial price will be set at the higher of “zero” or “cost”² until the reuse market increases to 20 percent of total water use market.

Hunter Water Corporation

- A four year price path has been set from 1996/97 to 1999/2000 with a mid term review to take place in early 1998.

¹ This implies a nominal increase of 3.0 percent on the basis of a 5.3 percent average increase in the Consumer Price Index (Sydney) for the twelve months to March 1996 compared with the twelve months to March 1995.

² There may be connection/contractual costs imposed on SWC in any sewer mining activity undertaken by another party.

- Overall periodic water, sewerage and drainage charges (excluding charges for the Hunter Sewerage Project) are to decrease by 2 percent³ a year in real terms from 1996/97 to 1999/2000.
- Charges relating to the Hunter Sewerage Project:
 - * The Environmental Improvement Charge is to decrease from \$78 a year to \$40 in 1996/97 and to be held constant in nominal terms (at \$40) until 1999/2000.
 - * The Hunter Sewer Service Access Charge is to be reduced from the current level of \$3,059 to \$2,780. This charge will remain at the reduced level in nominal terms until 1999/2000.
 - * A refund of \$441 plus accrued interest will be provided to owners who have paid the sewer service access charges in past years.
- Water charges
 - * The water usage charge (for water consumption below 1000 kl) is to increase by 5.3 cents to 85.7 cents per kilolitre in 1996/97. The usage charge is to then *increase* to 88.8 cents (in 1996/97 dollar terms) by 1999/2000.
 - * The water service charge is to decrease from \$73.50 a year to \$63.60 for residential and non-residential properties in 1996/97. The annual charge is to then *decrease* progressively to \$23.70 (in 1996/97 dollar terms) by 1999/2000.
- Sewerage charges
 - * Residential sewerage usage charges are to *decrease* by 8.8 cents to 74.6 cents per kilolitre in 1996/97 and then to decrease progressively to 45.8 cents (in 1996/97 dollars terms) in 1999/2000. (This usage charge is multiplied by a discharge factor of 50 percent and is then added to service charges to make up the residential sewerage bill.)
 - * The non-residential sewerage usage charge is to *increase* by 2 cents to 39 cents per kilolitre in 1996/97 and will remain at this level in real terms to 1999/2000.
 - * The sewerage service charge for residential customers will *increase* by \$16.20 a year to \$172.50 (assuming a discharge factor of 50 percent) for residential and non-residential properties in 1996/97. The annual charge are to then increase progressively to \$195.00 (assuming a discharge factor of 50 percent) in 1999/2000.
- Stormwater drainage service charges will be adjusted by CPI-2 percent a year over the price control period.
- The net present value (NPV) method currently used by Hunter Water to calculate developer charges will be modified to be consistent with the methodology determined by IPART. This generally implies an increase of approximately 50 percent over current charges. The new charges are to be phased in progressively over the next four years.
- New trade waste charges approved by IPART in 1994/95 to continue to be phased in during 1996/97. The charges are then to be adjusted annually by CPI-2 percent during the remainder of the price control period.
- Charges for miscellaneous customer services are to be adjusted annually by CPI-2 percent over the four years from 1996/97 to 1999/2000.

³ This implies a nominal increase of 3.3 percent on the basis of a 5.3 percent average increase in the Consumer Price Index (Sydney) for the twelve months to March 1996 compared with the twelve months to March 1995.

Mid-term pricing review for Sydney Water Corporation and Hunter Water Corporation

- Hunter Water is permitted to enter into contractual arrangements with its large customers, subject to a framework to be developed by IPART in consultation with the water agencies.
- Overview of future charges – see Table A2.

Table A1: Overview of Sydney Water's future charges (\$ of year)

	1995/96	1996/97	1997/98	1998/99	1999/2000
Water					
- service charge per annum	\$80	\$80	\$80	\$80	\$80
- usage charge	70 c/kl	76 c/kl	80 c/kl	85 c/kl	90 c/kl
Sewerage					
- service charge per annum	\$263.00 ⁽²⁾	\$271.60	\$280.40	\$285.60	\$290.40
- non residential usage ⁽¹⁾	83 c/kl	87 c/kl	90 c/kl	93 c/kl	96 c/kl
Stormwater drainage area					
- charge per annum	\$16	\$16	\$16	\$16	\$16
Non residential property value based charges					
	\$141m	\$121m	\$101m	\$81m	\$61m

Note:

1. For non-residential discharges above 1.37 kl/day (500 kl a year)
2. The sewerage service charge (\$65.75 per quarter) applies from 1 October 1995.

Table A2: Overview of Hunter Water's future charges

	1995/96 Current	1996/97	1997/98 in 1996/97 dollars ⁽¹⁾	1998/99	1999/2000
Water					
- service charge per annum	\$73.5	\$63.6	\$49.5	\$35.7	\$23.7
- usage charge ⁽²⁾	80.4 c/kl	85.7 c/kl	86.8 c/kl	88.1 c/kl	88.8 c/kl
< 1000 kl	74.2 c/kl	78.9 c/kl	79.9 c/kl	81.1 c/kl	81.7 c/kl
> 1000 kl					
Sewerage⁽³⁾					
- service charge per annum	\$312.60	\$345.0	\$362.1	\$377.4	\$390.0
- residential usage	83.4 c/kl	74.6 c/kl	63.5 c/kl	53.9 c/kl	45.8 c/kl
- non-residential usage	37.0 c/kl	39.0 c/kl	39.0 c/kl	39.0 c/kl	39.0 c/kl
Stormwater drainage					
- residential service charge per annum	\$24.1	\$24.9	\$24.4	\$23.9	\$23.4

Note:

1. Charges from 1997/98 to 1999/2000 to be indexed by the retrospective CPI for each year ending in March compared with the previous year.
2. Meters to be read progressively throughout the billing period. As the new usage charges apply from 1 July of each year, which may be part way through a billing period, the average daily consumption will be assumed to be constant throughout the billing period.
3. Subject to a discharge factor of 50 percent for residential customers.

A2 PERFORMANCE AGAINST ASSUMPTIONS

IPART determined a four year price path for Sydney Water and Hunter Water in June 1996. To promote regulatory certainty, it is important that the price path be maintained. However, if major changes have modified the outcomes assumed in the medium term price path, it is essential that their impact be assessed to ensure that the price path continues to be viable.

A2.1 Financial outcomes in 1996/97

In 1996/97, the financial position of both corporations improved from the result for the previous year. See Table A3.

Table A3: SWC and HWC - Financial highlights (\$m)

	SWC		HWC	
	1995/96 Actual	1996/97 Actual	1995/96 Actual	1996/97 Actual
Revenue	1,257.3	1,351.9	134.4	139.1
Earnings before interest and tax (excluding investment income)	304.8	319.9	34.4	36.6
Operating profit before tax, abnormal items & contributions for capital works	162.9	175.1	32.9	35.8
Income tax	95.7	99.0	16.3	11.7
Contributions for capital works	81.9	42.2	-	20.8
Abnormal items	(7.0)	31.9	-	18.4
Operating profit after tax and abnormal items	142.2	150.1	16.6	63.3
Dividends	40.0	77.6	29.6	35.5
Total fixed assets ⁽¹⁾	12,411.9	12,853.9	1,872.6	1,887.2
Regulatory asset base ⁽²⁾	5,100.0	5,286.0	680.0	704.0
Total borrowings	1,756.7	1,752.9	86.0	85.5
Total investments	661.7	769.2	84.9	116.8
Net debt/(cash)	1,095.0	983.7	1.1	(31.4)
Real rate of return (on revalued assets) ⁽³⁾	2.5%	2.5%	2.0%	2.0%
Return on regulatory asset base ⁽⁴⁾		6.2%		5.3%
Cash flow ratios:				
Funds flow interest cover	2.9	3	14.5	14
Funds flow net debt payback	6.5	6.3	1.18	1.04
Net cash flow/capital expenditure	104%	144%	213%	314%

Note:

1. The accounting book valuation is the written down current replacement cost based on estimates of modern engineering equivalent replacement values.
2. An opening regulatory asset value for existing asset was established in June 1996 based on the net present value of future cash flows at current price levels. The regulatory asset base is then adjusted through time to take account of new capital expenditure.
3. Real rate of return on fixed assets = Earnings before interest and tax/Average fixed assets.
4. Return on regulatory asset base = Earnings before interest and tax/Average regulatory asset value.

Key financial indicators show that for both Sydney Water and Hunter Water, there have been:

- reductions in net debt (an increase in cash and investments)
- increases in financial distributions to Government
- improvements in free cash flow.

Improvement in the cash flow position is due to greater than projected cost reductions and lower capital expenditure. In 1996/97, operating profit and financial distributions were higher than the results projected at the time of the determinations.

IPART seeks comments on actual financial outcomes and the corporations' revised financial and cash flow forecasts over the remaining price cap period.

A2.2 Expenditure analysis and efficiency targets

Sydney Water

Sydney Water is committed to a 45 percent reduction in underlying operating costs per property from 1992/93 to the year 2000. The medium term price path allowed for this reduction, but also provided for additional operating expenditure associated with higher standards.

