Sydney WATER

Submission to the Independent Pricing and Regulatory Tribunal of New South Wales

Prices for Water, Sewerage and Stormwater Services

(1 July 2003 to 30 June 2005)

30 September 2002

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Section One – Introduction

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All over the world, authorities face the challenge of providing water services to growing urban populations. More than 1.3 billion people lack access to safe drinking water while 2.8 billion do not have effective sanitation.

Sydney is a far cry from such dire circumstances. Here, the challenge is one of sustainability as increasing population places pressure on natural resources, including drinking water.

Today, Sydney Water provides water, wastewater and some stormwater services to more than 4.1 million people in metropolitan Sydney, the Illawarra and the Blue Mountains. This is expected to rise to 4.5 million by the end of the decade.

Sustainable urban development will require socially responsible, economically viable and environmentally sound water services that meet the needs of the present without compromising the ability of future generations to meet their own needs.

WaterPlan 21, Sydney Water's 20-year strategy for sustainable water services, establishes high-level direction and priority of effort. Its goals are to provide:

- Clean, safe drinking water;
- Sustainable water supplies;
- Clean beaches, rivers and harbours;
- Wise resource use; and
- Smart growth.

Of primary concern is the need to establish a long term balance of supply and demand for drinking water.

Aggregate demand for water, while very variable depending on weather patterns year to year, has been stable since the late 1980s while the population has increased by nearly 700,000. Per capita demand has reduced as a result of usage-based pricing, regulated standards, industrial restructuring, changes in housing, reduction of losses from Sydney Water's systems and behavioural changes by consumers resulting from imposed restrictions during droughts, education and other initiatives.

Environmental sensitivity is reflected in the Government's determination not to rely on supply augmentation through construction of a new dam and in the general acceptance of the need to increase "environmental flows" in the river systems, which provide Sydney's raw water supplies.

At the same time a range of significant "water cycle" issues are under consideration. These include the capacity of receiving waters to cope with nutrient and pollutant loads from increased wastewater and stormwater flows and development of options for water reclamation and re-use.

In the meantime Sydney Water must continue to deliver its existing services with the high degree of quality assurance necessary to meet regulated standards for the environment, public health and customer satisfaction.

It must also continue to deliver, efficiently in partnership with the private sector, an extensive capital program necessary to ensure that its infrastructure not only maintains its existing performance levels at an acceptable level of risk, but is extended and developed to meet increased community expectations and regulatory standards.

Section One - Introduction

Sydney Water must work with Government, regulators and other agencies to put in place new approaches, which meet the challenges of sustainability. In particular, achieving agreement on the long term supply/demand balance will require a high degree of collaboration with our bulk water supplier, the Sydney Catchment Authority and with the Tribunal and other stakeholders to develop innovative and complementary wholesale and retail pricing structures.

To facilitate the alignment of key regulatory reviews, Sydney Water now seeks a price determination from 1 July 2003 to 30 June 2005. At the end of this period, price paths and Operating Licences for Sydney Water and the Sydney Catchment Authority can be considered simultaneously, aligning the key regulatory instruments to better address the long term issues of integrated resource management.

This submission seeks price movements for the 2 years in line with CPI. This will consolidate the significant operating cost reductions achieved over the preceding 4 years while requiring Sydney Water to absorb the operating costs associated with improved levels of service, additional investments in demand management and ongoing pricing reform. Sydney Water's financial position may also be impacted on as a consequence of NSW Treasury's review of its capital structure in 2002/03.

Delivering a quality service that meets the expectations of customers and the community, pursuing further efficiency gains, not compromising the environmental and service improvements while assisting in the creation of a sustainable future for Sydney and its surrounding regions are the primary drivers of performance. The next 2 years will be a period of consolidation, building on past achievements and dedicating resources to the generation of better outcomes for the environment. Value for customers will be maintained by limiting price changes to movements in the cost of living.

Looking beyond 2005, Sydney Water wishes to explore, through extended consultation with stakeholders, manageable pricing arrangements that support and encourage a "total water cycle" approach to efficient service provision. This will require resolution of some of the key issues raised in the Tribunal's Issues Paper regarding incentive regulation, asset valuations, rates of return and the relationship between service levels, costs and revenue requirements. It will also require consideration of pricing reform options in the context of equitable distribution of the revenue burden, encouraging efficient use of services, simplicity and acceptance by customers. However, should the Tribunal not wish to defer consideration of these issues, Sydney Water would, as part of the current determination process, make a supplementary submission outlining its views.

Section Two – Better Performance for the Customer

Sydney Water is responsible for providing water and wastewater services to 4.1 million people and over 100,000 businesses, industries and other enterprises within Sydney, the Illawarra and the Blue Mountains. It also manages some aspects of stormwater in parts of metropolitan Sydney.

The community expects that these essential services will be available at a particular quality whenever required, and will be provided in a way that meets public health requirements, protects the environment and represents value for money. As population growth continues in the Sydney Basin, Sydney Water must manage limited natural and financial resources to sustain service provision in line with the expectations of an expanding community.

Sydney Water operates under a Licence granted by the New South Wales Government. This Operating Licence specifies minimum levels of performance. Sydney Water's performance against the Licence is audited annually, and in the last 2 audits, the organisation achieved either "Full" or "High" compliance ratings on the majority of Licence requirements. Corrective action was taken on some minor, often technical, breaches and the systems in question have subsequently performed to standard.

Sydney Water has adopted a continuous improvement philosophy aimed at delivering improved services and environmental outcomes beyond the minimum requirements of the Licence. Balancing adequate investment, appropriate levels of service and customer expectations requires timely and accurate information in addition to that provided by the Licence audits. Opinions gained directly from customers, and inter agency comparisons are central to this process. Some of the findings are presented below.

2.1 Customer Satisfaction

Sydney Water undertakes regular customer surveys to gain direct feedback on performance, customers' trust and the extent to which services are rated as value for money. In addition, specific surveys are conducted focussing on a particular product or service. The feedback received assists in building a two-way relationship to better understand customer needs, expectations and behavioural trends.

The survey results are closely examined and fed directly into Sydney Water's planning processes. Performance targets are set, improvement plans initiated, system and product planning reviewed and adjustments made to align future service delivery with customer demands and community expectations.

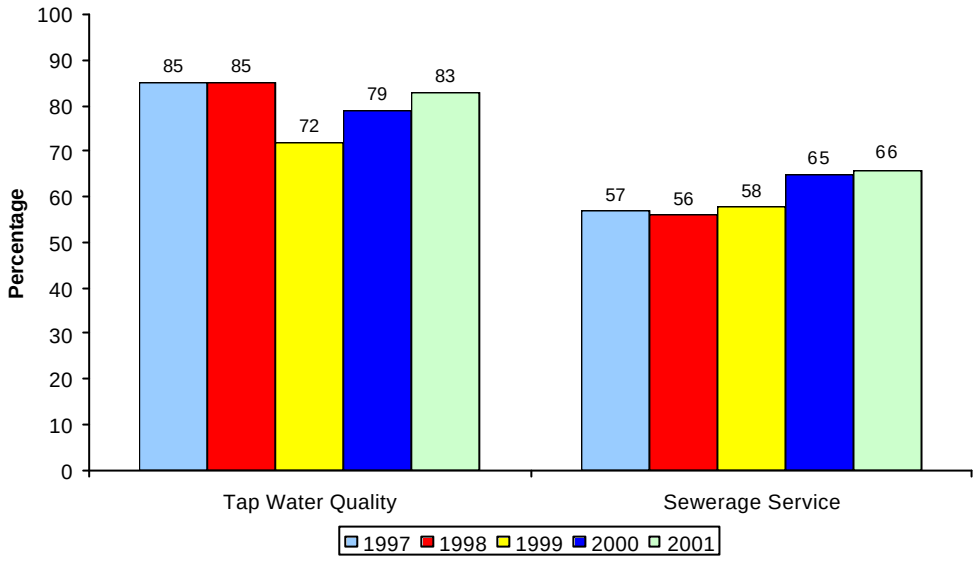
2.1.1 Residential Customer Survey

Overall the results of the 2001 survey show that residential customers consider Sydney Water to be performing well but, more importantly, that its performance, particularly from 1999 onwards, is getting better.

Figure 2.1 presents the percentage of customers satisfied with tap water quality and sewerage services over the last 5 years. Satisfaction levels with tap water have

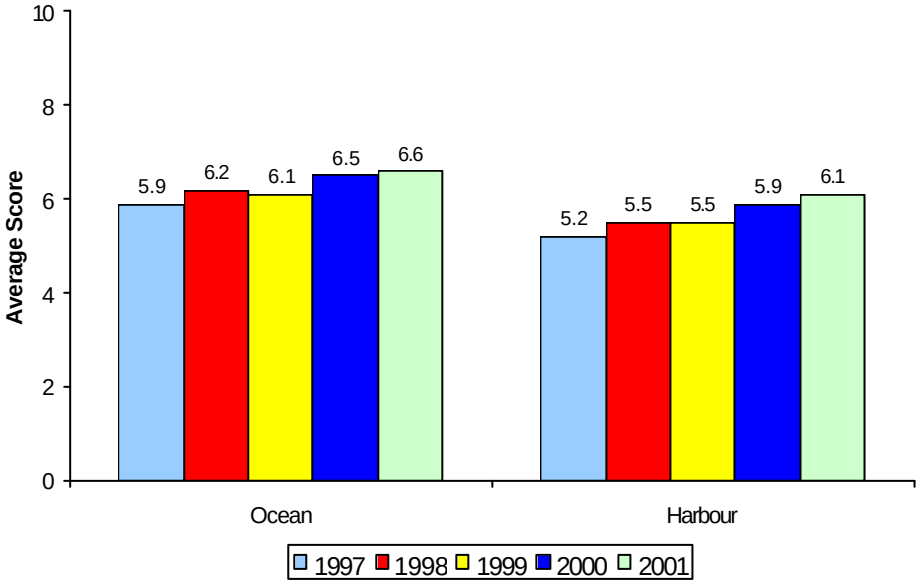
almost reached the pre-water quality incident levels [1] while satisfaction with sewerage services continues a trend of significant annual improvement.

Figure 2.1: Customer Satisfaction with Tap Water Quality and Sewerage Service (1997-2001)



The benefits of Sydney Water's investment programs are also beginning to be widely recognised as customers report steady improvements in their perception of Sydney's ocean and harbour water quality. Figure 2.2 presents customer ratings of water quality in the ocean and Sydney Harbour.

Figure 2.2: Customer Ratings of Ocean and Sydney Harbour Water Quality (1997-2001)



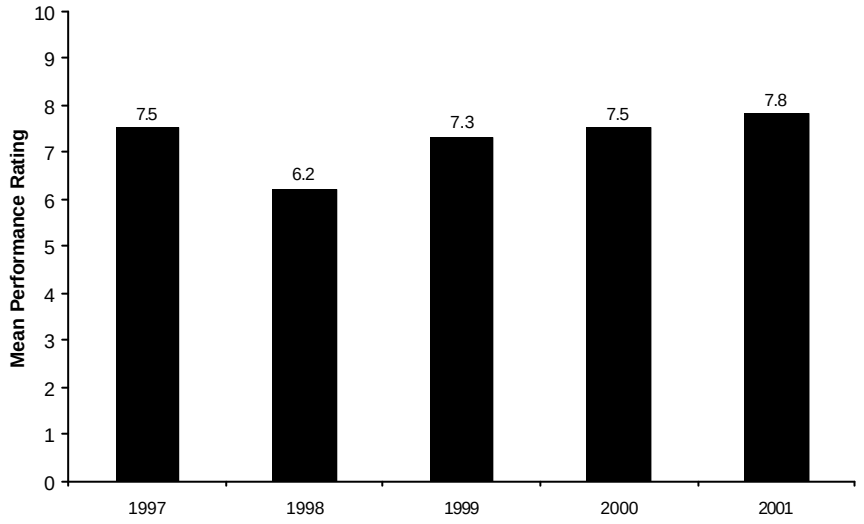
[1] In 1998, readings of Cryptosporidium and Giardia were found in drinking water being delivered to Sydney residents.

2.1.2 Non Residential Customers

The 2001 non-residential customer survey results reflects the upward trend in Sydney Water's performance since 1998. All performance ratings have increased from the 2000 survey and are higher than they have been since 1997. Non residential customers are increasingly satisfied with water quality and the sewerage services provided by Sydney Water and fewer customers reported experiencing a water supply interruption or water pressure problem in 2001.

Figure 2.3 shows the performance ratings that have been reported by commercial and industrial customers. In 2001 the overall non-residential performance ratings has surpassed all previous ratings.

Figure 2.3 Non Residential Overall Performance Rating (1997-2001)



The non-residential customer survey also reported that these customers consider Sydney Water is becoming more responsive to their needs and has a greater willingness to understand their businesses.

Commercial and industrial customers have also reported a willingness to examine their water use practices. In 2001, 34% of non-residential customers surveyed reported that they had taken action in the last 12 months to reduce water use or use it more efficiently. More importantly though, high water users have been more inclined to take action to reduce their consumption.

In 2001, a separate survey of commercial and industrial trade waste customers was undertaken to provide information on customers views of Sydney Water's trade waste performance. These customers rated Sydney Water's performance very highly. Customers report that the quality of the service provided by Sydney Water had improved over the last few years and the majority of customers rated the service as good value for money.

2.2 Benchmarking Performance

In addition to gaining direct feedback from customers, Sydney Water also compares its performance to that of other water service providers and is involved in a number of industry benchmarking studies. These comparisons assist in setting future directions and targeting service improvements. The most recent studies include WSAAfacts 2001, the Australian water industry benchmarking study for 2000/01, and the Ofwat Worldwide Water Comparison for 2000/01, conducted by the UK Office of Water Services.

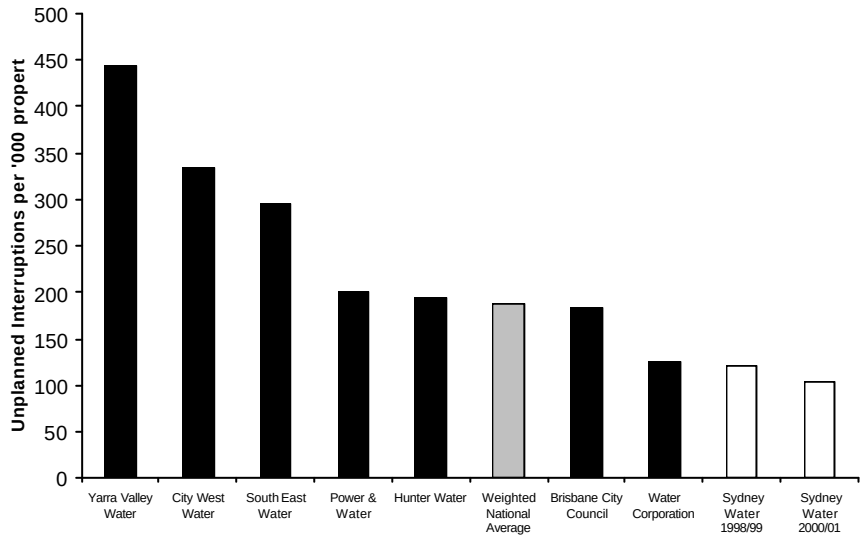
The results of both the WSAA and Ofwat studies indicate that Sydney Water's performance compares well and continues to improve.

Each of the figures presented below compares Sydney Water's performance through time and across the industry in Australia. They are compiled from data contained in WSAAfacts 2001, and include the weighted national average performance and Sydney Water's performance on the same measure in 1998/99.

Water and Wastewater Interruption Frequency

Unplanned service interruptions are a key measure of service reliability for both customers and suppliers.

Figure 2.3 – Unplanned Water Interruptions (2000/01)



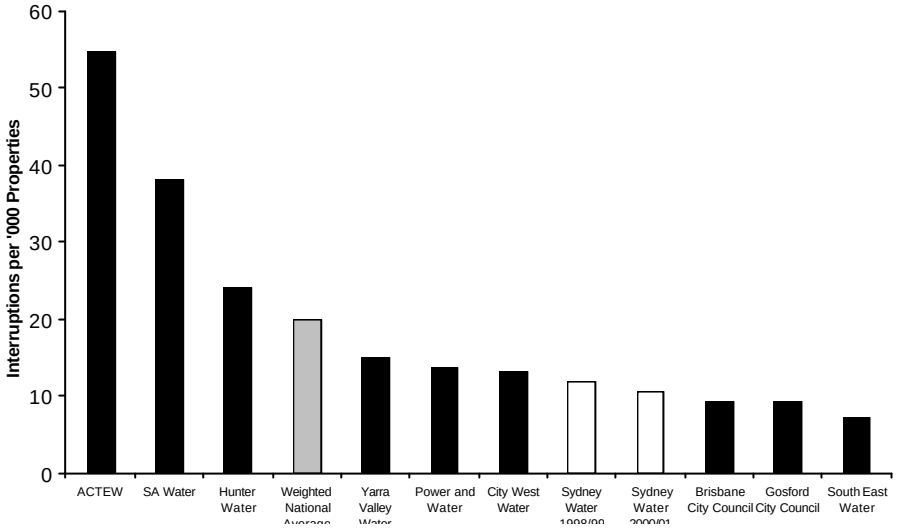
Note: No data reported in WSAAfacts 2001 for ACTEW, SA Water, Gosford City Council and Gold Coast Water

Unplanned water interruptions are low and there has been a marked decrease in the number of repeat events.

Sydney Water's performance against Australian authorities is mirrored in the Ofwat benchmarking study results. When compared to the UK water authorities, Sydney Water's performance in terms of unplanned interruptions is better than the UK average.

Figure 2.4 shows that Sydney Water's unplanned wastewater interruptions are also significantly better than the national average.

Figure 2.4 – Unplanned Wastewater Interruptions (2000/01)



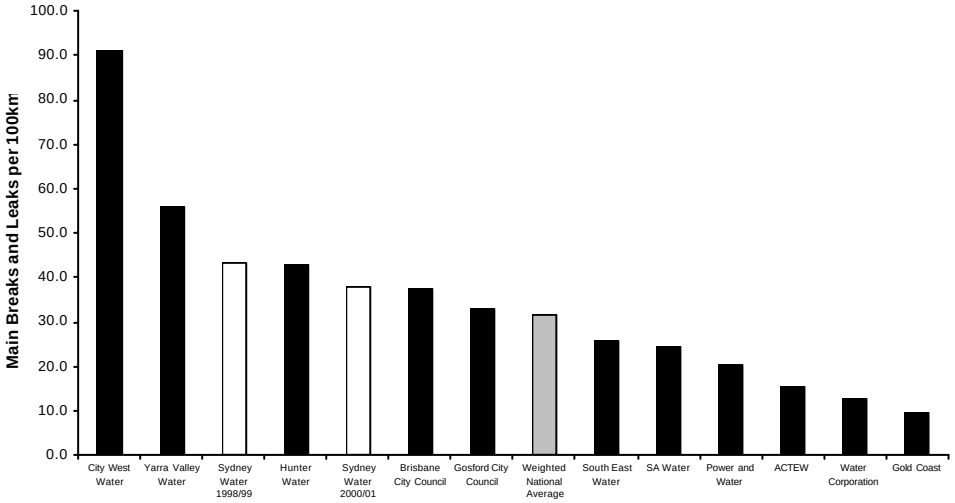
Note: No data reported in WSAAfacts 2001 for Water Corporation and Gold Coast Water

Water and Wastewater Infrastructure Performance

An additional measure of service level is the number of bursts, leaks, breaks and chokes as this gives some indications on the adequacy of the operator's renewals and refurbishment programs.

Figure 2.5 presents Sydney Water's water main breaks and leaks performance against those of other Australian water service providers.

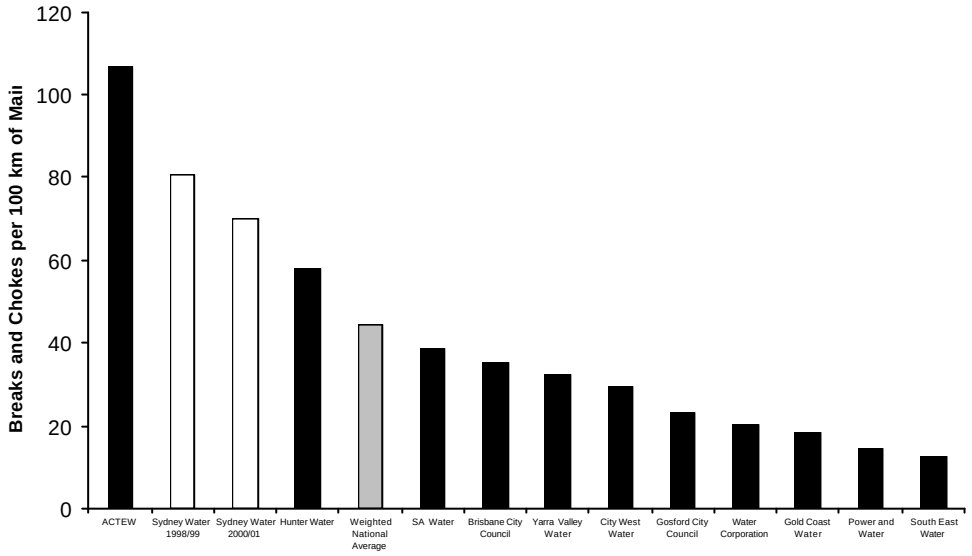
Figure 2.5 – Water Main Breaks and Leaks (2000/01)



Sydney Water experiences more water breaks and leaks than the national average. However, since 1998/99 there has been a 13% improvement compared to an average industry improvement of about 3%, indicating that Sydney Water's renewals program is achieving the desired results. The renewals program is expected to continue to improve Sydney Water's relative performance.

Figure 2.6 presents Sydney Water's sewer main breaks and chokes performance.

Figure 2.6 – Sewer Breaks and Chokes (2000/01)



Annual performance on sewer breaks and chokes fluctuates. For example, although current performance is better than in 1998/99, in 1999/2000 there were 62 breaks and chokes per 100km of main. In 2000/01 the number increased to 70.15 while for 2001/02 there were 68 chokes per 100km.

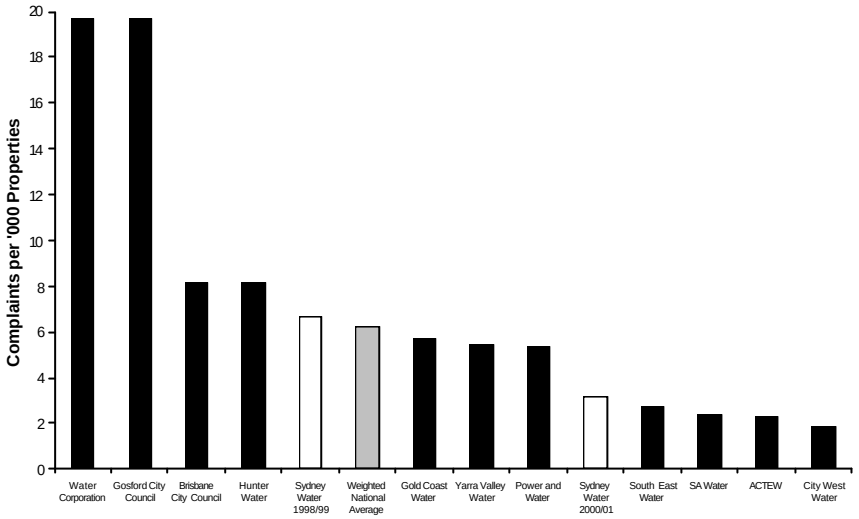
Sydney Water's performance can improve and that is why it has in place a pro-active program for the cleaning and rehabilitation of sewers to reduce choke frequencies. This is part of the SewerFix program, a 20 year, $2 billion sewer improvement program targeting Sydney Water's 27 sewer systems.

Water Quality

A primary responsibility of Sydney Water is to deliver clean, safe drinking water. Since the events of 1998, considerable efforts have been made to develop and implement a certified Drinking Water Management system. This system has improved water quality protection and has also resulted in a reduction in the number of water quality complaints received.

Figure 2.7 below presents the water quality complaint performance of Australian water service providers as reported in WSAAfacts 2001.

Figure 2.7 – Water Quality Complaints (2000/01)



The number of water quality complaints received by Sydney Water compares well against other water suppliers, and is now better than the national average.

In summary, the results of customer surveys and benchmarking studies demonstrate that considerable improvements have been made on key aspects of service delivery and would support the view that Sydney Water's investment program is producing results. Sydney Water does not consider its task to have been completed. It is now important for Sydney Water to continue the investment required to meet customers' ongoing service expectations in the context of increasing population pressures and more stringent environmental, public health and regulatory requirements. The current and future service demands that will underpin the prices and revenue necessary to support this investment are detailed in Section Three – Demand, while the expenditures required are outlined in Section Four – Expenditure.

Section Three – Demand

Once prices are established, demand determines revenue. The key demand elements for Sydney Water are:

- Customer numbers (54% of total revenue); and
- Metered water consumption (46% of total revenue).

As water is a finite resource, managing demand as well as supply is essential in order to achieve sustainability.

3.1 Customer Numbers

Customer numbers are a function of urban development to accommodate population growth. Sydney Water has in place a system of developer charges that signal the location specific costs of development. These encourage efficient use of existing infrastructure within the Sydney Basin but have little influence on the totality of urban expansion.