The trend in Sydney Water's expenditure is shown below:

Table A4: SWC – Expenditure trend (\$m of year)

	92/93 Actual	93/94 Actual	94/95 Actual	95/96 Actual	96/97 Actual	Av annual % change	96/97 Budget
Operating costs	593	546	563	518	527	-2.9%	551
Provisions	86	104	94	84	59	-9.0%	76
BOO costs				20	77	Nc	94
Total operating costs	679	650	657	621	662	-0.6%	721
Depreciation	291	293	249	167	175	-11.9%	173
Interest	199	184	194	194	187	-1.5%	186
Total expenditure	1,169	1,127	1,100	982	1,025	-3.2%	1,080
No of employees	8,629	7,326	5,965	5,099	4,763	-13.8%	
Properties serviced	1,406,958	1,429,137	1,456,137	1,481,308	1,504,200	1.7%	

Source: Sydney Water

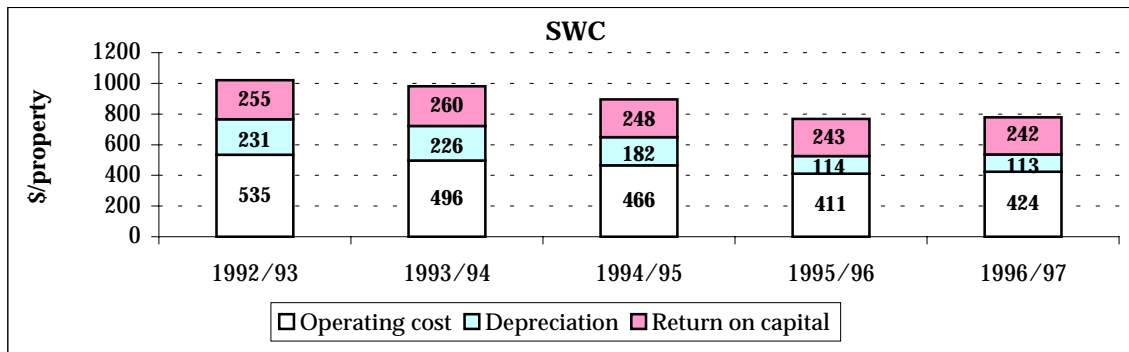
BOO = Build-own-operate water treatment plants.

Nc = Not calculated.

Overall, Sydney Water has met its cost reduction targets, with actual cost outcomes significantly below the budget for the 1996/97 year.

The reductions in cost per property achieved by Sydney Water since 1992/93 are illustrated in the following graph:

Figure A1: SWC - Trend in cost per property (1996/97 \$)



Note:

The increase in operating cost per property in 1996/97 is due to the full year impact of water filtration costs. Operating cost per property, excluding water filtration costs, is \$405 in 1995/96 and \$389 in 1996/97.

Sydney Water has significantly underspent its operating budget in 1996/97. IPART does not wish to remove the incentives for Sydney Water to improve its operating efficiency. Nor does IPART want Sydney Water to abuse its monopoly position. Therefore, it is important that IPART understand the extent to which such savings are indicative of Sydney Water's capacity to reduce costs more than was assumed for the purpose of the medium term price path.

Efficiency savings above those allowed in the price determinations should be shared with customers at the next major pricing review in 2000. Where savings are significant, the corporation may feel that those savings or part thereof, should be passed on to customers in advance of the next major price review. The Tribunal would, of course, take account of any such voluntary gain sharing in its next major review. The Tribunal seeks comments on whether efficiency gains should be shared among stakeholders between major pricing reviews.

The reduction in depreciation over the period from 1992/93 to 1996/97 relates to changes in asset valuation policies and an extension of asset lives. As depreciation is a non cash item, this reduction has not been matched by an increase in cash flows.

The following table shows the capital expenditure allowed for in determining Sydney Water’s medium term price:

Table A5: Sydney Water - Capital expenditure projections (1995/96 \$m)

Category	1995/96	1996/97	1997/98	1998/99	1999/2000	4 year total
Existing operational standards	148	116	126	122	113	477
Existing environmental standards	31	46	68	75	45	234
Anticipated standards	6	15	48	88	117	268
Growth	20	11	11	15	8	45
Government commitments	8	24	44	26	13	107
Total projection	213	212	297	326	296	1,131
Actual	182	143				

Sources:

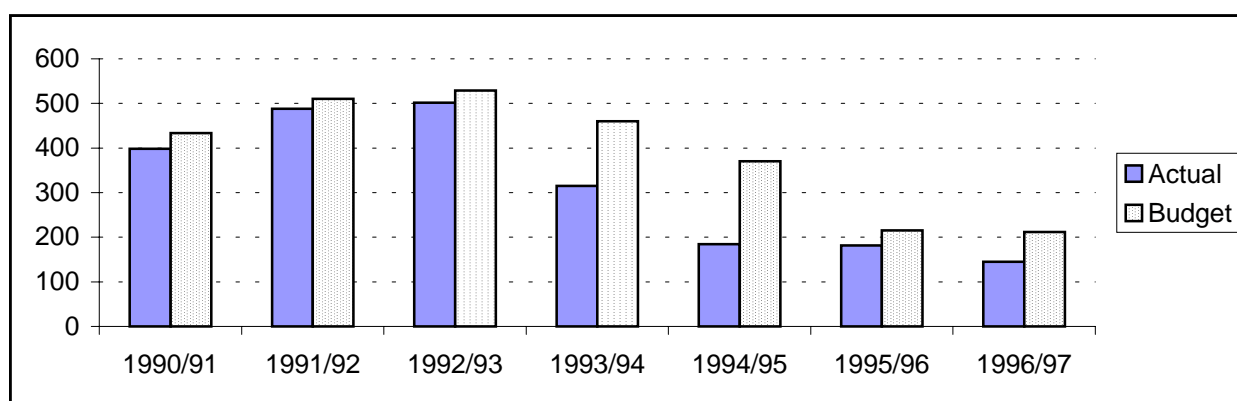
Sydney Water’s Annual Report 1996/97, Independent Pricing and Regulatory Tribunal Determination of Sydney Water Corporation’s Medium Term Price Path from 1 July 1996.

Note:

Capital expenditure relating to growth excludes Rouse Hill infrastructure and free assets contributed by customers/developers.

Actual capital expenditure by Sydney Water has fallen to below the budgeted level. Actual capital expenditure in 1996/97 was \$143m, 30 percent below the level of \$212m projected by Sydney Water and assumed in the price path determinations.

Figure A2: Sydney Water - Actual and budgeted capital expenditure (\$m of year)



Source: Information spreadsheets, Sydney Water Annual Report.

Note: Capital expenditure excludes developer funded/free assets.

The Tribunal is interested in the reasons for the capital expenditure shortfalls, particularly whether they relate to delays in EIS or other approval processes, estimate bias, real savings or a possible decline in asset condition which may lead to poorer service quality in the medium to longer term.

The Tribunal seeks comments on Sydney Water’s lower capital expenditure and whether any outputs or standards are at risk as a result of reductions/deferral of capital investment.

Hunter Water

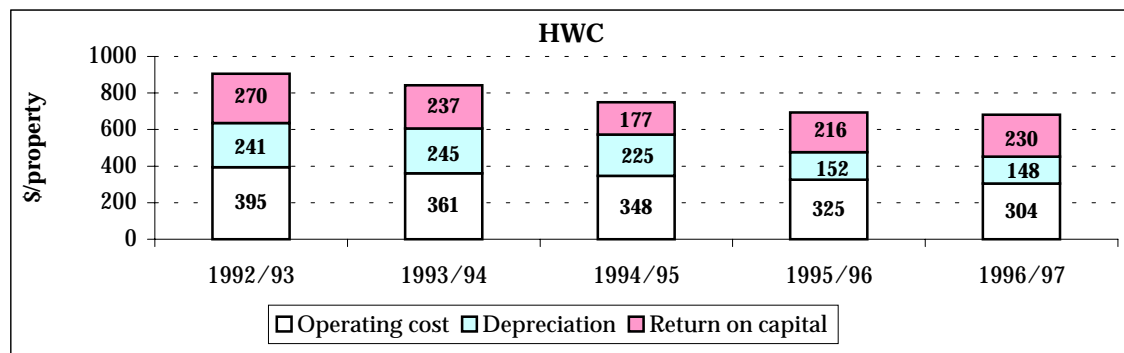
Hunter Water has successfully achieved cost reductions in recent years. Real operating costs were 18 percent lower in 1996/97, compared with the level in 1992/93.

Table A6: Hunter Water - Expenditure trend (\$m of year)

	92/93	93/94	94/95	95/96	96/97	Average annual % change	96/97 Budget
Operating cost							
- water services	57.0	57.8	57.0	55.0	53.8	-1.4%	
- non-regulated businesses	-	0.4	1.9	2.9	7.6	nc	
Total operating costs	57.0	58.2	58.9	57.9	61.4	1.9%	59.9
Employee provisions	4.2	0.1	2.7	4.4	3.2	-6.6%	3.5
Total operating costs	61.2	58.3	61.6	62.3	64.6	1.4%	63.4
Depreciation	37.4	39.3	38.6	27.7	27.8	-7.1%	26.4
Interest	24.4	20.2	11	6.6	7.2	-26.3%	7.2
Total expenditure	123	117.8	111.2	96.6	99.6	-5.1%	97.0
Employee numbers	934	822	770	720	620	-9.7%	
Properties serviced	173,171	176,965	182,083	184,865	187,148	2.0%	

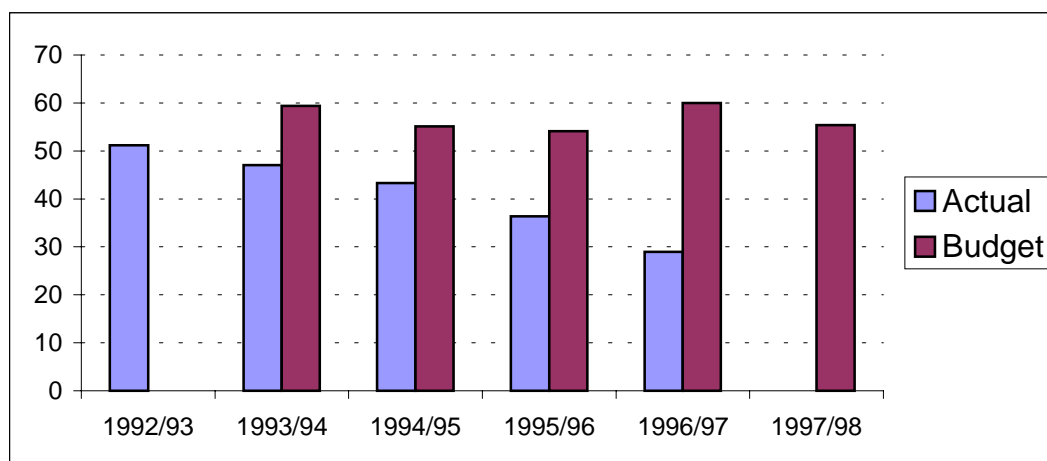
The decline in cost per property is illustrated in the following chart:

Figure A3: HWC - Trend in cost per property (1996/97 \$)



As with Sydney Water, Hunter Water's actual capital expenditure is consistently below the budgeted level. In 1996/97, capital spending was significantly below (52 percent lower than) the level projected by Hunter Water for the 1996 determinations. When free assets are excluded, net capital expenditure in 1996/97 is \$19.6m.