Historically, growth has been reasonably consistent and predictable. Forecasts used by Sydney Water in the lead up to the Tribunal's September 2000 Determination were based on PlanningNSW projections, and trends over previous years. Since then, however, growth has exceeded expectations, to the extent that, based on Australian Bureau of Statistics Census data, it will be almost 3% higher than anticipated by 2003 (PlanningNSW is yet to update its projections). As a result, as at 30 June 2002, actual customer numbers were 1.4% above September 2000 forecasts.

Contributing factors appear to be the flow on effects of the Olympics and subsequent initiatives to promote housing development including the Federal Government's First Home Buyers Grant and State Government stamp duty concessions.

As a consequence of higher than expected customer growth, Sydney Water has received slightly more service (fixed) charge income than anticipated, however, it is currently within 1.6% of forecasts. Customer growth has also impacted on Sydney Water's usage revenue. This is dealt with in Section 3.5.

The trend in population growth in Sydney is expected to continue for the medium term. 25,000 to 30,000 new developments are expected each year, resulting in over 100,000 new apartments and 70,000 new houses being constructed over the next 5 years. Over the next decade, based on Census results and preliminary PlanningNSW estimates, there are likely to be 4.5 million people living in the Sydney region. Forecasts of customer numbers used in this submission reflect these predictions and the higher than expected growth over the last 3 years.

3.2 Water Use

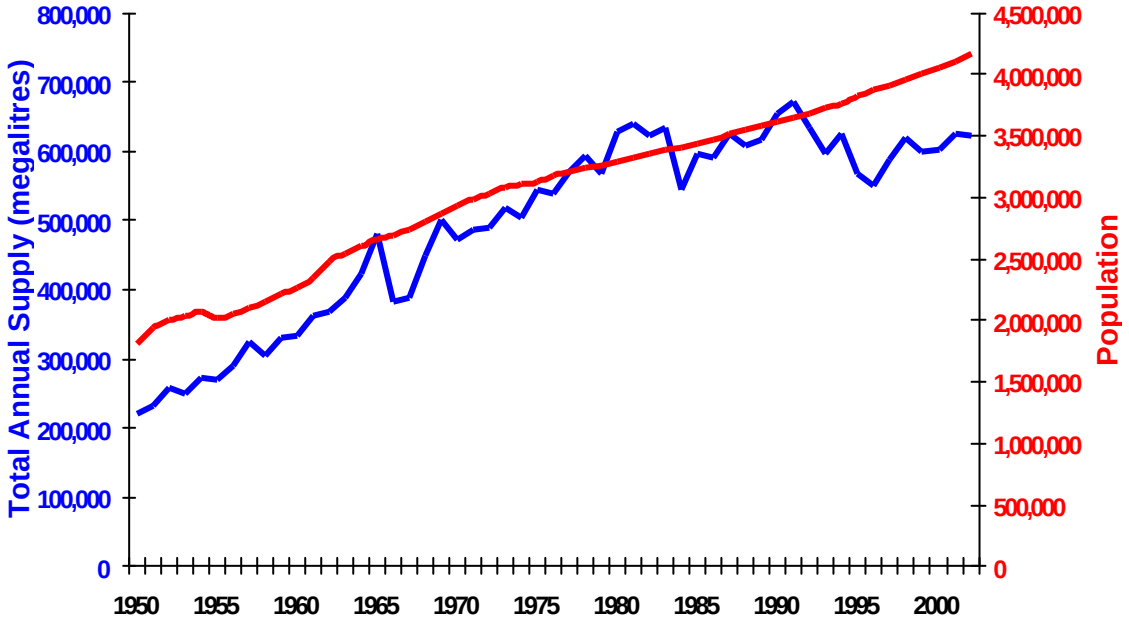
The influx of people into the Sydney Basin places increasing pressures on the environmental resources of the region, particularly in terms of sustainable water supply. The Tribunal's Issues Paper observes that, with the Government indefinitely deferring a new dam, Sydney Water may already *"…be drawing close to the long-*

term safe yield of water available from existing storages under current operating rules." [2] It is therefore imperative for Sydney Water to pursue effective demand management in order to ensure that available resources are properly managed and current and future water demands can be satisfied within the constraints of the SCA's capacity to supply water. This is a key aspect by which Sydney Water's performance is measured and is consistent with the inclusion of water conservation requirements in its Operating Licence.

Sydney Water has embarked on an aggressive program of demand management initiatives aimed at meeting the water conservation targets contained in the Operating Licence. While it has made considerable progress to date, achieving the 2004/05 and 2010/11 targets will require customers to respond more positively than in the past to Sydney Water's education and demand management initiatives.

Figure 3.1 shows that up until the late 1980s Sydney's total water demand increased in line with population. Since then, despite population increases of over 700,000 people, demand has essentially levelled out. Although significant per capita reductions have been achieved, total water consumption continues to be of the order of 600,000 ML per annum.

Figure 3.1: Water Consumption and Population Growth Since 1950



[2] IPART (2002), *Review of Metropolitan Water Agency Prices – Issues Paper*, p. 24

3.3 Sydney Water's Demand Management Performance

In its 1999 price submission, Sydney Water presented a 5 year, $50 million Demand Management Strategy designed to close the gap between projected demand and the Operating Licence target. The Strategy initiated programs to reduce residential and non residential demand at the lowest cost to the community. It was projected that this would allow Sydney Water to meet both the 364 and 329 litres per capita per day (lcd) targets for 2004/05 and 2010/11 respectively.

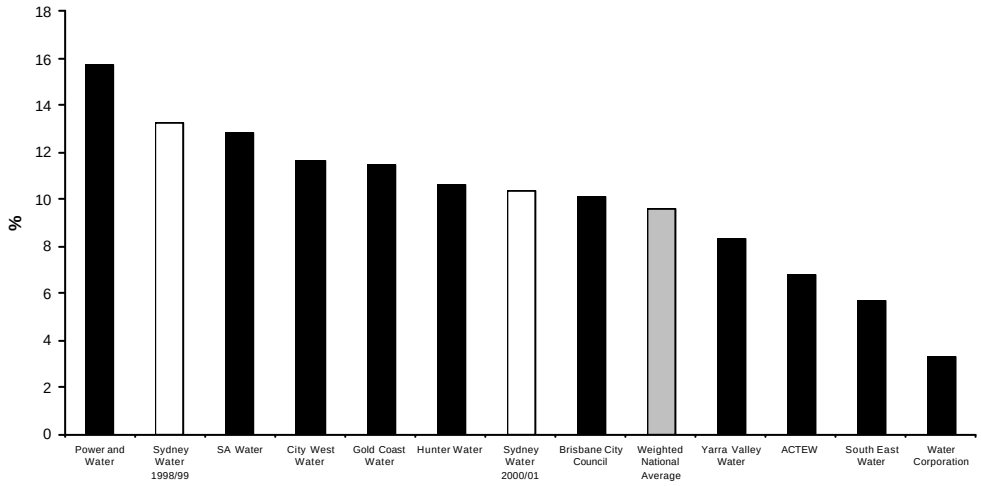
The Strategy is now more than 2 years into its implementation and some $26.7 million has already been spent. Major program initiatives have included:

- Leakage reduction in the distribution system through active leakage detection and scheduled repair of over 4,000 kilometres of water supply mains or 18% of Sydney Water's delivery system;
- Residential indoor water efficiency program including the residential retrofit program;
- Residential outdoor water efficiency program; and
- Business water efficiency program targeting industrial, commercial and government sectors.

While Sydney Water can only seek to influence customer demand, it can control the performance of its own delivery system. Its aggressive leakage detection program has generated significant savings. It is estimated that this program saves approximately 22 megalitres (ML) of water per day.

The improvement in Sydney Water's system water loss performance through time and in comparison to other Australian water service providers as reported in WSAAfacts 2001 is shown in Figure 3.2.

Figure 3.2: System Water Losses as Percentage of Total Volume Supplied (2000/01)



Note: No data reported in WSAAfacts 2001 for Gosford City Council

Sydney Water's system water losses have fallen from an estimated 13.3**%** in 1998/99 to an estimated 10.4**%** in 2000/01, out performing many of the other major authorities and bringing performance much closer to the national average. Additionally, when compared with UK companies, Sydney Water's leakage per property is lower than the UK average.

In addition to the expanded leakage program, Sydney Water's "Every Drop Counts Residential" and "Every Drop Counts Business" programs have contributed a significant and growing proportion of water savings. To date, 179,405, or 12% of customers have participated in the residential retrofit program, with over 250,000 AAA rated shower heads fitted, generating water savings in the order of 10.3 ML per day. Additionally, more than 60 business customers have agreed to introduce water saving initiatives, reducing water consumption by businesses by up to 2.4 ML per day.

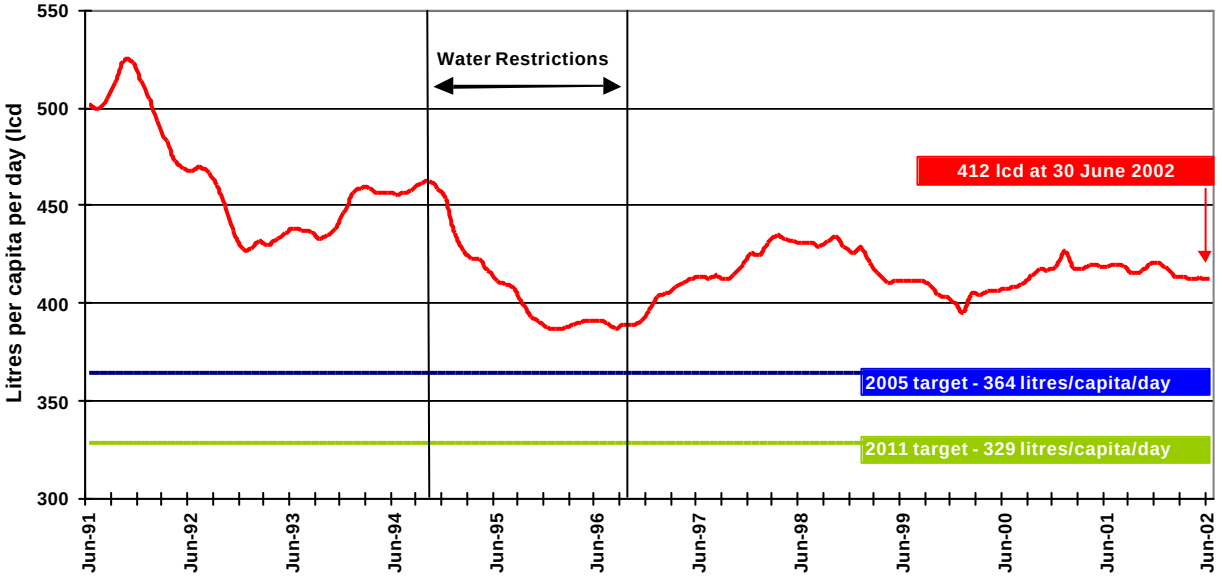
Sydney Water has also been actively encouraging the uptake of recycled water to reduce demand for potable water. In 2004, the largest recycled water scheme undertaken by Sydney Water will commence operations. More than 20 ML per day of recycled effluent will be supplied to BHP Steel Port Kembla, substituting for water currently drawn from Avon Dam.

Sydney Water has also increased its own use of recycled water whenever possible. Currently 80**%** of the water used in the operation and maintenance of Sydney Water's sewage treatment plants is recycled.

These initiatives and programs are beginning to have an impact and savings are being realised. On a per capita basis, daily consumption for the year ending 30 June 2002 was 412 litres, some 18.5% below the 1990/91 base year.

Per capita demand since 1990/91 is presented in Figure 3.3.

Figure 3.3: Per Capita Water Consumption since 1990/91



The Montgomery-Watson-Harza review of demand management performance, commissioned by the Tribunal, commended Sydney Water on the programs it has implemented to date. The review reinforced that, while Sydney Water can introduce programs to educate and influence customers, it cannot control their demand.

The issue for Sydney Water is that, despite a levelling off of consumption in line with sustainable yields from existing supply sources, revised estimates of storage inflows and impending environmental flow regimes for downstream river systems are likely to reduce the sustainable yield. This presents a challenge in terms of demand management, particularly as population continues to grow.

3.4 Sydney Water's Revised Demand Management Strategy

Sydney Water recognises that it will be difficult to meet the 2004/05 target. However, the lessons learnt from the first 2 years of the program have allowed Sydney Water to thoroughly review its Demand Management Strategy and reaffirm its commitment to work with customers to encourage wise water use.

Implementation of the 1999 Demand Management Strategy has provided Sydney Water with considerable data on the success of various programs and their impact on water use behaviour. This data has been used as the basis for a revision of the Strategy enabling better targeting and more efficient resource use in order to move toward the 2004/05 target.

The revised Demand Management Strategy will continue to educate and influence customers to use water more wisely and continue Sydney Water's investment in programs to further reduce operational water use and system leakage.

Sydney Water has recently committed additional funds to the achievement of both the 2004/05 and 2010/11 targets. In 2002/03, $16 million will be spent on demand management initiatives with an additional $36.5 million to be spent by 30 June 2005. This means that since 1999, Sydney Water is spending in the order of $80 million on demand management initiatives to meet the 2004/05 target, compared to the $50 million it proposed in its 1999 price submission to the Tribunal.

The major initiatives of the revised Strategy are outlined below.

3.4.1 Leakage Reduction Program

The component of water consumption over which Sydney Water has the most direct control is system leakage. The prioritised leakage detection and reduction program has delivered a water saving of 22 ML per day from the 18% of the water delivery system targeted so far.

Based on these results savings are expected to increase to 50 ML per day by 2005 as more of the delivery system is inspected and remedial action taken. It is anticipated that leakage levels can be reduced to 7.5%, achieving one of the lowest leakage rates in the world.

3.4.2 Residential Sector Programs

The residential sector accounts for over 70% of annual water consumption. Accordingly, Sydney Water is dedicating considerable resources in this area. Sydney Water also acknowledges that, as pointed out in Section 7.1.1 of the Tribunal's Issues Paper, average residential consumption in Sydney is high when compared to the other water service providers regulated by the Tribunal. However, such comparisons are problematic as they fail to adequately account for differences, especially rainfall patterns, between cities and regions.

Data collected has signalled a number of important trends regarding the householders likely to participate in water conservation programs. Analysis of this data has allowed a better targeted residential strategy to be developed to maximise the demand reductions from this sector. The "Every Drop Counts Residential" program will focus on:

- Targeting of the residential retrofit program to high water users;
- A retrofit of Department of Housing properties over the next 5 years;
- The addition of new programs aimed at further reducing outdoor demand;
- Development, in conjunction with PlanningNSW, of water efficiency requirements for new residential developments; and
- The introduction of rebates and subsidies for water efficient devices where appropriate.

3.4.3 Business Sector Programs

Nationally and internationally, water agencies have found that most businesses have the potential to reduce water consumption by between 10% and 30%. A 10% reduction in business sector use across greater Sydney would save about 50 ML of water per day. The "Every Drop Counts Business" program is targeting industries such as manufacturing, pharmaceutical, laundries, property management, and local councils in order to maximise the water saved.

Previous investigations have found that while businesses are willing to improve their water use efficiency, funds were often not available to undertake the necessary investments. For this reason, Sydney Water has established a revolving investment fund to assist businesses with implementation. The fund allows Sydney Water to meet the cost of implementation, with businesses using the resulting cost savings from reduced water consumption to repay Sydney Water.

Sydney Water will also continue to promote recycled water as a substitute for potable water. It is expected that recycled water usage will increase by as much as 20 ML per day by 2005.

3.5 Water Usage and "Surplus Revenue"

In its Issues Paper, the Tribunal suggests that Sydney Water will receive between $35 million and $72 million in "surplus revenue" because water demand is tracking above the trend line necessary to meet the 2004/05 demand management target [3].

When considering this issue, natural volatility in water demand must be taken into account. Significant short term fluctuations around long term average demand will occur due to influences such as weather and economic activity over which Sydney Water has no control and which are themselves often difficult to predict. For example, since 1997/98, total water sales have fluctuated by almost plus or minus 5% around the 5 year average. At today's prices, this means a possible year on year differential of almost $45 million in water usage revenue alone.

The move to user pays pricing, which the Tribunal has continually supported, has seen Sydney Water's reliance on usage revenue grow from less than 20% of total income in 1993 to the current level of 46%. The year on year uncertainties of usage income impose an element of business risk on the organisation. This risk was realised in the mid 1990s when the imposition of water restrictions during drought adversely impacted on Sydney Water's expected income. Sydney Water was obliged to accept the downside, and the notion of short term price increases to cover perceived shortfalls was never contemplated.

Fluctuations in actual compared with forecast demand in individual years are inevitable and should not attract special attention or impact on subsequent pricing determinations.

For the 2 years to 30 June 2002, Sydney Water has received $55 million more in water usage revenue than it anticipated at the time of the Tribunal's September 2000 Determination. As previously stated, however, population growth over the period has exceeded the expectations of both Sydney Water and PlanningNSW. While population impacts on total demand, it does not affect the per capita demand target against which demand management performance is assessed. At least $20 million of the $55 million additional water usage revenue can be attributed to the demand imposts of the additional population rather than Sydney Water's demand management performance.

Of the remaining $35 million, it is difficult to unbundle demand management impacts from the influences of dry weather and other external influences. The fact remains, however, that water usage revenue (excluding the population growth impact) over the 2 years is within 4% of the expected outcome. This compares more than favourably with the plus or minus 5% variations in water sales that have occurred over the last 5 years.

It should also be noted that while there is no direct nexus with the water usage revenue outcomes of 2000/01 to 2002/03 Sydney Water is proposing to spend an additional $30 million on demand management in order to achieve the 2004/05 target. This acknowledges that, for whatever reason, water usage was higher than that anticipated over the period of the September 2000 Determination and additional effort will be undertaken to influence customers to reduce demand.

[3] IPART (2002), *Review of Metropolitan Water Agency Prices – Issues Paper*, p. 28

3.6 Demand Assumptions

In Section 7.1 of its Issues Paper, the Tribunal poses the question *"What water demand assumptions should the Tribunal adopt for setting prices in the 2003 determination?"* [4]

Sydney Water is committed to its revised Demand Management Strategy in order to achieve the reduction in daily per capita consumption required to meet the target contained in the Operating Licence by the conclusion of 2004/05 (although the average over that year may be marginally above the target).

It stresses, however, that this is under normal operating conditions. External influences such as the weather could impact on this outcome by plus or minus 5% or more and may provide sound reasons why a "target" is not achieved in a particular year. The Montgomery-Watson-Harza review of Sydney Water's Demand Management Strategy expressed concerns about target setting. It supported a view that the real objective is a sustainable water supply, which means the management of demand over the long term to ensure that "normal" requirements can be met from available resources.

Table 3.1 outlines the demands assumed by Sydney Water in preparing the revenue and financial impacts of the prices proposed in this submission.

Table 3.1: Demand Assumptions

	2003/04	2004/05
Population (millions)	4.263	4.316
Daily Per Capita Demand (litres) – average for year	387	371
Operating Licence target – by 30 June		*364*
Total Demand (Bulk Water Purchases - GL)	602	584
Metered Water Sales (GL)	533	517
Customer Numbers ('000) – average for year	1,645	1,674

[4] IPART (2002), *Review of Metropolitan Water Agency Prices – Issues Paper*, p. 23

Section Four – Expenditure

In providing water, wastewater and stormwater services, Sydney Water currently owns and operates approximately 20,500 kilometres of watermains, 263 reservoirs, 143 water pumping stations, 22,500 kilometres of sewermains, 656 sewage pumping stations, 30 sewage treatment plants and 489 kilometres of stormwater channels.

To satisfy statutory obligations and customer expectations, Sydney Water must invest capital to upgrade and replace existing assets, and to create new ones. It must also meet the costs of operating and maintaining delivery systems and the processes that support them.

When properly managed, assets delivering water related services generally have a long life. Efficient investment in these assets should therefore anticipate likely future requirements as well as catering for more immediate regulatory and community demands. With this in mind, WaterPlan 21 sets Sydney Water's long term strategic direction for service delivery.

Conceptualised in the 1990s with a primary focus on improving wastewater service outcomes, WaterPlan 21 was soon expanded to include sustainable provision of safe, reliable drinking water and improved stormwater management.

The plan is working. Beaches and waterways are cleaner, sewage overflows are being addressed, nutrient removal rates at inland sewage treatment plants are at world's best levels and water use has decreased by nearly 20% per person. To build on the significant environmental and social gains already achieved requires a continued commitment to WaterPlan 21 by Sydney Water, its regulators and the communities served. The gains made today set the benchmark for assessing adequate performance tomorrow.

To reflect emerging global and local challenges of sustainable water resource management, Sydney Water has recently reviewed WaterPlan 21. While the majority of the plan was found to be sound, the review identified major challenges in relation to population growth and sustainable urban development. Meeting the water supply and wastewater disposal needs of a growing population with finite resources requires integration of water, wastewater and stormwater into a total water cycle management strategy that optimises use of all available resources. That strategy may require refinement as issues such as riverine environmental flow requirements, opportunities for non-potable reuse and institutional arrangements for stormwater become clearer.

4.1 Asset Management and Renewal

A key assumption within WaterPlan 21 is that Sydney Water's existing assets will be maintained, renewed or improved to deliver quality products and services to customers. Water service assets generally have long lives, however Sydney Water's asset base is comprised of a significant proportion of aging assets, the proper management of which imposes costs.

The ability to meet customer and community expectations over the long term is dependent upon an understanding of individual assets, the systems within which they operate and the environment within which they are placed. Asset Management Plans and Area Plans currently being developed play a key role in supporting such an understanding.

The Asset Management Plans identify the risk management framework taken in the operation, maintenance and renewal of each class of assets. This approach considers the severity and probability of asset failure in determining the asset management strategy and the level of maintenance and renewal required. High risk or critical assets are identified on the basis of the potential adverse customer, social, environmental and economic consequences of failure. An intensive management strategy is applied to critical assets with the aim of minimising the risk of asset failure. Non-critical assets may be managed re-actively, with renewals triggered once pre-determined criteria are met.

In relation to Sydney Water's planned levels of renewals, the 1999 Halcrow report for the Tribunal stated:

> *"Our view is that current levels are modest and acceptable but will probably need increasing in the medium term….."* [5]

Current analysis and predictive modelling indicates that higher levels of renewals in the water pipe networks will be required over the medium to long term as asset condition deteriorates and serviceability is affected adversely. This reflects the age profile, materials and estimated condition of the system, much of which was built in the 1930s and 40s through to the 1960s and 70s.

Over the next 2 years further work will determine the critical water mains, assess their condition and the impacts of various rates of renewals on standards of service to customers.

In relation to the wastewater system, a combination of growth, renewals and maintenance and improved standards will drive investment over the next 20 years. Current programs contribute to multiple objectives.

The Sewerfix program, for example, has the following objectives:

- Maintain the structural integrity of critical sewers;
- Minimise the risk of dry weather overflows from pumping stations;
- Reduce pathogen levels in creeks and stormwater channels;
- Reduce wet-weather flow in pipes;
- Reduce wet-weather overflows in catchments; and
- Reduce overflows caused by chokes and blockages in pipes.

Current Sewage Treatment System Licences (STS Licences) issued by the EPA give a priority to reducing dry weather overflows in the networks and reducing wet weather overflows in the Blue Mountains.

In addition to the requirements of the STS Licences, maintenance and renewals of other aspects of the sewerage system and treatment plants will still be required. Pipe material and its joining mechanism is an important determining factor of the life cycle of pipes, with the majority of damage to smaller pipes being caused by tree root ingress. The asset condition of critical sewers is assessed on a priority basis in terms

[5] Halcrow Management Sciences (1999), *NSW Water Agencies Review – Appendix A*, p. 33

of damage, siltation and internal structural deterioration. The ongoing reliability of the sewage treatment plants is also a major focus area.

Planning and investment over the next 2 years will focus on delivery of the STS Licence requirements, refinement of ongoing maintenance and renewals programs and evaluating the effectiveness of various methods of reducing overflows for refinement of the long term overflow abatement strategy.

Stormwater assets are regularly inspected and maintained to ensure that their hydraulic capacity is maintained. Increasing maintenance costs associated with treatment facilities are also being reviewed as input to long term environmental improvement strategies.

4.2 Regulatory and Other Drivers

An increasing population, improved understanding of environmental management and better corporate governance all require agencies to increase their investment in service delivery if sustainable outcomes are to be achieved.

These additional investments may be driven by:

- The regulatory framework under which the agency operates – in Sydney Water's case, its Act, Operating Licence, EPA and NSW Health requirements;
- Service demands and expectations of customers;
- Anticipated future regulatory requirements;
- Corporate governance and risk management; or
- Efficiency improvements.

4.3 Capital Planning and Expenditure

WaterPlan 21 sets out high level strategies for future sustainable service provision. Sydney Water's 2002 Corporate Plan establishes a 5 year planning horizon consistent with WaterPlan 21, detailing priorities, targets and resource requirements.

Under WaterPlan 21 capital investment is aimed at delivering:

- Clean, safe drinking water – the continued delivery of high quality safe drinking water to customers;
- Sustainable drinking supplies – development of sustainable supplies of "water fit for use" in applications where potable quality water is not essential;
- Clean beaches, rivers and harbours – reduction of sewer overflows, improved sewage treatment and management of discharges to receiving waters, improved wastewater management in unsewered urban areas, and better management of stormwater;
- Wise resource use – recycling of biosolids; and

- Smart growth – innovative servicing strategies to minimise the impact of new developments.