Figure A4: Hunter water – Actual and budgeted capital expenditure (\$m of year)



Note: Capital works include free and developer assets, and the Hunter Sewerage Project

Long-term capital investment needs to be monitored to ensure that water utilities maintain serviceability and produce acceptable outcomes for the environment. The Tribunal does not wish to encourage water utilities to over-spend merely to meet budgets. However, the Tribunal is interested in the reasons for the decline in capital expenditure.

A2.3 Operational licence audits

Both corporations are subject to an annual operational audit by an independent auditor appointed by the Licence Regulator. The Tribunal notes the audit findings for the corporations and the Ministerial directives to Sydney Water.

The findings for Sydney Water’s 1996 operational audit are summarised below:

“... the overall finding from the audit is that Sydney Water has met its Operating Licence requirements. As was the case last year, Sydney Water has achieved high or full compliance with the majority of operating requirements and has performed particularly soundly in the areas of environmental performance and full compliance with national water quality standards.”⁴

The Licence Regulator also identified a number of issues that would be more appropriately addressed during the mid term licence review⁵. The Tribunal will continue to consider these issues and their implications for future pricing reviews.

The Tribunal also notes the findings of the audit for Hunter Water. The report found that Hunter Water fully complied with the Operating Licence requirements.

⁴ Letter from the Minister, the Hon Craig Knowles to the Chairman of Sydney Water Corporation 27 June 1997.

⁵ The issues are outlined in the letter from the Licence Regulator to the Minister, the Hon Craig Knowles.

A3 MAJOR DEVELOPMENTS SINCE JUNE 1996

Developments since the June 1996 determination are discussed below. It should be noted that many of these developments will not significantly affect the corporations until beyond 2000. While the major issues have been considered in this information paper, there may be other issues which could potentially impact on water pricing.

A3.1 Sewerage backlog pricing

In 1997, the Tribunal conducted a review of pricing principles and charges for the provision of sewerage services in backlog areas.⁶ The review considered four backlog projects in Sydney Water's operational area.

In July 1997, the Tribunal released its determination. Key features of the determination are:

- Where there are substantial environmental and public health benefits for the wider community, 25 percent of the *capital* costs of backlog projects will be recovered from local residents who benefit directly from the projects via a capital contribution fee; the remaining 75 percent of capital costs are to be paid by the wider community via an increase in the common sewerage charge.
- *Operating* costs for backlog sewerage projects are to be recovered through the annual sewerage charges common to all Sydney Water customers.
- Backlog sewerage capital contribution fee:
 - To be capped and fixed at \$3,000 per property to ensure affordability and to minimise disincentives to connect to the new sewerage system.
 - To be either paid up front, or by instalments over a period of up to 20 years.
- The estimated increase in annual sewerage charges payable by all Sydney Water customers for the four backlog areas is approximately \$4.70. The actual increase in Sydney Water's common sewerage charge is to be determined at major pricing reviews, when the cost outcomes of the completed backlog projects and more complete cost estimates for proposed projects are available.
- The Tribunal strongly recommends that the Government establish a backlog sewerage social program to help particular customer groups pay part or all of the capital contribution fees. The cost of exempting pensioners from the fees is estimated at \$4m.

Since the determination, Sydney Water has continued with four sewerage backlog projects (Picton, Gerringong/Gerroa, Bundeena/Maianbar and Winmalee STP). Picton and Gerringong/Gerroa are proceeding with the private sector being invited to bid as build-own-operate (BOO) schemes. In September 1997, Sydney Water announced a short list of six proponents (including its own, in-house bid). It is expected that the successful tenderer will be selected by July 1998. Bundeena/Maianbar will include private sector involvement in the design and construct phase.

The Tribunal notes that the backlog projects will not be completed until 1999/2000. It remains open to Sydney Water whether it wishes to seek price changes relating to the sewerage backlog projects at the mid term review.

⁶ This review was to finalise unresolved matters arising from the medium term price path determination for SWC and Gosford City Council.

A3.2 The Waterways Package

On 1 May 1997, the Government released its strategy for cleaner harbours, rivers and beaches: the Waterways Package. Key components of the package are:

- \$3.1b to be spent over 20 years in Sydney, the Blue Mountains, the Hunter and the Illawarra. A high priority is to clean up Sydney Harbour by 2000.
- Establishment of a Special Waterways Advisory Panel to consider whether the proposal by Sydney Water to construct a storage tunnel to contain high volume wet weather flows from the Northern Suburbs Ocean Outfall should go ahead or not.
- Competitive tendering to be used to deliver maximum benefit/least cost solutions.

Sydney Water's tunnel proposal from Lane Cove to North Head to reduce wet weather sewer overflows

Sydney Water proposes cleaning up the Harbour prior to 2000 as part of a wider strategy to reduce sewage overflows throughout the Sydney Region. Sydney Water's proposal involves the construction of a storage and transport tunnel from Lane Cove to North Head to transport the significant excess volumes of diluted effluent in wet weather. The proposed storage tunnel would capture wet weather sewer overflows from Lane Cove, Scotts Creek, Quakers Hat and Tunks Park, which are four of the largest overflow points on the Northern Suburbs Ocean Outfall Sewer (NSOOS). Sydney Water is also planning additional work to identify solutions for other sewerage overflow points.

To assess Sydney Water's tunnel proposal, the Government referred the proposal to the Waterways Advisory Panel.⁷ In its report to the Government, the Panel recommended that the proposal by the Sydney Water proceed, subject to a number of requirements.

In assessing Sydney Water's proposal, the Panel examined the issue of stormwater management. To improve water quality and to meet community environmental requirements, stormwater management must become as high a priority as sewage management. The Panel has an ongoing role in advising on stormwater management. The Panel's conclusions are discussed in Section B, in relation to Sydney Water's Stormwater Review.

Sydney Water's tunnel proposal has also been the subject of a review by a Select Committee.⁸ The Committee's report was released in December 1997. The Committee recommended that construction of the Sydney Water be postponed until a full and independent cost/benefit analysis of the Tunnel against other reasonably developed on site treatment options has been conducted. The Government has rejected the Committee's report.

The Tribunal notes the Select Committee's recommendation that the Tribunal, in partnership with Sydney Water, investigate measures to develop economic incentives for water reuse in NSW. In its medium term pricing determination, the Tribunal stated its intention to introduce a new charge for "sewer mining" (ie extraction of wastewater prior to

⁷ The Advisory Panel is chaired by Dr. Col Gellatly (Director General of the Premier's Department) and comprises Mr Ian Kiernan (Chairman of Founder of Clean Up Australia), Mr. David Harley (Chairman of the Environment Protection Authority) and Dr. Thomas Parry (Chairman of IPART).

⁸ Committee members are: the Hon John Ryan (Chair), the Hon Jan Burnswoods, the Hon Ian Cohen, the Hon Richard Jones, the Hon Charlie Lynn, and the Hon Andrew Manson.

any treatment) with the initial price set at a “zero” or with only an “at cost” charge until such time as the reuse market increases to 20 percent of the total water use market.

Implications for Sydney Water

In determining Sydney Water’s medium term price path, the Tribunal has considered certain expected environmental and health outcomes. Expected outputs and deliverables are specified in the determination report, including Sydney Water’s ability to meet existing and anticipated future standards for the ocean, the Hawkesbury/Nepean, reuse and overflows (Attachment 1). The determination allows for sufficient revenue to finance the operating and capital expenditure required to achieve these outcomes.

Much of the capital expenditure included in the Waterways Package is for projects which will not be completed within the current four-year medium term price path. Additional new operating expenditure relating to the Package will not be incurred until these new works have been completed.

The Tribunal’s initial analysis suggests that over the period 1996/97 to 1999/2000, the Package implies significantly higher capital expenditure than is provided for in the Tribunal’s June 1996 price determination.

The Tribunal has sought clarification from Sydney Water of the impacts of the Waterways Package, including the funding of the NSOOS Tunnel. In response to the Tribunal’s letter, Sydney Water has reiterated its commitment to seeking to fund the NSOOS Tunnel within its existing pricing structure. Sydney Water has also indicated that some capital works had been deferred due to delays in the environmental impact assessment (EIS) process.

As a consequence of the Government’s Waterways Package, assumptions about Sydney Water standards and commitments (including environmental standards) underlying the medium term price determination may have changed. The full impact on Sydney Water’s operational expenditure has yet to be assessed.

The Tribunal seeks comments on the implications of the Waterways Package for Sydney Water’s capital expenditure program and the medium term price path determination.

Implications for Hunter Water

In addition to spending on the Hunter Sewerage Project, the Waterways Package provides:

- \$60m to clean up Hunter region waterways.
- \$12m towards the new Shortland Treatment Plant (STP) incorporating an effluent pipeline for industrial reuse.

To a large extent the above expenditure was allowed for in Hunter Water’s 1996 medium term price path determination.

A3.3 SWC’s Water Plan 21

In September 1997, Sydney Water released its Water Plan 21.⁹ The Plan covers four key areas of wastewater management:

⁹ Sydney Water, *Water Plan 21*, October 1997.

- *Protecting the rivers.* This will be achieved by:
 - Upgrading all Hawkesbury Nepean Sewage Treatment Plants (STPs) using world class technology, bringing 75 percent of the flow to near drinkable standard.
 - Introducing state of the art disinfection at all Hawkesbury-Nepean STPs.
 - Constructing a reuse pipeline linking Georges River STPs to industrial reuse customers.

- *Protecting the beaches and ocean.* This will be achieved by:
 - Upgrading treatment at the three major ocean plants.
 - Upgrading treatment at Cronulla STP.
 - Implementing the Illawarra upgrade and recycling scheme.
 - Increasing recycling of treated wastewater from ocean plants.

- *Recycling water and biosolids.* This will be achieved by
 - Commissioning a \$14m water factory to showcase purification methods for total reuse.
 - Recycling more than 90 percent of biosolids.
 - Introducing a source control action plan.
 - Implementing ecologically sustainable technologies for industrial and agricultural use.

- *Reducing wet weather sewage overflows* to protect the rivers, oceans and harbour. This will be achieved by:
 - Undertaking sewer renewals and other improvements that will stop 80-90 percent of wet weather sewage overflows.
 - Building a new storage tunnel from Lane Cove to North Head.

The goals of WaterPlan 21 will be delivered over a 20-year period.

The Tribunal will examine Sydney Water's Water Plan, including the funding of the works and the likely impact on future water pricing. The Tribunal seeks comments on the Plan's impact on the pricing determination to the year 2000.

A3.4 Healthy Rivers Commission's inquiries

The Healthy Rivers Commission was established in 1996 to make recommendations to Government on:

- Suitable objectives for water quality, flows and other goals central to achieving ecologically sustainable development in a realistic time frame.
- Known or likely views of stakeholder groups on the recommended objectives.
- Economic and environmental consequences of the recommended objectives.
- Strategies, instruments and changes in management practices needed to implement the recommended objectives.

The Commission completed the first inquiry into the Williams River in December 1996. It has since released a draft report on the second inquiry into the Hawkesbury-Nepean River System.

IPART notes that some of the recommendations go beyond the scope of the Corporation's businesses.

The Williams River Inquiry

The Williams River is the source of most of the surface water supplied by Hunter Water to the lower Hunter community. Hunter Water's infrastructure, Chichester Dam and Seaham Weir, are major influences on flow regimes within the river.

The Commission's final inquiry report was released in December 1996¹⁰. The report generally gave the Williams River a clear bill of health. The Commission made both generic recommendations and specific recommendations on the Williams River.

Generic recommendations cover measures to:

- Improve the whole catchment focus of actions by public authorities, including in particular their determinations of funding priorities within programs impacting on catchment and river health.
- Contain the longer term pressures on natural resources generated by urban and semi-rural residential development in the catchments of stressed or "at risk" rivers.
- Ensure that the existing powers and resources of public agencies with river management responsibilities are harnessed to achieve concerted, integrated and effective action.

The report also contains many specific Williams River (WR) recommendations, including specific actions for Hunter Water, notably provision for increased environmental flows. Recommendations which impact on Hunter Water are as follows:

- Hunter Water to support the re-establishment of viable riparian and aquatic plant communities along the length of Seaham Weir pool by contributing to the costs to landholders of fencing or alternative means of limiting cattle access, and to revegetation programs (WR4).
- Hunter Water to assess the feasibility of augmenting the weir gates to facilitate the flushing of bottom sediments if the results of current studies reveal a significant accumulation of sediments in the weir pool (WR5).
- The Commission found that the greatest incremental improvement in the river's ecology can be expected with protection of flows up to 15 ML/day at Mill Dam Falls. This corresponds to a flow of 14 ML/day at Chichester Dam as spills or releases (WR6). Although not explicitly stated, this recommendation requires Hunter Water to provide releases from the dam averaging 14 ML/day when the dam is not spilling and when inflows to the dam are greater than or equal to 14 ML/day. When inflows fall below 14 ML/day, releases may be proportionately reduced.
- Rights and obligations of Hunter Water in the Williams River catchment to be formalised and specified through the creation of a licence for the Corporation under the Water Act (WR7).
- Upgrading the Dungog sewerage scheme to the planned level (\$4.4m) should be accelerated. The \$2.6m additional cost of developing the \$7m plant to meet the full requirements of the Class P classification should *not* be incurred. If the Government decides that the Class P requirements should not be varied, there is no other course than

¹⁰ Heavy Rivers Commission of NSW, Final Report, *Independent Inquiry into the Williams River*, December 1996.

to expend the greater sum on the sewerage scheme. It is necessary to decide whether this requirement should be linked explicitly to the Hunter Water's operations and interests in the river. If this is the case, the additional sewage treatment costs (both capital and operating) should be shared equally between the Corporation and Dungog Council (after adjusting for any applicable State subsidy payments) (WR12).

Hunter Water should investigate the feasibility of reducing the potential for outbreaks of blue green algae by mechanically aerating Seaham Weir pool (WR13).

- Hunter Water should carry out remedial measures necessary to achieve more effective fish passage at the concrete causeway where the Chichester Dam pipeline crosses the river at Bandon Grove. (Section 5.4.4)

The Tribunal seeks comments on how these recommendations impact on Hunter Water's price determination to the year 2000.

Inquiry into the Hawkesbury-Nepean (H/N) River System¹¹

Following extensive consultation and investigation processes, a draft report was released in November 1997. The Hawkesbury and the Nepean are essentially one river with two names. The Commission found that many parts of the H/N river system are in relatively good condition. However, the small parts of the total catchment which are urbanised, as well as some of the agricultural areas, are in relatively poor condition.

The Commission has recommended ways of protecting the river and ensuring that it is both healthy and productive. The recommendations include new "rules" and measures for activities affecting the river. They include rules for sharing and measuring the water extracted from the river, and rules for how discharges of treated sewage flow back into the river from sewage treatment plants. They include measures to protect the river from pollutants and from weed infestations. Additional recommendations aim to protect natural riverine corridors and vegetation from the more severe impacts of urban development.

Overall, the measures emphasise the need to manage the river as a total system, by taking account of the many complex inter-relationships between land use, water quality, water flows and the condition of riverine corridors.

The Commission recommends a suite of measures to improve the river's health, including water quality and river flows by:

- improving the **diet** of the river – reducing pollution entering the river
- improving the **circulation** of the river – keeping to the water flowing
- improving the **lifestyle** of the river – balancing urban development and agriculture
- managing the **stress** on the river – providing buffer zones of trees and plants around the rivers to reduce run off and erosion as well as answering appropriate land use zoning is in place
- understanding the **limits** of the river – not over-extracting the river's water, sand or gravel resources
- **respecting the river** – recognising its true value and not sacrificing it for short-term interests.

¹¹ This summary is based on, *Community Feedback Report – Summary of Draft Recommendations*, Healthy Rivers Commission, November 1997.

The Commission maintains that three significant reforms must be carried out to ensure successful implementation of its recommendations:

- ❑ Establishment of a “river manager”. This will ensure that responsibility for the river system is clearer and more enforceable.
- ❑ Catchment planning involving all parties in determining what will be done, rather than simply listing principles and good intentions.
- ❑ Local government must be empowered. Councils need access to resources, either through state financing/subsidy programs or through normal rate revenue/special levies.

The Commission is seeking comments by 30 January 1998. It is expected that its final report will be available by the end of February 1998.

A3.5 Inquiry into the management of sewage and sewage by-product in the NSW coastal zone

This inquiry is a result of NSW Government and community concern about the impact of ocean outfalls and other effluent disposal schemes on the coastal environment of NSW. In August 1997, a draft report was released.¹² The inquiry report covered a wide range of recommendations:

- ❑ The decision making framework for sewage management should be based on the principles of ecologically sustainable development, total water cycle management and total catchment management.
- ❑ Water quality and river flow objectives and catchment plans should be developed for coastal catchments.
- ❑ A leadership and administrative role should be established to ensure a whole-of-government approach to catchment planning and sewage management.
- ❑ Service providers should be encouraged to move towards total water cycle management by developing a strategic long term approach to sewage management, and pursuing and establishing links between existing water supply, sewage and stormwater plans and services that are not adequately linked. This should be facilitated by state funding and by revising the current arrangements of the state subsidy scheme to country areas.
- ❑ A government sewage management policy should be developed, which acknowledges the value of sewage as a resource.
- ❑ All strategies for sewage management should be considered on a case by case basis.
- ❑ Impacts (short and long term) of sewage management should be monitored independently.
- ❑ Greater community involvement in decision-making for, and implementation of sewage management, should be encouraged through a better consultation process, access to information and education.

It is expected that the report will be finalised in early 1998.

¹² Draft Report, *Public Inquiry into the Management of Sewage and Sewage By-products in the NSW Coastal Zone*, August 1997.