Sydney Water also undertakes capital investments to improve business performance, minimise risk to employees, the community and the environment and to manage its property portfolio.

4.4 Capital Expenditure Outcomes

Under Sydney Water's recent capital program significant amounts have been invested in the renewal and refurbishment of existing assets. Resources have been committed to maintain and improve levels of service to customers, as well as to the achievement of ongoing compliance with regulatory standards. As outlined in Section Two – Better Performance For The Customer, this program has been successful. Sydney Water is performing well when compared to other water service providers and, more importantly, its performance is getting better.

In addition to renewals expenditure, Sydney Water's capital program has also realised gains for the community generally through works dedicated to improving environmental and public health outcomes. Water quality on Sydney and Illawarra beaches, in rivers and in estuaries has improved due to improvements in treatment levels and a reduction in sewage overflows. These gains will continue over the next few years as projects and programs recently initiated are completed.

Investment in transport and treatment systems has resulted in:

- The capture of over 5 billion litres of diluted sewage that would have otherwise flowed into Sydney Harbour, through the operation of the Northside Storage Tunnel on 29 occasions between January 2001 and June 2002;
- Tertiary treatment at Cronulla sewage treatment plant has improved ocean water quality in the surrounding area, virtually guaranteeing that the water at Cronulla's beaches will be safe to swim in all the time;
- The level of nutrient removal at inland sewage treatment plants has assisted in the prevention of algal blooms in inland waterways. The loads of both phosphorus and nitrogen discharged have fallen significantly;
- A 50% reduction in nitrogen loads and a 75% reduction in phosphorus loads to South Creek over the past 7 years;
- A reduction in total suspended solids discharged from coastal treatment plants, primarily as a result of the upgrade of Cronulla sewage treatment plant;
- Reduced sewage overflows to the environment. The total number of sewage overflows has fallen by 37% since 1997/98. This performance will continue to improve as Sydney Water continues its SewerFix program which aims to end all dry weather overflows from the transport system and to progressively reduce wet weather overflows throughout Sydney Water's area of operations;
- Provision of sewer services to nearly 5,000 properties in towns and villages in highly environmental sensitive areas through the New South Wales Government's Priority Sewerage Program;

- Sydney Water is on target to comply with the Pollution Reduction Programs (PRPs) contained in its Sewerage Treatment System licences issued by the EPA;
- The decommissioning of 8 sewage treatment plants, construction of a transfer tunnel, removal of 30 sewage pumping stations and improvement of treatment quality at Winmalee sewage treatment plant has reduced sewage overflows to streams and improved the environment of the Blue Mountains; and
- The total number of odour complaints continues to fall. This fall is attributable to the completion of major overflow abatement works.

The following table provides an overview of Sydney Water's capital program based on the goals of WaterPlan 21, with a further break up into specific projects and programs from the current Corporate Plan that contribute to the overall program. The table focuses in particular on the period covered by the Tribunal's last determination (2000/01 to 2002/03), and the period for which prices are now being sought (2003/04 to 2004/05). It also provides an indication of individual projects and programs beyond 2005.

The table shows that, by 30 June 2003, Sydney Water will have delivered a capital investment program averaging over $500 million per annum within the financial parameters established by the Tribunal's September 2000 Determination supporting lower levels of expenditure.

Table 4.1 Sydney Water's Capital Program

GOAL	Contributing Projects and Programs	Expenditure Over Past Determinations			Future Expenditures	
		Pre 2000/01	2000/01 – 2002/03		2003/04 - 2004/05 Forecasts	To complete project or program
			September 2000 Estimates (2000/01-2002/03)	Actuals and Current Estimates (2000/01 – 2002/03)		
		$M of year			$M of 2002/03	
Clean, safe drinking water	Water system maintenance and renewal	Ongoing	$203.6	$221.8	$158.5	Ongoing
Sustainable drinking supplies	General Reuse		$4.0	$2.9	$1.0	Ongoing
Clean beaches, rivers and harbours	SWOOS sewer risk reduction program	$10.0	$31.4	$36.4	$27.0	$94.6
	Minimise sewer surcharges	Ongoing	$106.5	$88.5	$54.0	Ongoing
	SewerFix (overflow abatement program)	$16.0	$126.3	$219.5	$199.0	Ongoing
	Northside Storage Tunnel	$400.0	$43.0	$77.0	$0.0	$0.0
	Maintain reliability of STPs	Ongoing	$70.7	$78.9	$20.0	Ongoing
	Bondi STP renewals	$0.0	$0.0	$17.1	$40.0	$37.9
	Cronulla STP upgrade	$60.0	$31.1	$28.4	$0.0	$0.0
	Illawarra Wastewater Strategy and Shellharbour STP	$0.5	$148.7	$100.2	$116.0	$21.2
	North Head STP upgrade	$0.2	$10.4	$5.7	$6.0	$213.1
	Vaucluse/Diamond Bay transfer scheme	$0.0	$24.5	$1.4	$3.0	$30.0
	Georges River wastewater/reuse strategy	$0.0	$10.7	$10.7	$71.0	$136.3
	Berowra Creek STPs upgrade	$1.0	$26.0	$25.2	$0.0	$0.0
	South Creek STPs upgrade (Bubble Licence)	$0.0	$8.0	$7.4	$1.0	$10.0
	Backlog/Priority Sewerage Program	Ongoing	$132.5	$165.3	$78.0	Ongoing
	Misc. sewer maintenance & upgrades	Ongoing	$21.2	$25.1	$11.0	Ongoing
	Maintain stormwater capacity	Ongoing	$9.4	$5.7	$7.0	Ongoing
	Improve stormwater quality	Ongoing	$5.0	$5.6	$16.0	Ongoing
Wise resource Use	Manage and market residuals (biosolids)	$0.0	$27.6	$39.9	$1.5	$0.0
Smart Growth	Expenditures to cater for new development	Ongoing	$147.4	$111.5	$131.0	Ongoing
Business Management	IT Projects	Ongoing	$176.1	$208.1	$49.0	Ongoing
	Risk and property management	Ongoing	$17.9	$29.0	$16.0	Ongoing
	Capitalised borrowing costs	Ongoing	$18.6	$12.0	$24.0	Ongoing
TOTAL COST OF PROGRAM			**$1,400.6**	**$1,523.3**	**$1,030.0**	

4.5 Capital Expenditure 2000/01 – 2002/03

The capital program is a continuum of investment activities aimed at achieving a number of long term goals. Individual projects have, and will continue to be, reprioritised to accommodate more immediate shifts in environmental priority, changing community demands or other short term requirements. There will also be variations in actual costs to estimates for projects. However in an environment where the Tribunal determines the reasonableness of costs as part of its determination process, the risk of cost over-runs is largely borne by the regulated agency.

In 1999, the Halcrow efficiency review commissioned by the Tribunal identified potential capital savings for Sydney Water. A number of initiatives have resulted in the streamlining of tendering and procurement procedures, bundling linked capital projects, and, where practical, adopting innovative solutions to service delivery in lieu of traditional approaches. Resultant savings are beginning to be realised and are reflected in future cost estimates.

Current indications are that, over the period covered by the Tribunal's September 2000 Determination, Sydney Water will spend $127 million (9%) more on capital than originally estimated. This has been a conscious decision in order to manage and reprioritise projects to accommodate short term changes to environmental priorities and community demands. It is worth noting that the over expenditure includes $62 million for the Gerringong/Gerroa sewerage scheme, not originally contained in Sydney Water's 2000-2003 capital program.

Specific variations to the program include:

- Increased expenditure on maintenance of the water supply system due to accelerated watermain renewals to improve water quality, service levels and reduce system losses;
- Pollution reduction programs contained in the EPA's sewage transport system licences (finalised subsequent to the Tribunal's September 2000 Determination) required acceleration of the SewerFix (overflow abatement) program, with a significant increase in expenditure;
- Delays in expected expenditure on the Illawarra Wastewater Strategy due to ongoing community consultation;
- Delays in Vaucluse/Diamond Bay sewage transfer scheme and North Head STP upgrade due to re-scoping the nature and extent of works, in consultation with the local communities; and
- In view of the delays at Illawarra, North Head and Vaucluse/Diamond Bay, Sydney Water brought forward upgrade works at other STPs, including a significant advancement of work at Bondi.

There were also variations in capital expenditure for other items included in the 2000 – 2003 capital program that were not included in the September 2000 Determination of periodic prices:

- Priority Sewerage Program (PSP) capital expenditure increased as a result of inclusion of Gerringong/Gerroa, originally proposed as a private sector Build Own

Operate project. In line with the Tribunal's determined backlog methodology, a price increase for this and other PSP schemes will only be sought once the projects are completed and final costs known. Despite the fact that Gerringong/Gerroa has now been completed, Sydney Water will not be seeking specific price increases for it under the Tribunal's methodology. Rather it will absorb the cost within the constraints of the prices sought in this submission; and

- Resolution of EPA requirements delayed upgrade/amplification works on Hawkesbury/Nepean STPs. This work is required to accommodate new development and costs are recovered through developer charges. Delays will not compromise the development of land in the area, and there is no impact on periodic prices.

In addition to the above, there have been instances where expenditure has merely exceeded original estimates:

- Cost of the now operational Northside Storage Tunnel increased due to unforeseen adverse ground conditions encountered in 2000 when tunnelling Middle Harbour; and
- IT expenditure increased, primarily due to changes to the new Customer Information & Billing System (CIBS).

Sydney Water has managed its capital program over the 3 years and has delivered services within the pricing arrangements determined by the Tribunal. Its objective is to continue to improve its capital performance and deliver value for money services into the future.

4.6 Future Capital Expenditure

Over the 2 years of the Determination, Sydney Water will be spending more than $500 million (almost 50% of its capital program) on maintenance and renewals to improve the performance of existing infrastructure in terms of service delivery, public health and environmental outcomes.

A further $220 million will be invested in wastewater system enhancements, to continue the improvements to water quality at beaches, in the Harbour and other waterways. Key projects will include wastewater strategies for the Illawarra and the George's River.

To meet the needs of a growing city, $130 million will be invested in major works to service new development. Much of this will be to manage the wastewater impact of land releases in western Sydney on the Hawkesbury/Nepean river system. Similarly, almost $80 million has been allocated to the provision of sewerage to existing urban communities where present sewage disposal methods present an environmental or public health risk.

4.7 Operating Expenditure

In 1999 Sydney Water set itself a target to reduce controllable costs on a per property basis by 23% by 2001/02. The target aimed to bring Sydney Water into line with the Australian water industry average operating cost per property. As at 30 June 2002, these operating cost savings had been achieved through a program of internal reforms that allowed the identification and generation of cost efficiencies.

Table 4.2 below summarises operating expenditure performance since 1998/99.

Table 4.2: Sydney Water's Controllable Operating Cost per Property (1998/99 to 2001/02)

	1998/99 Base	1999/00 Actual	2000/01 Actual	2001/02 Actual
Operating Cost per Property ($ of 2002/03)	$448	$418	$350	$344
Reduction from Base Year		6%	22%	23%

Organisational restructures, including the voluntary exit program, the restructure of accountabilities to align with processes and the integration of AWT, have been significant contributors to these savings. The restructures were aimed at refocussing Sydney Water to better meet customer needs, delivering a large capital program and generating cost savings by reducing the level of duplication within the organisation. Additionally, these savings have been achieved against a backdrop of rapid systems growth, increased expectations for service delivery and more stringent regulatory requirements.

Additional operating costs result from undertaking capital works that improve service and environmental outcomes. Over the period of the September 2000 Determination, Sydney Water absorbed these operating cost increases while achieving the efficiency gains necessary to meet its operating cost targets.

Table 4.3 itemises Sydney Waters operating costs for the period 2000/01 to 2004/05:

Table 4.3: Sydney Water Operating Costs ($ million of 2002/03)

	September 2000 Determination			2003/04 – 2004/05 Determination	
	2000/01 Actual	2001/02 Actual	2002/03 Budget	2003/04 Forecast	2004/05 Forecast
Operations and services	$462.6	$472.8	$450.0	$450.2	$449.8
Water filtration tariffs	$96.4	$93.5	$94.3	$94. 5	$94.4
Bulk water purchases	$127.2	$126.5	$124.0	$124.0	$124.0
Employee provisions	$76.9	$122.3	$71.8	$61.9	$56.4
Other provisions	$46.0	$28.7	$44.5	$44.5	$44.5
TOTAL	**$809.1**	**$843.8**	**$784.6**	**$775.1**	**$769.1**

In 2001/02, approximately 40% of Sydney Water's operations and services costs, of $472.8 million, were labour or labour related. A further 22% were payments to external contractors and 8% for materials. Transport, electricity, licence fees, data management, administration, and property related costs each comprised approximately 5% of operations and services costs.