A3.6 Legislative changes and load based licensing

The Government is currently moving to amend the Pollution Control Act. The State's pollution contract statutes: (Clean Air, Clean Waters, Noise Control and Pollution Control Act) will be integrated in a single new Act. This will provide the essential legislative framework for implementation of the load based licensing (LBL) reform package.

One of the significant changes in the new Act will be the use of a single schedule of activities to determine the need for a licence. This changes the current system, where there are separate licensing criteria under each of the separate Acts. This change will greatly simplify the licensing system. The draft regulatory impact statement will be available for public consultation in February 1998 with implementation scheduled from 1 July 1998. The impending implementation of LBL will have major implications for licensing fees for Sydney Water and Hunter Water.

A3.7 National and interstate water reforms

COAG Water Reform/National Competition Policy

The Council of Australian Governments (COAG) agreed in 1994 to implement reforms in water pricing and resource management. State governments have made commitments in relation to water reform, including pricing reform.

The reform of water prices is linked to cost recovery. What costs should be recovered in prices, and how those costs should be defined are issues to be decided by the National Competition Council in its interpretation of the states' compliance with the COAG commitments.¹³

The Tribunal seeks comments on the impact of nationally agreed cost recovery principles upon the price determinations to the year 2000.

Competition and access issues

Under the National Competition Policy (NCP) and Competition Principles Agreement, mechanisms for third party access to nationally significant infrastructure were introduced. The National Competition Council (NCC) was created to oversee implementation of the NCP and make recommendations on third party access. One of NCC's roles is to advise Commonwealth and State Governments, particularly in the areas of access matters and progress in implementing competition policy.

So far there have been no formal access applications for water infrastructure under Part IIIA of the Trade Practices Act. To encourage discussion of the access issue, NCC engaged a consultant (Tasman Asia Pacific) to provide a report on the extent to which the services provided by water facilities in Australia meet the criteria for declaration¹⁴. The five criteria are:

¹³ SCARM Water Industry Asset Valuation Study, *Draft Guidelines on Determining Full Cost Recovery*, August 1997.

¹⁴ Declaration is one mechanism to gain access to the services of key infrastructure. This is triggered by an actual or potential user, who may apply to the National Competition Council to have an infrastructure service "declared" under Part IIIA of the Trade Practices Act.

- ❑ Access to the services provided by water facilities would promote competition in another market.
- ❑ It is economically feasible to develop another facility to provide the service or part of the service.
- ❑ Water facilities are nationally significant having regard to:
 - the size of the facility
 - the importance of the facility to constitutional trade or commerce
 - the importance of the facility to the national economy.
- ❑ Access can be provided without undue risk to human health or safety.
- ❑ Access to the service is not contrary to the public interest.

In a paper presented by NCC to the 1997 Australian Water Summit¹⁵, a summary of the consultant's findings is presented:

The Tasman Report concludes that some services of water facilities are likely to meet the criteria for declaration. Access is more likely to be sought in relation to urban water and wastewater services, where competition is likely to evolve than rural services (excluding irrigation services). However, it is unlikely that access arrangements will generate widespread competition in water markets as it has in electricity and telecommunications. This is because the feasibility of access is highly sensitive to the physical location of potential access seekers. Nevertheless, access is likely to stimulate competition at the margin.

Tasman also noted that access is one of several options for introducing competitive disciplines in water and wastewater services. The agreed COAG reforms are designed to introduce substantial reforms which will affect industry structure, pricing, cost allocation, corporate governance, natural resource management and trading in water entitlements in the industry over the next few years. It is desirable that many of these reforms be implemented prior to the introduction of access. Institutional and pricing reforms are particularly relevant to considerations of third party access in the water industry.

As seen in the UK, the potential for access can stimulate pricing reform and efficiency improvements. The Tasman report suggests that it is desirable that other reforms (pricing, industry structure etc) be implemented prior to the introduction of access. If access occurred first, new entrants could be attracted to the industry on the basis of distorted price signals.

Competition promotes efficiency, helps to ensure that charges more accurately reflect costs, and provides customers with choice. Competition can deliver benefits to customers such as lower prices. The Tribunal notes that competition has already been introduced into other traditional monopoly industries overseas and in Australia, including telecommunications, gas distribution and electricity. It has been argued that the water industry is different from these industries, in terms of structure (there is no national network), extent of the monopoly nature (the cost of duplicating the necessary system and infrastructure seems to be uneconomical and unattractive) and the associated environmental and health issues.

In the UK, the Office of Water Services (OFWAT)¹⁶ has developed policy guidelines and framework to facilitate competition, including:

- ❑ *Inset appointments.* OFWAT has put in place licensing arrangements to encourage inset appointments (ie a new supplier operating under a licence within the area of an existing

¹⁵ Paper presented by Ross Campbell, National Competition Council, *The application of third party access to water infrastructure*, October 1997.

¹⁶ OFWAT is the economic regulator of the water industry.

undertaker) for either greenfield sites (a site not served by an existing undertaker) or large customers consuming more than 250 ML a year.

- *Cross border supplies.* The current provisions for competition permit cross border supplies, ie provision of services by a water utility to a customer located outside its operational area.
- *Introduction of common carriage ie shared use of pipes.* This requires:
 - Existing undertakers to offer terms on which their network could be used by alternative suppliers (incomers).
 - Giving the Director of Water Services the power to determine common carriage agreements between the incumbent and the incomer.
 - Creating a new “direct supply licence” for new suppliers who are not already undertakers.

OFWAT has reported that competition is developing slowly and has been hampered by a lack of transparency. Most applications received so far have been for inset appointments, and only one of these to date has been recommended by OFWAT. As a result of these problems, OFWAT has published revised guidelines which seek greater transparency to help speed up the process.

The Tribunal seeks comments on whether and how price determinations might need to be amended to facilitate competition in the water industry.

Interstate water reform initiatives

Other Australian states are at various stages of implementing water pricing reforms. For example, Brisbane City Council introduced from 1 July 1997 a two part tariff (a fixed charge and a consumption-based charge) for its residential customers.¹⁷

In October 1997, the Victorian Government announced a major reform package for the Victorian Water Industry. The key aspects of the reforms are:

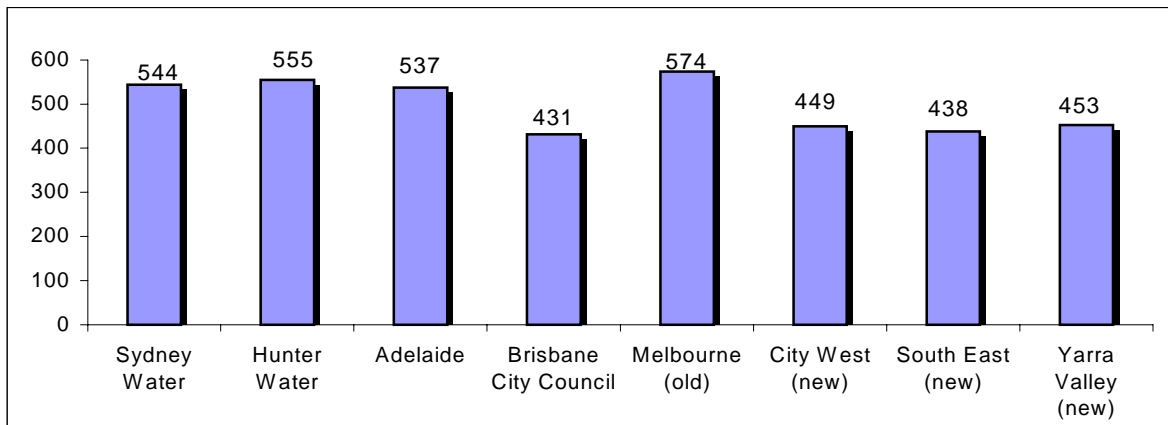
- \$1.3b debt reduction and funding covering:
 - \$850m debt relief to metropolitan water businesses.
 - \$410m financial assistance to non-metropolitan urban water authorities (NMUs).
 - \$40m financial assistance to rural water authorities (RWA) and catchment management authorities (CMA).
- Tariff reforms. The main metropolitan water tariff reform includes:
 - New price structure effective from 1 January 1998.
 - Abolition of property-based water and sewerage rates for all domestic and non-domestic customers and the introduction of a flat fixed fee.
 - User pays approach to pricing through water and sewerage disposal charges.
 - Differential/cost reflective water pricing by the three retailers.
 - Removal of vacant land charges.

The Victorian Government expects that 85 percent of Melbourne’s water customers will benefit from lower water and sewerage bills when the new system begins.

¹⁷ Property value based charges remain the main revenue source for non-residential customers.

A comparison of the new water charges in Australia's major capital cities is shown below:

Figure A5: Residential water & sewerage bill comparison (\$)



Source: Various water authorities

Note: The bill is calculated based on an annual water consumption of 230 kL, which is the average water consumption in Melbourne. Average household water consumption varies from this level in other cities.

A comparison of typical household bills in 1995/96, 1996/97 and 1997/98 with anticipated bills in 1998/99 and 1999/2000 for both corporations is provided in Attachment 2.

The Tribunal seeks comments on the implications of national and interstate reforms.

A3.8 Shareholder value added

In 1996/97 a new indicator, the measurement of shareholder value added (SVA), was adopted by NSW Treasury and has been included in both Corporations' Statements of Corporate Intent (SCI). This reporting requirement focuses on the year to year changes in the notional "value of the business". SVA represents economic profits generated by a business above and beyond the return required by the providers of capital. It measures the operating after tax profits of a business, net of a capital charge for the debt and equity capital employed.

$$\begin{aligned} \text{SVA} &= \text{Net operating profit} - [\text{Cost of Capital} \times \text{Capital}] \text{ or} \\ &= [\text{Return on Capital} - \text{Cost of capital}] \times \text{Capital} \end{aligned}$$

The Tribunal seeks comments on the effects of the Government's adoption of SVA for the price determinations to the year 2000.