Sydney Water's operations and services costs are relatively fixed in the short to medium term. Potentially less than 5%, or $23 million, are truly variable. The operations and services costs forecast in Table 4.3 reflect this and are predicated on estimates of inputs and associated prices.

The forecasts also reflect cost savings in those areas where Sydney Water is able to achieve further efficiencies. Maintaining operations and services costs at these levels will become increasingly difficult. Nevertheless over the 2 years to 30 June 2005, Sydney Water will be seeking to maintain operations and services costs at about $450 million (in $ of 2002/03). To achieve this Sydney Water will continue to absorb the additional costs associated with unforeseen input price movements, regulatory changes and additional levels of service.

To assist in understanding the relationship between its capital investment and operating programs Sydney Water has developed and is implementing an activity based cost model. It is expected that this model will improve Sydney Water's ability to target areas for further savings. This will facilitate the presentation of an activity-based view of the operating costs, including the costs of providing all core service and ancillary products.

The activity based costing system will benefit strategic decision-making and competitiveness, while improving the transparency of organisational costs.

Section Five – Financial Outcomes

In addition to operating and managing its business in a manner that promotes environment sustainability and the protection of public health, Sydney Water is also required to be a responsible and financially sustainable business. The fundamental business drivers to deliver value for customers, meet regulatory requirements and to improve the value of the community's investment require sound financial stewardship.

Sydney Water operates in a manner that seeks to balance the clear commercial, operational and customer objectives and accountabilities that arise from the key regulatory instruments, with the costs of doing business and generating an adequate rate of return.

5.1 Core Service Revenue

Table 5.1 below compares Sydney Water's actual and forecast revenues based on prices in the Tribunal's September 2000 Determination, for the 2000/01 and 2001/02 financial years.

Table 5.1: Sydney Water Core Service Revenue 2000/01 and 2001/02. Forecast versus Actual (nominal $ million)

	Forecast	Actual	$ Variation	% Variation
2000/01 Service Charges	$628.6	$636.4	+ $7.7	+ 1.2%
Usage Charges	$538.5	$559.5	+ $21.0	+ 3.9%
TOTAL	**$1,167.1**	**$1,195.8**	**+ $28.7**	**+ 2.5%**
2001/02 Service Charges	$646.0	$658.4	+ $12.4	+ 1.9%
Usage Charges	$538.8	$573.6	+ $34.9	+ 6.5%
TOTAL	**$1,184.8**	**$1,232.0**	**+ $47.2**	**+ 4.0%**
2 Year Total	**$2,351.9**	**$2,427.8**	**+ $75.9**	**+ 3.2%**

Higher than expected population growth since 1999/2000 has increased demand for Sydney Water's services. Population is now some 2.5% above that forecast at the time of the Tribunal's September 2000 Determination. To 30 June 2002, this accounts for at least $20 million in additional water usage revenue alone (see also Section 3.5).

Clearly, the interaction of increased population and success in demand management initiatives will impact on revenue outcomes for 2002/03. Sydney Water considers that a difference to date of only 3.2% between forecast and actual revenue represents a reasonable outcome, particularly given the unforeseen population increases and the volatility of usage based revenue.

Based on the population and demand projections detailed in Section 3 and an annual inflation rate of 3%, the prices proposed in this submission will generate revenue increases of less than 3% per year for Sydney Water. Table 5.2 provides an indicative break up, in nominal terms, of how this revenue is derived.

Table 5.2: Projected Revenue (nominal $ million assuming 3% inflation)

	2002/03 Baseline	2003/04	2004/05
CPI price outcome*		$1,273	$1,316
Customer growth (1.8%)		$21	$22
Property value charge reduction		- $6	- $3
Reduced water use		- $4	- $22
Forecast outcome	**$1,248**	**$1,284**	**$1,313**
% revenue increase		2.9%	2.2%

* Previous year (excluding property value charges) inflated by 3%

5.2 Financial Position

Sydney Water will maintain a reasonable financial position over the period of the September 2000 Determination, given its large capital and borrowing program, and increased superannuation expenses arising from negative earnings of superannuation funds worldwide.

For the year ended 30 June 2002 and using the Corporation's audited annual accounts, return on net operating assets has declined, from 2.4% in 2000/01 to 2.3%. Debt to equity at 19.3% when using book values, appears moderate while interest cover has improved slightly to 2.1 times.

The challenges of managing within a CPI price cap are significant. CPI price movements in 2003/04 and 2004/05 mean that Sydney Water will need to absorb the costs arising from additional levels of service, changes to input prices and any expansion of demand management programs. Sydney Water will also absorb the revenue reductions associated with the declining property value based charges. The target is to maintain core controllable operating costs over the next 2 years at about $450 million (in $ of 2002/03) and to maintain capital expenditure at about $515 million per annum. To fund its proposed capital program over the 2 years, Sydney Water will borrow a further $445 million.

As previously noted, core controllable operations and services costs are relatively fixed in the short term or are subject to external market price movements, which are expected to increase by at least CPI. Core controllable operations and services costs, at $450 million, comprise some 57% of Sydney Water's total costs in 2002/03. Both water filtration tariffs and bulk water prices are similarly pegged to CPI and comprise a further 28% of total costs. The remaining final large cost category, employee and other provisions, are assumed to decline over the next 2 years. However, these costs are particularly volatile, being subject to market conditions and

long tail workers compensation claims and have the potential to increase at rates above CPI.

Based on these assumptions, Sydney Water's key financial performance indicators will be as indicated in Table 5.3.

Table 5.3: Sydney Water's Key Financial Indicators

	Current Prices	Proposed Prices	
	2002/03 Budget	2003/04 Forecast	2004/05 Forecast
Operating Profit (before capital contributions & tax - $ million)	$182	$194.5	$178.6
Shareholder Value Added ($ million)	$1.7	-$7.4	-$35.5
Return on Net Operating Assets (at Book Value)	2.6%	2.8%	2.5%
Debt to Equity (at Book Value)	22.1%	24.7%	25.2%
Interest Cover	2.2	2.3	2.1

The erosion of shareholder value and the decline in other financial indicators suggest that, over the next 2 years, Sydney Water's financial position will be tight. Sydney Water will be able to manage under the prices proposed in this submission, however, anything less than a CPI increase will place considerable financial pressure on the organisation.

Over the next 2 years, issues surrounding incentive regulation, rates of return and asset valuations, as raised in the Tribunal's Issues Paper, will require resolution if long term financial sustainability is to be achieved. Using the Tribunal's methodology for rolling forward the Regulatory Asset Base (RAB), Sydney Water estimates the Tribunal's RAB for it to be in the order of $7 billion by 30 June 2003. By contrast in 2001/02, for accounting purposes, using the recoverable amount methodology, Sydney Water values its assets at $13 billion or at $16 billion when adopting a MEERA methodology.

It is Sydney Water's view that, at the very least, future price determinations should provide sufficient income to support existing investments and future levels of capital and operating expenditure. While not central to the current CPI pricing proposals, asset values and related issues such as Weighted Average Cost of Capital (WACC) will be central to future determinations. Sydney Water wishes to explore these issues, together with all interested stakeholders in the lead up to the 2005 determination.

Section Six – Pricing Proposals and Customer Impacts

6.1 Pricing Proposals

Sydney Water is seeking prices for the period 1 July 2003 to 30 June 2005. In its Issues Paper, the Tribunal agreed to a 2 year price path.

"The factors that led the Tribunal to this conclusion include:

- *uncertainty about the impacts of environmental flow requirements on water supply capacity and the possible requirement for additional capital investment;*
- *broader reviews of stormwater institutional structures currently being undertaken and the likelihood of impacts on funding and pricing arrangements;*
- *difficulties being experienced by Sydney Water in achieving demand management targets currently contained in its operating licence;*
- *the expiry of the current SCA price path in 2005 and the opportunity to synchronise the price determinations of the SCA and Sydney Water; and*
- *the operating licences of both the SCA and Sydney Water are current until 2005. Synchronisation of renewal of these licences with a new price path is considered desirable."* [6]

Additionally, the long term water sustainability within the Sydney Basin is currently being considered at an operator and regulator level and by a number of working groups including the Water CEOs Task Force and the Hawkesbury/Nepean Forum. Clarification of issues is likely within the next 2 years. With SCA sales to Sydney Water accounting for the major share of the region's current water demand, sustainable solutions will clearly require the agencies to work together to develop a realistic approach to total water cycle management. This will include consideration of:

- Environmental flow requirements for the region's river systems, in particular the Hawkesbury/Nepean;
- The sustainable yield from SCA storages;
- Population growth and demand projections;
- The greater use of recycled water and stormwater as alternative supplies in non-potable applications or to provide environmental flows;
- Supply sources other than new dams;
- "Tradeable rights" to existing water resources; and
- The potential to influence demand through both price and non price initiatives.

The outcome will provide value to the community through innovative solutions to better manage limited financial and environmental resources. There could, however, be an impact on the current cost and price expectations of both Sydney Water and the SCA.

[6] IPART (2002), *Review of Metropolitan Water Agency Prices – Issues Paper*, p. 15

Other factors likely to impact on Sydney Water's future costs and prices include:

- The full effect of recent investments in efficiency improvements;
- Completion of the condition based assessment of assets and the formulation of an appropriate renewals strategy; and
- NSW Treasury's review of the capital structure of Sydney Water.

In many respects, the next 2 years are a period of consolidation and review for Sydney Water, pending resolution of the internal and external issues outlined above. Service delivery in line with customer expectations and regulatory requirements will continue. However, Sydney Water wants to ensure that, over the longer term, the costs of those services are appropriate and reflect value for money. Sydney Water proposes, therefore, that prices for its core services over the 2 years commencing 1 July 2003 move in line with movements in the Consumer Price Index (CPI).

This CPI proposal is also consistent with previous determinations of the Tribunal in that there will be no real increases in bills to the typical household.

6.2 Removal of Property Value Based Charging

The Tribunal has already indicated in its Issues Paper that it will be seeking to eliminate these charges [7]. Sydney Water fully supports this move. Over the 2 years of this Determination, Sydney Water seeks the progressive reduction of these charges with a view to completely removing them from 1 July 2005.

This will complete a decade of pricing reform aimed at removing the cost impost on businesses and industries. The $24 million Sydney Water would have received from these charges over the 2 years will reduce to $9 million. Sydney Water will absorb the $15 million cost of this pricing structural change within the pricing proposals contained in this submission.

Pending resolution of future stormwater pricing arrangements, however, the Tribunal should be aware that removal of the property value based charges for stormwater will mean significant reductions for some large non-residential customers. Depending on as yet undetermined regulatory and associated reforms for stormwater, these customers may face price increases in the future.

6.3 Impact on Customers

With CPI price movements, the real impact on customers will be zero and some non-residential customers will actually benefit from the removal of property value based charges. To put the proposal in context, an inflation rate of 3% per year has been assumed and the following tables compiled to indicate nominal impacts on some representative customers.

[7] IPART(2002), *Review of Metropolitan Water Agency Prices – Issues Paper*, p. 33

6.3.1 Residential Customers

Assuming no change in demand, for all but very high water users, households will be paying less than $10 per quarter more for Sydney Water services in 2004/05 than they pay now (including increases for inflation). For pensioners, the increase will typically be around half that of other residential customers.