A4 OTHER ISSUES

A4.1 Specific pricing issues - Sydney Water Corporation

Trade waste charges

Sydney Water's trade waste charges are levied on businesses that discharge wastewater to the sewerage system. The amount levied is determined by the Trade Waste Service Agreements which individual firms enter into with Sydney Water. Currently, revenue raised by Sydney Water trade waste charges exceeds the cost of transporting and treating trade waste. Therefore, not all of the trade waste charge can be regarded as a user charge. Sydney Water's trade waste charges have been frozen since 1993/94.

A Trade Waste Charges Working Party was formed to consider IPART's recommendations in the final report on its inquiry into water and related services.¹⁸ The Working Party assessed the proportion of the current trade waste charge that is, in effect, a pollution tax, and provided advice on the appropriateness of the charging framework. At present, revenue from trade waste charges is transferred to three environmental trusts. The NSW Treasury subsequently reimburses Sydney Water for the same amount, in the form of a community service obligation. The Working Party recommended transitional arrangements for making trade waste charges cost reflective.

Steps are to be taken to ensure that appropriate transitional arrangements are in place for the introduction of load based licensing and continued funding of the environmental trusts.

Other pricing issues

Sydney Water has indicated that it will submit revised charges for the Penrith Sewerage Scheme. Since 1994/95 the increases in service charges have been capped at 15 percent a year for non-residential properties and 10 percent a year for residential flats. They will be capped at the same rates until 1999/2000.

An issue has arisen in respect of the manner in which the special charge determined for the Rouse Hill Area ("Rouse Hill Charge") is levied. Under the determination made in June 1996 the Rouse Hill Charge depends on land area. The Tribunal intends to revisit the suitability of this arrangement.

A4.2 Specific pricing issues - Hunter Water Corporation

Hunter Water has indicated to the Tribunal that it will submit revised prices for its miscellaneous charges, trade waste charges and development services fees.

A4.3 Demand management issues

Sydney and Hunter Water Corporations have an obligation¹⁹ to promote efficient use of water. Effective demand management may defer the development of major new water sources, and has the potential to save money and avoid additional environmental damage.

¹⁸ IPART, *Inquiry into Water and Related Services*, October 1993.

¹⁹ A demand management target is specified in SWC's operating licence. The terms of such relevant licences require that SWC reduce the quantity of water drawn from all storages on a per capital basis by at least 25 percent between 1990/91 and 2000/01 and by at least 35 percent between 1990/91 and 2010/11.

The Tribunal notes that Hunter Water plans to reuse 15 percent of its wastewater by the turn of the century. Increasing water reuse has enabled the augmentation of the Grahamstown Dam to be deferred.

The Tribunal seeks comments on the Corporations' progress in demand management.

**PART B: REVIEW OF SYDNEY WATER'S
STORMWATER CHARGES AND EXPENDITURES**

B1 INTRODUCTION

B1.1 Purpose and scope of this stormwater review

The draft Terms of Reference for this referral from the Premier under section 12(1)(a) of the Independent Pricing and Regulatory Tribunal Act 1992, were advertised for public comment on 29 October 1997. After considering the submissions, the Tribunal finalised the terms of reference in December 1997.

The Tribunal will conduct investigations and make a price determination for Sydney Water's stormwater services. In addition to section 15 requirements,²⁰ the terms of reference require the Tribunal to consider the following matters:

- 1. Scope of and expenditure on Sydney Water's stormwater drainage services.***
- 2. Sources of revenue and alternative pricing structures for Sydney Water's stormwater drainage services, including base charges and property based charges, having regard to impacts on user groups, and economic, environmental, social and urban development impacts.***
- 3. The impact on pricing policies of any need to renew or increase stormwater infrastructure.***
- 4. The effect of the existing operating framework for stormwater management on the efficiency of Sydney Water's stormwater drainage services.***

The review is to have regard to the Government's policy on stormwater issues, catchment planning and the implications for total water management. The review may need to consider the interface between Sydney Water's and local councils' stormwater systems.

B1.2 Context

Stormwater is rainfall which runs off surfaces. In the natural environment, a large proportion of this water soaks into the ground or flows into waterways. In the cities, the proportion of stormwater run-off is higher due to the presence of hard surfaces such as roads and roofs. Stormwater is carried in stormwater channels and discharged directly into creeks, rivers, the harbour and the ocean. Stormwater collects animal wastes, fertilisers, pesticides, oil and refuse which pollute urban waterways and estuaries. Studies undertaken by the Environment Protection Authority (EPA) and Sydney Water indicate that stormwater contributes to the visual, pathogenic and toxic pollution of waterways and is the major cause of pollution at a number of beaches.

Many factors contribute to these stormwater problems, complicating their resolution. Unlike for water and sewerage, there is no overarching responsibility for the provision of stormwater services within the Sydney basin. Water suppliers, local councils and government departments (eg Roads and Traffic Authority²¹) share responsibilities for the provision of stormwater services.

This division of management responsibility potentially produces problems of coordination and effective management to achieve desired quality and quantity outcomes. The current

²⁰ Section 15 requires the Tribunal to consider 12 matters covering consumer protection, economic efficiency, financial stability and environmental and other standards.

²¹ RTA is responsible for stormwater systems on freeways and state roads under their control.

divisions are essentially arbitrary and do not relate to physical catchments, the units at which stormwater management planning would be most effectively carried out.

Such divisions may also work against the securing of a regular and appropriate source of income, due to inconsistencies between the approaches taken by various authorities and the relative priority afforded stormwater issues in different areas at different times.

Stormwater is currently unregulated in terms of public health requirements. Standards of flood protection are diverse, and environmental objectives are often not clearly specified or regulated.

In its inquiry into water services²², the Tribunal considered stormwater and drainage services and recommended that the relevant authorities should:

- Establish environmental standards for stormwater and urban run-off and integrate these with the standards for other discharges.
- Coordinate decision-making within stormwater catchment areas.
- Clarify accountabilities and responsibilities for the provision of stormwater services.
- Incorporate stormwater infrastructure costs in developer charges and ensure accountabilities for stormwater services are transparent.

In its determination of Rouse Hill Charges (Determination No 7, 1993) the Tribunal recognised that Rouse Hill residents will have a unique drainage service and a “new” supply of recycled water. In recognition of this the Tribunal decided to introduce a new access charge (the “Rouse Hill” charge) for properties where one or both of these services is available.

Stormwater pollution problems have been highlighted in recent inquiries by the Healthy Rivers Commission, and the Inquiry into the Management of Sewage and Sewage By-products in the NSW Coastal Zone.

In May 1997 the Government announced the Waterways Package of which a key initiative is to improve the management of urban stormwater quality. The Government has committed funding of up to \$60m over three years for a Stormwater Trust Fund. A Stormwater Board²³ has been established to manage the “Early Action Stormwater Program”. The relevance of these initiatives to the current Inquiry need to be clarified.

B1.3 Catchment based stormwater management and planning

Stormwater management addresses the quality and the quantity of stormwater. Within a catchment, stormwater management is often undertaken by several organisations. Local councils are generally responsible for the majority of stormwater systems. There may be more than one council within a particular catchment.

The fragmentation of responsibility hampers control of urban run-off and stormwater. The stormwater problems should not simply be moved from one area to another area either in

²² Independent Pricing and Regulatory Tribunal, *Final Report on Inquiry into Water Services*, October 1993.

²³ Board members are: Director General, Environment Protection Authority; Director General, Department of Land and Water Conservation; Director General, Department of Local Government; Chief Executive Officer, Ministry of Urban Infrastructure Management; President, Local Government and Shires Association; Executive Director (Budget Strategy), NSW Treasury.

the same or nearby catchment. The effect of any works on downstream properties needs to be considered.

In November 1997 the Environment Protection Authority (EPA) issued a draft notice to all local councils requiring that catchment-based stormwater management plans be prepared. The Sydney and Hunter Water Corporations, the Roads and Traffic Authority and other State Government agencies with stormwater and/or land management responsibilities are required to cooperate with councils in the preparation of these plans.

A publication "Managing Urban Stormwater: Council Handbook"²⁴ is being developed to provide guidance to local councils and other organisations responsible for preparing catchment-based stormwater management plans in accordance with the EPA notice. The handbook provides State Government agencies, developers and other organisations with guidance on how to meet the requirements of a stormwater management plan. This document discusses the process involved in preparing a plan and includes a prototype as a guide a suitable format for a catchment-based plan.

It is expected that the Council Handbook will be finalised in early 1998. EPA will then issue a formal notification to Councils, Sydney Water and relevant government departments. Metropolitan councils will be required to complete the stormwater plan within one year.

The Tribunal supports EPA's initiatives regarding stormwater management planning. Given the current time line, Sydney Water will not be in a position to assess any new obligations and commitments to stormwater management and standards, and consequent expenditure requirements until 1999.

The Tribunal intends that any additional environmental obligations and pricing implications be considered in the major pricing review commencing in 1999. For this interim review, the Tribunal will focus on Sydney Water's operation of the existing stormwater system.

B1.4 Waterways Advisory Panel²⁵ Report

The Waterways Advisory Panel was established by the Premier to report to the Government on:

- Whether Sydney Water's proposal to construct a sewage storage and transport facility to alleviate overflow problems in the Northern Suburbs Ocean Outfall Sewer (NSOOS) should proceed.
- If so, with what conditions.