Single Dwelling Customers

Table 6.1: With Water and Sewerage Services
(approximately 752,000 customers)

Water Use (kl/pa)	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Low (150)	$136.17	$140.26	$144.47	$8.30
Typical (240)	$157.37	$162.06	$166.96	$9.59
High (500)	$218.62	$225.17	$231.93	$13.31

Table 6.2: With Water, Sewerage and Drainage Services
(approximately 175,000 customers)

Water Use (kl/pa)	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Low (150)	$142.10	$146.37	$150.76	$8.66
Typical (240)	$163.30	$168.20	$173.25	$9.95
High (500)	$224.55	$231.28	$238.22	$13.67

Table 6.3: With Water Service Only
(approximately 40,000 customers)

Water Use (kl/pa)	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Low (150)	$54.08	$55.70	$57.38	$3.30
Typical (240)	$75.28	$77.54	$79.87	$4.59
High (500)	$136.53	$140.62	$144.84	$8.31

Table 6.4: With Water and Sewerage Services – Pensioner
(approximately 130,000 customers)

Water Use (kl/pa)	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Low (150)	$56.68	$58.38	$60.13	$3.45
Typical (240)	$77.88	$80.21	$82.62	$4.74
High (500)	$139.12	$143.29	$147.59	$8.47

Table 6.5: With Water, Sewerage and Drainage Services – Pensioner (approximately 40,000 customers)

Water Use (kl/pa)	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Low (150)	$59.64	$61.43	$63.27	$3.63
Typical (240)	$80.84	$83.27	$85.76	$4.92
High (500)	$142.08	$146.35	$150.74	$8.66

Table 6.6: With Water Service Only – Pensioner (approximately 4,500 customers)

Water Use (kl/pa)	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Low (150)	$23.56	$24.26	$24.99	$1.43
Typical (240)	$37.69	$38.82	$39.98	$2.29
High (500)	$94.22	$97.05	$99.96	$5.74

Home Units

Table 6.7: Non Pensioner Customers* (approximately 330,000)

Services	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Water, sewer	$132.99	$136.98	$141.09	$8.10
Water, sewer, drainage	$138.92	$143.09	$147.38	$8.46

Table 6.8: Pensioners * (approximately 35,000 customers)

Services	Nominal Quarterly Bill			Total Increase Over 2 Years
	Current	2003/04	2004/05	
Water, sewer	$53.49	$55.10	$56.75	$3.26
Water, sewer, drainage	$56.46	$58.15	$59.90	$3.44

* Includes contribution towards usage bill normally paid by body corporate (reflects the Sydney average usage per unit of 180 kl/pa)

6.3.2 Non Residential Customers

This group is far more diverse than residential customers and ranges from the corner store to industrial complexes as large as the steelworks at Port Kembla. However, under Sydney Water's pricing proposals, no customer will face a real bill increase. For the 18,000 small businesses that use small quantities of water and do not pay property value based charges, impacts will be in line with non-pensioner household impacts. That said, assuming an inflation rate of 3%, they will pay no more than $10 per quarter more in 2 years time than they pay now.

At the other extreme, Table 6.9 contains indicative impacts on major customers, many of which will benefit from ongoing reductions in the level of property value based charges.

Table 6.9: Impacts on Major Non Residential Customers

Customer	Quarterly Bill			Total Change Over 2 Years
	Current	2003/04	2004/05	
City Office Tower (AAV $6.4 million)	Real $91,226	$85,962	$83,021	- $8,204 (- 9%)
	Nominal* $91,226	$88,541	$88,077	- $3,148 (- 3%)
Regional Retail Complex (AAV $7.0 million)	Real $85,825	$82,946	$81,338	- $4,487 (- 5%)
	Nominal* $85,825	$85,434	$86,291	$467 (1%)
Major Water Using Industry (AAV $1.43 million)	Real $859,987	$858,813	$858,157	- $1,831 (0%)
	Nominal* $859,987	$884,577	$910,419	+ $50,431 (+ 6%)
Major Water Using Industry (AAV $4.5 million)	Real $597,157	$595,307	$594,273	- $2,884 (0%)
	Nominal* $597,157	$613,166	$630,465	+ $33,307 (+ 6%)

* Assumed 3% CPI

The reduction in bills to these major non residential customers is a result of the reduction in property value based charges from 1 July 2003. Sydney Water will not be seeking to recover this revenue from other customers.

6.4 Specific Pricing Issues

Although Sydney Water is not proposing wholesale changes to its pricing system in this submission, there are a number of issues that need to be considered at this determination.

6.4.1 Minor service extensions

From time to time, property owners at the fringes of the existing network approach Sydney Water seeking a service extension to their property. Where there is no environmental imperative (ie: the property is not scheduled for servicing under the

Government's Priority Sewerage Program) or it is not commercially viable to extend the service, Sydney Water offers the property owner the option of contributing towards the cost. The owner's contribution is based on the total cost less the net present value of the future income Sydney Water will derive through periodic charges from that service. This is not a "monopoly" arrangement in that the property owner chooses to become a Sydney Water customer, and costs of providing a Sydney Water service are not being subsidised by the wider community. Sydney Water has therefore not previously sought the involvement of the Tribunal.

Circumstances are now arising where extension of a service will benefit more than one property, but not all owners initially want the service or agree to contribute. The options open to Sydney Water are:

Option 1: Not to extend the service unless all potential customers agree to contribute (in which case some will be denied a service they are prepared to pay for);

Option 2: Recover the costs from those who do agree to pay, in which case those who elected not to pay could later connect as "free riders" (there appears to be no grounds on which Sydney Water could refuse connection in such cases); or

Option 3: Extend the service on the basis that all potential customers will ultimately connect, and establish an "owner contribution" for the project based on total cost less the net present value of periodic income from all potential customers, divided by the number of potential customers. That contribution could then be increased each year in line with inflation and be recovered as and when the individual connections are made.

Option 3 appears to be the most equitable, although it does expose Sydney Water to an element of risk if not all customers connect within a reasonable time frame. Sydney Water therefore seeks to retain the right to assess each case on its merits and to refuse to extend services where, in its opinion, the likely customer demand is insufficient.

Option 3 will effectively mean the imposition of locality specific "connection charges" for such schemes. Such charges could be considered monopoly charges. Sydney Water therefore asks the Tribunal to determine that the methodology to establish and apply such charges be in line with Option 3 from 1 July 2003. The proposed methodology is contained in Appendix One – Determinations Required.

6.4.2 Blue Mountains Septic Pump-Out and Periodic Charges in Priority Sewerage Program Areas

Priority Sewerage Program (PSP) works are undertaken for environmental and public health reasons. However, if the people to whom the service is provided elect not to connect, the benefits of the scheme will not be realised. The Tribunal's September 2000 Determination states that unconnected properties do not incur Sydney Water charges for water and sewerage. Therefore there is no financial incentive for customers in PSP areas to connect.

Compounding this, in the Blue Mountains, Sydney Water provides a subsidised septic pump out service, the original intent of which was to provide an interim measure of environmental benefit until proper sewerage services became available. The Tribunal determines prices for this pump out service and many property owners still avail themselves of it, despite the fact that a sewerage system is available.

Therefore, Sydney Water seeks the Tribunal's concurrence to the following:

1. The levying of periodic sewerage charges to developed properties (considered to be those properties with facilities that would, in normal circumstances, be connected to the sewer system) in PSP areas once the sewer service is provided unless the property owner has an alternative means of sewage disposal that satisfies local environment and public health requirements; and
2. That the subsidised septic pump out service in the Blue Mountains apply, only until such time as a sewerage service is available. At that point, Sydney Water considers that as an alternative service is available the pump out service is contestable and should no longer be subject to price regulation by the Tribunal.

Sydney Water recognises that some customers in PSP areas may find it difficult to fund connection to its system. Sydney Water will examine opportunities to assist genuine hardship cases, on a case by case basis.

6.5 Miscellaneous Service Charges

Sydney Water provides a range of miscellaneous services. Changes in Sydney Water's approach to service delivery, which include electronic service provision and the opening of markets to contestability, have prompted a number of changes to price levels and structures for these services. Sydney Water's service delivery reforms and pricing proposals are detailed in Appendix Two – Miscellaneous Charges.

6.6 Trade Waste Charges

Sydney Water currently has approximately 1,000 industrial and over 15,000 commercial trade waste customers. Consistent with proposed movements in core service charges, it is proposed that trade waste charges generally move in line with changes in the CPI. Minor changes to some aspects of existing trade waste pricing arrangements are proposed in order to facilitate trade waste management, better reflect costs and reduce complexity in the charging system. Proposed trade waste charges are fully detailed in Appendix Three – Trade Waste.

6.7 Pricing Beyond 2005

To be fair to its customers pending resolution of the uncertainties surrounding fundamental aspects of its operations, Sydney Water is seeking CPI price

adjustments (ie no real increases in bills) for the next 2 years. Within this constraint, Sydney Water aims to:

- Achieve the service delivery outcomes required of it by customers and regulators;
- Complete the reform process by reducing property value based charges for non residential customers; and
- Absorb any Priority Sewerage Program costs that would otherwise be met by Sydney Water customers.

The prices proposed do not fully reflect expected cost increases. Consequently, as indicated in Section 5.2, Sydney Water's financial position over the next 2 years will be tight.

Despite this, Sydney Water is not proposing to seek "catch up" prices beyond 2005. It will, however, seek prices from 2005 that reflect future costs and support the environmentally and financially sustainable provision of water related services.

Taking 2003 to 2005 as a period for consolidation and review, it seems more appropriate to deal with matters raised in Sections 5 and 6 of the Tribunal's Issues Paper as part of the 2005 Determination process.

Incentive regulation (Section 5.1) and optimal levels of service quality (Section 5.2) will need to reflect as yet undetermined solutions to sustainable water, environmental flows and wastewater management. These may include mutually beneficial arrangements between Sydney Water and SCA.

Similarly, the scope for further operating and/or capital efficiencies and the extent of capital investment beyond 2005 (Sections 6.1 and 6.2) will not be fully assessable until the current uncertainties surrounding the long term provision water related services are clarified.

Rate of return (Section 6.2.4) and regulatory asset base (RAB) (Section 6.3) issues are not central to Sydney Water's current CPI driven pricing proposals. They are, however, central to establishing the nexus between costs and revenue requirements under the building block approach. In the lead up to the 2005 Determination, it is essential that the roll forward of the Tribunal's 2000 RAB of $5.3 billion (estimated using the Tribunal's methodology to be of the order of $7.0 billion by 2003) be evaluated against other methods of asset valuation. Sydney Water will also be interested in rate of return, weighted average cost of capital (WACC) and transparency issues relating to the Tribunal's exercise of "regulatory judgement".

6.7.1 Pricing Arrangements

Once the balance between lowest efficient costs to consumers, non compromise of health and environmental standards and the commercial needs of Sydney Water and its shareholder is established, prices must be set to achieve the required revenue.

Sydney Water will explore pricing reform beyond 1 July 2005. This will involve examination of options that support and encourage a "total water cycle" approach to efficient water related service provision as well as simplification of pricing arrangements where possible so they are better understood by customers and are easier to administer.

The Tribunal's Issues Paper has already raised some aspects Sydney Water wishes to consider as part of the 2005 Determination process, namely:

- The degree to which price can influence water demand (price elasticity);
- "Efficient" water prices and assessments of long run marginal costs;
- Externality costs/resource rents/environmental taxes;
- Inclining block tariffs/step pricing (both for end users and for SCA prices to Sydney Water);
- The mix between fixed and variable charges;
- Wastewater/sewerage pricing; and
- Stormwater pricing.

Sydney Water would add the following:

- Examination of price elasticity in the context of discretionary versus essential water demand;
- Other tariff arrangements such as peak demand and seasonal prices, location (service delivery system) based pricing, market segmentation and prices based on the end use of water;
- Recycled water (treated sewage effluent) pricing; and
- The inter-relationship between bulk water, potable water, wastewater, stormwater and recycled water pricing in a total water cycle management context.

Options will need to be evaluated against considerations of economics, equity, impact on customers, feasibility of implementation, complexity and customer understanding and acceptance.

Sydney Water proposes that, together with the Tribunal and other stakeholders, the fundamental components used to set prices be examined outside of this price setting process in preparation for the 2005 price review. These issues should also be considered in light of the need to develop an approach to pricing that encourages and supports a "total water cycle" approach to the efficient provision of water related services.

Sydney Water debates the merit of considering pricing reform, such as the Tribunal's suggested step price for Sydney Water's bulk water purchases from the SCA, in isolation. That and other pricing reforms need to be considered in the wider context of sustainable water service provision.

If the Tribunal does not wish to defer consideration of these issues until the 2005 Determination, Sydney Water would intend to make a supplementary submission outlining its views on these matters. However, Sydney Water believes that the consideration of these individual issues should be undertaken in conjunction with any comprehensive review of price structures.

Appendix One – Determinations Required

Schedule 1 - Fees and Charges for Water, Sewerage and Stormwater Services

Proposed fees and charges, to apply from 1 July 2003 to 30 June 2005, in dollars of 2002/03.

CPI means the consumer price index, All Groups index number of the weighted average of eight capital cities as published by the Australian Bureau of Statistics from time to time.