In its report to the Government, the Panel concluded that:

"Sewage contamination and stormwater run-off represent the most significant threats to water quality in the Harbour.... The need for a coordinated approach is underpinned by the fact that the sewerage and stormwater drainage systems are interconnected at many locations so that action to prevent pollution from one source would produce only limited positive outcomes".²⁶

²⁴ *Managing Urban Stormwater: Council Handbook* (Draft), November 1997.

²⁵ The Waterways Advisory Panel was established to assess the rigour of Sydney Water's NSOOS tunnel storage/transportation proposal. The Panel now has an ongoing role to assist in monitoring progress in stormwater management.

²⁶ Waterways Advisory Panel, *Report to the NSW Government on the Proposal by Sydney Water Corporation for Sewage Overflow Abatement in Sydney Harbour*, p12.

Although the Panel recognised the importance of reducing sewage discharges to the Harbour, it emphasised that it is also necessary to initiate commensurate action to prevent contaminated stormwater entering Harbour water. The Panel concluded that achieving cost effective improvements in water quality, stormwater control and management must become as high a priority as sewage control and management. The current lack of funding must be addressed.

The Panel considered that Sydney Water's tunnel proposal will be effective in addressing sewage contamination. However, Sydney Water has not adequately addressed stormwater problems. Nor has there been adequate coordination with stormwater management by local government. The Panel believed that a sewerage strategy can be truly effective only when it is developed within the context of a total water cycle management approach, using catchment-wide strategies. The Panel also believed that Sydney Waters proposal for the NSOOS tunnel must be complemented by investment in the repair of other Harbour sewerage systems and in stormwater management.²⁷

The Panel made a number of recommendations about stormwater issues including:

- That Sydney Water make every effort to complete the transport and storage tunnel for less than the estimated cost of \$375m, and that any savings be applied to stormwater management (Recommendation (a)(iii)).
- That all revenue raised by Sydney Water from stormwater charges is expended on stormwater management (Recommendation d)²⁸.

The second of these recommendations has not yet been endorsed by the Government and the Premier has referred to the Tribunal the review of Sydney Water's stormwater charges and expenditures.

²⁷ Ibid, p16.

²⁸ Ibid, p17 and p18.

B2 SYDNEY WATER'S STORMWATER SYSTEM

In conjunction with over 40 local councils and certain state government organisations (eg Rivers Management Trusts), Sydney Water provides stormwater systems which transport stormwater to waterways and reduce flood damage. Sydney Water is responsible for collecting and transporting stormwater from some areas. At 30 June 1997²⁹ there were 506 kilometres of stormwater channels under Sydney Water Control making drainage available to 376,677 properties. Overall, Sydney Water owns less than 2 percent of the metropolitan stormwater systems. Sydney Water's drainage system is shown in Attachment 4.

Stormwater drainage assets constructed by the Department of Public Works during the Great Depression were transferred to local councils during the 1940s. To avoid disputes between councils, Public Works vested selected trunk mains in the then Water Board where those mains crossed more than one council boundary or traversed boundaries. As a result, Sydney Water holds assets fragmented in 31 different council areas.

Key facts and statistics of Sydney Water's stormwater business are summarised below:

Table B1: Sydney Water's stormwater business

<i>Description</i>	<i>Quantum</i>	<i>Context</i>
Stormwater channels	506 kilometres	<2% of metropolitan stormwater systems
Asset values (written down replacement cost)	\$597m	5% of SWC's infrastructure assets
Properties serviced	376,677	25% of SWC's customer base
1996/97 operating costs ¹	\$5.7m	0.9% of SWC's total operating costs
1996/97 capital expenditure	\$0.65m	Less than 0.5% of SWC's capital spending
1996/97 stormwater revenue	\$19.6m	1.8% of SWC's tariff incomes
Average operating cost per property	\$15	

¹ Excludes customer service cost and capital costs.

In wet weather stormwater enters parts of Sydney Water's sewerage systems through cracked pipes, resulting in sewage overflow problems. Illegal connections of roof and yard drains to the sewerage system lead to wet weather sewerage overflows. Effective wastewater management requires that all inputs from all sources (including stormwater) be considered.

The Tribunal seeks comments on:

- ***What is the effect of the existing operating framework for stormwater management on the efficiency of Sydney Water's stormwater drainage services?***
- ***How efficiently does Sydney Water operate its stormwater system?***
- ***What is the relationship between Sydney Water and local councils, including the interface between Sydney Water's and local councils' stormwater systems?***

²⁹ Source: Sydney Water, *Annual Report*, 1997, p91.

B3 SYDNEY WATER'S STORMWATER REVENUES AND EXPENDITURES

Sydney Water provides water, sewerage and drainage services as an integrated organisation. Internally, Sydney Water has separated its businesses into a holding company and two subsidiary companies: (Utilities and Transwater).

Sydney Water does not report its stormwater business as a separate entity. The stormwater business represents a small component of Sydney Water's total operations. Nevertheless, the Tribunal considers that ring-fencing³⁰ is essential to ensure that prices reflect the costs of producing a particular service. From its annual return of information to IPART, Sydney Water must allocate costs to water, wastewater and stormwater services. Since 1996/97, Sydney Water is also required to provide notional financial statements for each of the water, wastewater and stormwater businesses.

The Tribunal will examine whether Sydney Water's stormwater services are appropriately reported.

B3.1 Stormwater revenue

Sydney Water collected \$20m in stormwater revenue in 1996/97 - only 2 percent of its total tariff income. Of this \$20m, over 60 percent is generated from property-value based charges. As a result of reducing property-value based charges, the stormwater revenue for 1996/97 was 20 percent lower (or 28 percent in real terms) than the level in 1992/93.

Table B2: Sydney Water - Stormwater revenue 1992/93 – 1996/97 (\$m of year)

	1992/93	1993/94	1994/95	1995/96	1996/97
Residential					
Base charges	4.3	4.5	4.9	5.3	5.2
Property-value based charges	1.5	1.5	1.5	0.4	-
Subtotal	5.8	6.0	6.4	5.7	5.2
Non-residential					
Base charges	1.6	1.7	1.5	1.3	1.9
Property-value based charges	16.6	13.5	12.7	12.7	12.6
Subtotal	18.2	15.2	14.2	14.0	14.1
Total stormwater revenue	24.0	21.2	20.6	19.6	19.6
Total SWC tariff incomes	1,180.1	1,181.4	1,119.6	1,028.5	1,081.2
Stormwater revenue (%)	2.0%	1.8%	1.8%	1.9%	1.8%

Source: Information Spreadsheet provided by Sydney Water, October 1997.

B3.2 Stormwater expenditures

Recurrent expenditures

Sydney Water's costs of stormwater services represent only about 2 percent of its total expenditure. The operating costs of Sydney Water's stormwater services are shown below:

³⁰ Ring-fencing refers to the physical or accounting separation of business activities to enable the costs and revenues of one activity to be differentiated from another.

Table B3: Sydney Water - Trends in stormwater expenditure

	1992/93	1993/94	1994/95	1995/96	1996/97
Direct operating costs ⁽¹⁾ (\$m of the year)	na	9.8	4.3	7.5	5.7
Number of properties serviced				353,629	376,677
Direct operating cost per property (\$)				21	15

Source: Information Return by Sydney Water, October 1997.

1. Excludes customer service and capital costs.

In addition to operation and maintenance costs, there are customer services costs and fixed costs of capital (rate of return, depreciation). In its submission, Sydney Water will include a detailed cost analysis of its stormwater services.

Capital expenditures

Sydney Water's last major stormwater capital works program was the \$60 million Drainage Action Program completed in 1989. In the early 1990s Sydney Water undertook trials of various stormwater pollution reduction devices. As part of this program, Sydney Water constructed and installed ten gross pollutant traps, two trash racks, four litter booms, three sedimentation ponds and two wetland sites.

In its 1996 pricing submission, Sydney Water did not allow for any major new capital expenditure on stormwater.

A key element of this review is to assess the need to renew or increase stormwater infrastructure.

B4 PRICING ISSUES

Historically, Sydney Water's source of revenue was generated largely from property-value based charges, including for stormwater services. Since the first determination by the Tribunal in 1993/94, Sydney Water (and its predecessor) have been moving progressively from a property-value based charging system to a cost reflective pricing system with increasing focus on user-charges. Elimination of property-value based charges will continue over the price cap period.

There are difficulties in attributing the costs of stormwater management to specific individuals or organisations. For example, the costs of improvements to particular stormwater catchments may convey benefits to residents beyond those stormwater catchments. This may affect the pricing structure eventually adopted.

B4.1 Current stormwater charges

At present, Sydney Water's drainage charges are levied on some 377,000 properties:

- For residential properties, there is a fixed service charge of \$16 a year.
- For non-residential properties, there is a fixed service charge of \$42.60 a year plus a component based on property value.

Table B4: Sydney Water's Drainage areas - stormwater charges (\$ of year)

	1996/97	1997/98	1998/99	1999/2000
Service availability charge				
- Residential and vacant land	\$16	\$16	\$16	\$16
- Non-residential	\$42.60	\$42.60	\$42.60	\$42.60
Property value based charges (cents in the AAV dollar)				
Non-residential (on AAV > \$2,500)	0.327	0.322	0.317	0.313

In December 1993, the Tribunal determined a separate charge for the Rouse Hill Development Area. The Rouse Hill Development incorporates integrated water management comprising water recycling, a "soft" engineering approach to drainage, wastewater treatment and artificial wetlands. Given the unique nature of the development, a combined base charge for recycled water and stormwater drainage services was determined. The determination was made on the basis of the full recovery of operating costs. For properties with an area not greater than 1,000m², a uniform charge applies. For larger areas of land, the Rouse Hill charge will be payable according to land area.

Table B5: Sydney Water – Rouse Hill River Management Charge⁽¹⁾

Rouse Hill River Management Area	1996/97	1997/98	1998/99	1999/2000
Drainage component of the river management charge	89	92	95	98

Note:

1. Charge varies with land area.

For new development areas, the costs of providing stormwater infrastructures could be included in the developer charge. The Tribunal has determined a methodology for calculating developer charges for water, sewerage and drainage services.

In other states, most water authorities have a separate charge for drainage. For example:

- The three water retailers in Melbourne collect a drainage charge to fund drainage works by Melbourne Water. The charge is based on property value.
- The Water Authority of Western Australia has a drainage charge based on property value, subject to a minimum charge.

B4.2 Price structure issues

Regional or catchment based pricing

Sydney Water currently applies uniform stormwater charges within each of the customer classes (ie residential and non-residential). Stormwater charges within local council rates or applied by river management trusts have the potential to be more catchment or local government area specific. Charges and standards of service may vary between river catchments and local government areas.

In its submission to the Tribunal's inquiry into water services, the then Sydney Water Board proposed a catchment-based charging system. Under this system, the costs of addressing flood mitigation and other stormwater pollution problems would be recovered from customers in the stormwater catchment area. It should be noted that catchment areas may vary considerably in size and are unlikely to match sewerage or water supply catchment areas. Sydney Water also proposed that catchment area stormwater charges vary according to area of land occupied on the basis that stormwater run-off can be related to property size. Under this approach, charges would vary substantially between locations and could be quite large for some.

At the time of the Sydney Water submission, the Tribunal considered that its priority was to introduce appropriate water charges - an important change which meant sending clear pricing signals for the consumption of scarce water. The Tribunal therefore did not take up Water's stormwater pricing proposal, considering that pricing reforms for stormwater services should be implemented in the longer term. This review provides the opportunity to consider the pricing of stormwater services.

Alternative stormwater pricing approaches

Charging arrangements can be based on property area to reflect the cost of collecting and transporting stormwater and the cost of improvements to systems. As in the case of the Rouse Hill Charge, charges can be levied according to land size or as "residential equivalent lot" based charges. The same charges could be applied to all properties.

Urban run-off from properties may relate more to the permeability of the surface area of the properties. This is measured by the built upon area (including concrete paths and driveways etc). In practice, it is considered that there are administrative difficulties and problems if properties are to be measured on this basis.

The Tribunal will examine the costs involved in providing stormwater services to various classes of customer and will set charges to reflect them. The Tribunal will also consider

whether cross subsidies exist between stormwater and other services. Before any change to current drainage charges is implemented, the impact of cost allocation, impact on customers and the environment must be examined.

B5 SUMMARY OF KEY ISSUES

The investigation of charges for stormwater services will consider whether Sydney Water's stormwater systems are well managed and whether prices charged for stormwater appropriately recover costs. The Tribunal will examine Sydney Water's existing drainage charges and whether there is a need to amend these charges over the medium term price path.

The Tribunal seeks submissions which answer the following questions:

- What effect does the existing operating framework for stormwater management have on the efficiency of Sydney Water's stormwater drainage services?*
- How efficiently does Sydney Water manage its stormwater system?*
- What is the relationship between Sydney Water and local councils, including the interface between Sydney Water's and local councils' stormwater systems?*

Cost issues:

- How should drainage costs be defined?*
- What costs should be included in drainage costs? For example, to what extent and how should environmental costs be included?*
- What is Sydney Water's requirement for stormwater infrastructure renewal and introduction of new stormwater systems in the short, medium and long term?*
- To what extent should Sydney Water put in place accounting separation and ring-fencing arrangements between its water, sewerage and drainage services?*

Pricing issues:

- Is there cross subsidisation between services and between customer groups?*
- How can differences in the charging structures of Sydney Water and the councils be resolved?*
- What options are available for the reform of drainage prices to better reflect costs?*
- How should stormwater works be paid for?*
- Should drainage charges vary by catchment?*
- If price changes are warranted, what adjustment mechanisms and safety nets should be put in place?*

ATTACHMENT 1

SYDNEY WATER - EXPECTED OUTPUTS AND DELIVERABLES BY 1999/2000

IPART's Determination of price paths for Sydney Water to 2000 had regard to the fact that over the four year price control period, Sydney Water will need to:

- maintain at least existing standards of services under its Operating Licence
- meet higher drinking water quality standards
- improve environmental quality to achieve specified existing standards and specified anticipated standards.

Expected environmental and health outcomes over the next four years are as follows:

Existing standards

- Existing EPA licence conditions on sewage treatment plants (STPs).
- Sewer surcharge: the requirements of its operating licence will be met.

Future standards

- Hawkesbury/Nepean standards: Nitrogen levels in effluent from existing STPs to fall to 7 mg/litre (50 percentage quartile) and phosphorus levels to fall to 0.15 mg/litre (50 percentage quartile) to meet anticipated EPA requirements and to avoid sewage-induced algal blooms in the Hawkesbury-Nepean River.
- North Head, Malabar and Bondi Ocean STPs: By the year 2001, engineering design work will have been completed and construction of the necessary facilities will have commenced to meet anticipated EPA requirements for the elimination of floatable and settleable solids.
- Warriewood and Cronulla Ocean STPs: Bathing water quality at nearby beaches to meet anticipated EPA requirements based on the ANZECC standards on bathing waters better than 90 percent of the time. Work at both STPs will be completed by 2001/02.
- Illawarra STPs: The Illawarra strategy and the detailed design of some facilities will have been completed. Effluent disinfection will have commenced and, as a consequence, bathing water quality at all beaches near Wollongong, Shellharbour and Bombo will meet anticipated EPA requirements based on the ANZECC standard better than 90 percent of the time.
- STPs: Future licence conditions that will be set through the EPA's current pollution reduction programs will have been met.
- Potable reuse plant: The plant will have been constructed and will be operating. Trials proving reliability and ability to continuously meet drinking water standards will have commenced. The costs of producing drinking water from effluent will have been better defined.
- Drinking water quality: NHMRC's 1987 drinking water guidelines will be met through the installation and operation of water filtration plants.
- Sewer overflows:
 - * Sydney Water will spend some \$63m from 1996/97 to 1999/2000 to help contain dry weather discharges from cracked pipes. Of this, approximately \$50m is operating expenditure (provided for within an asset maintenance provision) and \$13m relates to capital expenditure. This spending will meet "existing standards"

and expenditure will be prioritised to target areas where pipe conditions also makes a significant contribution to wet weather overflows.

- * Approximately \$14m of operating and \$5m of capital costs have been allowed to meet anticipated EPA wet weather overflow requirements. The overall level of expenditure that may be needed is unknown. It will depend on the requirements specified by the EPA through the licensing process. The wet weather overflow program could involve expenditure of over \$1.6bn more than the next 25 years.

ATTACHMENT 2

1996 MEDIUM TERM DETERMINATIONS FOR METROPOLITAN WATER CORPORATIONS

Residential bill comparison of metropolitan water suppliers

The following table shows Sydney Water's average bill in 1995/96, 1996/97 and 1997/98 and the anticipated average bill after 1997/98 for a typical residential customer consuming 240 kilolitres of water a year. All figures are in dollars of the day.

	Sydney Water Corporation (\$)				
	1995/96	1996/97	1997/98	1998/99	1999/2000
Water	245	259	270	281	293
Sewerage	262	272	280	286	290
Drainage	16	16	16	16	16
Total	523	547	566	583	599

The following table shows Hunter Water's average bill in 1995/96, 1996/97 and 1997/98 and anticipated average bill after 1997/98 for a typical residential customer consuming 220 kilolitres of water a year. All figures are in dollars of the day.

	Hunter Water Corporation (\$)				
	1995/96	1996/97	1997/98	1998/99	1999/2000
Water	250	252	246	241	236
Sewerage	248	255	257	260	264
Drainage	24	25	25	25	25
EIC	78	40	40	40	40
Total	600	572	568	566	565

EIC = Environmental Improvement Charge

ATTACHMENT 3

REVIEW OF SYDNEY WATER CORPORATION'S STORMWATER CHARGES AND EXPENDITURES

The Independent Pricing and Regulatory Tribunal (IPART) is to conduct a review of Sydney Water Corporation's stormwater charges and expenditures. This review will be undertaken in conjunction with the mid term pricing review for Sydney Water in 1998. The stormwater review has been referred to IPART by the Premier under Section 12(1)(a) of the Independent Pricing and Regulatory Tribunal Act 1992 (Matter SRD/98/1.)

Final Terms of Reference

In conducting this review and determining maximum prices for Sydney Water's stormwater services, the Tribunal will have regard to the matters listed in Section 15 of the IPART Act. The Tribunal will investigate and report on the following matters:

1. The scope of and expenditure on Sydney Water's stormwater drainage services.
2. Sources of revenue and alternative pricing structures for Sydney Water's stormwater drainage services, including base charges and property based charging, having regard to impacts on user groups and economic, environmental, social and urban development impacts.
3. The impact on pricing policies of any need to renew or increase stormwater infrastructure.
4. The effect of the existing operating framework for stormwater management on the efficiency of Sydney Water's stormwater drainage services.

The review is to have regard to the Government's policy on stormwater issues, catchment planning and the implications for total water management. The review may need to consider the interface between Sydney Water's and local councils' stormwater systems.