CPI_1 means the number derived from the application of the following formula:

$$CPI_1 = \left(\frac{CPI_{June2002} + CPI_{Sep2002} + CPI_{Dec2002} + CPI_{Mar2003}}{CPI_{June2001} + CPI_{Sep2001} + CPI_{Dec2001} + CPI_{Mar2002}} \right)$$

CPI_2 means the number derived from the application of the following formula:

$$CPI_2 = \left(\frac{CPI_{June2003} + CPI_{Sep2003} + CPI_{Dec2003} + CPI_{Mar2004}}{CPI_{June2002} + CPI_{Sep2002} + CPI_{Dec2002} + CPI_{Mar2003}} \right)$$

QUARTERLY SERVICE CHARGES (in $2002/03) (see Notes 1, 2 and 3)

Charge	2002/03 (Current)	2003/04	2004/05
Water			
Standard	$18.75	$18.75 x (1+$CPI_1$)	$18.75 x (1+$CPI_1$) x (1+$CPI_2$)
Unmetered Residential[1]	$77.61	$77.61 x (1+$CPI_1$)	$77.61 x (1+$CPI_1$) x (1+$CPI_2$)
Wastewater			
Standard	$82.09	$82.09 x (1+$CPI_1$)	$82.09 x (1+$CPI_1$) x (1+$CPI_2$)
Stormwater			
Residential	$5.93	$5.93 x (1+$CPI_1$)	$5.93 x (1+$CPI_1$) x (1+$CPI_2$)
Non Residential	$16.73	$16.73 x (1+$CPI_1$)	$16.73 x (1+$CPI_1$) x (1+$CPI_2$)
Vacant Land	$5.93	$5.93 x (1+$CPI_1$)	$5.93 x (1+$CPI_1$) x (1+$CPI_2$)

[1] Comprised of a Water Service Component ($18.75) and a notional Water Usage Component ($58.86)

Note 1: Service or availability charges for residential flats, dual occupancies, Community Title developments, Strata Title home units, Company Title home units and non residential Strata Title developments may reflect the number of individual dwellings, units or strata lots in the complex.

Note 2: The Standard Service Charge for water and wastewater are for 1 x 20mm water meter. Some classes of properties pay water and/or wastewater service charges that reflect the size(s) of water meter(s) fitted to the property - see the attached schedule for meter size charges.

Note 3: Developed properties in Priority Sewerage Program areas may be subject to the applicable service charge for wastewater from the time at which a Sydney Water sewer main becomes available for connection. This will be charged regardless of whether the customer connects to the sewer main. Developed properties are those that have facilities that would normally be connected to a sewer main.

USAGE CHARGES (in $2002/03) (See Note 4 and 7)

Charge	2002/03 (Current)	2003/04	2004/05
Water			
Water Usage Charge (per kilolitre)	$0.9422	$0.9422 x (1+$CPI_1$)	$0.9422 x (1+$CPI_1$) x (1+$CPI_2$)
Unfiltered Water (per kilolitre)	$0.7435	$0.7435 x (1+$CPI_1$)	$0.7435 x (1+$CPI_1$) x (1+$CPI_2$)
Sewerage			
Non residential sewer usage (per kilolitre) (for discharges above 1.37kl per day)	$1.0907	$1.0907 x (1+$CPI_1$)	$1.0907 x (1+$CPI_1$) x (1+$CPI_2$)

Note 4: Price changes to apply from the meter reading/charging period commencing on or after 1 July and concluding on or after 1 October each year.

PROPERTY VALUE BASED CHARGES (in $2002/03) (See Note 5)

Charge	2002/03 (Current)	2003/04	2004/05
Wastewater			
Non residential (c/$ of AAV on AAV>$2,500)	0.0953	0.046 x (1+CPI_1)	0.023 x (1+CPI_1) x (1+CPI_2)
Stormwater			
Non residential (c/$ of AAV on AAV>$2,500)	0.0858	0.046 x (1+CPI_1)	0.023 x (1+CPI_1) x (1+CPI_2)

Note 5: State Government owned and occupied properties (and properties owned and occupied by the Australian Broadcasting Corporation), while not exempt from payment of service availability charges, are not subject to property taxes. They otherwise pay service charges in line with non-residential properties, including the appropriate meter size charges for water and wastewater.

QUARTERLY METER SIZE BASED WATER CHARGES (in $2002/03) (See Note 6)

Water Meter Size	2002/03 (Current)	2003/04	2004/05
20mm	$18.75	$18.75 x $(1+CPI_1)$	$18.75 x $(1+CPI_1)$ x $(1+CPI_2)$
>20mm	(nominal diameter)^2 x $18.75/400	(nominal diameter)^2 x $18.75/400 x $(1+CPI_1)$	(nominal diameter)^2 x $18.75/400 x $(1+CPI_1)$ x $(1+CPI_2)$

QUARTERLY METER SIZE BASED SEWERAGE CHARGES (in $2002/03) (See Note 6 and 7)

Water Meter Size	2002/03 (Current)	2003/04	2004/05
	Sewer (100% Discharge Factor)	Sewer (100% Discharge Factor)	Sewer (100% Discharge Factor)
20mm	$82.09	$82.09 x $(1+CPI_1)$	$82.09 x $(1+CPI_1)$ x $(1+CPI_2)$
>20mm	(nominal diameter)^2 x $82.09/400	(nominal diameter)^2 x $82.09/400 x $(1+CPI_1)$	(nominal diameter)^2 x $82.09/400 x $(1+CPI_1)$ x $(1+CPI_2)$

Note 6: Nominal diameter means the size of the water meter as recorded in Sydney Water's customer database.

Note 7: Non residential properties are assigned a discharge factor, which is designed to reflect the percentage of metered water use discharged to the sewer. The discharge factor is used in the calculation of both sewer usage charges and meter sized based sewerage service charges. Regardless of the discharge factor the sewerage service charge for any property can not be less than the sewerage service charge for a 20mm meter with 100% discharge factor.

MINOR MISCELLANEOUS CHARGES (in $2002/03)

Charge	2002/03 (Current)	2003/04	2004/05
Sewerage Services Rendered to Exempt Properties			
Quarterly Charge per UC or WC	$19.06	$19.06 x (1+CPI$_1$)	$19.06 x (1+CPI$_1$) x (1+CPI$_2$)
Metered Standpipe Charges			
Quarterly Availability (25mm outlet)	$29.30	$29.30 x (1+CPI$_1$)	$29.30 x (1+CPI$_1$) x (1+CPI$_2$)
Quarterly Availability (32mm outlet)	$48.00	$48.00 x (1+CPI$_1$)	$48.00 x (1+CPI$_1$) x (1+CPI$_2$)
Usage Charges (per kilolitre)[1]	$0.9422	$0.9422 x (1+CPI$_1$)	$0.9422 x (1+CPI$_1$) x (1+CPI$_2$)
Blue Mountains Septic Pump Out[2]			
Quarterly Service Charge Usage Charges (per kilolitre)	$95.01	$95.01 x (1+CPI$_1$)	$95.01 x (1+CPI$_1$) x (1+CPI$_2$)
First Tier (80-100 kl per annum)	$8.63	$8.63 x (1+CPI$_1$)	$8.63 x (1+CPI$_1$) x (1+CPI$_2$)
Second Tier (100kl+per annum)	$17.26	$17.26 x (1+CPI$_1$)	$17.26 x (1+CPI$_1$) x (1+CPI$_2$)

[1] To apply from the meter reading/charging period commencing on or after 1 July and concluding on or after 1 October each year.
[2] These charges will only apply until such time as a sewer main becomes available for connection.

ROUSE HILL DEVELOPMENT AREA CHARGES in ($2002/03)

Charge	2002/03 (Current)	2003/04	2004/05
Recycled Water Usage[1] (per kilolitre)	$0.275	$0.275 x (1+CPI$_1$)	$0.275 x (1+CPI$_1$) x (1+CPI$_2$)
River Management Charge[2] (per quarter)	$ 24.95	$ 24.95 x (1+CPI$_1$)	$ 24.95 x (1+CPI$_1$) x (1+CPI$_2$)
Recycled Water Access (per quarter)			
Residential	$5.85	$5.85 x (1+CPI$_1$)	$5.85 x (1+CPI$_1$) x (1+CPI$_2$)
Non Residential (based on meter size) Meter Size			
20mm	$5.85	$5.85 x (1+CPI$_1$)	$5.85 x (1+CPI$_1$) x (1+CPI$_2$)
>20mm	(nominal diameter)^2 x $5.85/400	(nominal diameter)^2 x $5.85/400 x (1+CPI$_1$)	(nominal diameter)^2 x $5.85/400 x (1+CPI$_1$) x (1+CPI$_2$)

[1] To apply from meter reading/charging periods commencing on or after 1 July and concluding after 1 October each year.
[2] For land area greater than 1,000m^2 the non residential drainage charge is the drainage base charge multiplied by the number of equivalent 1,000m^2 lots occupied.

Schedule 2 – Miscellaneous and Trade Waste Charges

MISCELLANEOUS CHARGES (in $2002/03)

2002/03 (Current)	2003/04	2004/05
Current charges in accordance with the Tribunal's September 2000 Determination	Relevant Charge in Appendix Two x $(1+CPI_1)$	Relevant Charge in Appendix Two x $(1+CPI_1) \times (1+CPI_2)$

TRADE WASTE CHARGES (in $2002/03)

2002/03 (Current)	2003/04	2004/05
Current charges in accordance with the Tribunal's September 2000 Determination	Relevant Charge in Appendix Three x $(1+CPI_1)$	Relevant Charge in Appendix Three x $(1+CPI_1) \times (1+CPI_2)$

Schedule 3 - Minor Service Extension Methodology

Calculation of the capital contribution from customers seeking a minor service extension to a property not subject to charges under the Tribunal's Determination of Developer Charges (IPART Determination No. 9, 2000) or under the Tribunal's Backlog Sewer Determination (IPART Determination No. 4, 1997).

This methodology calculates the customer contribution on an equivalent tenement basis as:

- The net present value (NPV) of the capital cost of the service extension;
- Less the NPV of the future periodic revenues expected to be derived from providing services;
- Divided by the number of properties to which services will become available.

The discount rate used in the NPV calculation will be equal to the discount rate for Post 1996 Assets under the Tribunal's Developer Charges methodology (current 7% real).

$$\text{Charge} = \frac{K}{L} - \frac{NPV(R_i)}{L} \text{ for } i = \text{years } 1,\ldots..,30$$

Where:

K = the NPV of the capital cost of the extension

L = the number of equivalent tenements served by the extension

R_i = the future periodic revenue to be received from the service(s) that will become available as a result of the extension in year i

Once established, the capital contribution charge for a particular project will be increased annually in line with changes in the Consumer Price Index (CPI).

Appendix Two – Miscellaneous Charges

Appendix Two – Miscellaneous Charges

In addition to the provision of core water, wastewater and stormwater services, Sydney Water currently provides a range of miscellaneous customer services. These miscellaneous services are generally accessed by customers when buying and selling property, building, connecting new plumbing or when developing land.

While this submission proposes CPI price increases for core services, there are a number of drivers for significant changes in the charges for miscellaneous services. These drivers are outlined below:

1. Cost Variations

Efficiency improvements achieved by Sydney Water and the use of new systems have reduced the cost of providing some miscellaneous services. These cost reductions will be passed on to customers in the form of lower prices. For example, charges for services such as Sewer Service Diagrams and Conveyancing Certificates will fall.

Where the costs of providing services have increased, to reflect this change, Sydney Water is seeking price increases.

2. Harmonisation of Products

In May 2002, the Tribunal convened a Working Group involving the four metropolitan water agencies to agree on standard descriptions for 20 common miscellaneous services. The changes agreed by the Working Group mean the services and prices contained in this submission may not be directly comparable to current charges. However, the common approach will introduce consistency and comparability between the agencies.

3. Move to Fixed Price Services

The Tribunal has also expressed a preference, where possible, to introduce a fixed price for services rather than prices based on hourly labour rates. The Working Group endorsed this approach for a number of charges and these changes are reflected in Sydney Water's proposed prices.

4. New Service Delivery Channels

Sydney Water has also introduced new electronic service delivery channels for some services. Where this has resulted in reductions in cost, this has been passed onto the users of these delivery channels.

5. Move to Contestable Services

Sydney Water also proposes to make more services contestable. This means that Sydney Water is not seeking a determination of prices for a number of services, as the market will determine the price.

A2.1 New Delivery Channels

Sydney Water has introduced a number of new channels through which customers may access certain miscellaneous services. These channels generally provide greater convenience of access through the use of the Internet for electronic delivery or the use of agents for those customers who still wish to transact their business over the counter. These delivery channels include:

(a) Property Link

The Property Link service uses the Internet or other electronic means to provide four services commonly used by solicitors and conveyancers. These are:

- Conveyancing Certificate;
- Property Sewerage Diagram (known as a Sewerage Service Diagram);
- Service Location Diagram (known as a Service Location Print); and
- Building Over or Adjacent to Sewer Advice (known as a BOS/BAS Letter).

In July 2002, 69% of conveyancing type transactions with Sydney Water took place through the Property Link service. Whilst initially targeted at the property conveyancing industry, other types of customers including residential customers are now availing themselves of these services.

Sydney Water proposes that the prices via the Property Link service should reflect the efficiencies achieved and be separated from the prices for services delivered through traditional channels.

Sydney Water seeks the determination of 2 prices for Conveyancing Certificates, Property Sewerage Diagrams and Service Location Diagrams to reflect changes in the delivery of these services. The over the counter charge includes a labour component that reflects the costs associated with providing these services while the electronic charge reflects the fact that service delivery is entirely automatic and incorporates the costs associated with the delivery infrastructure, transaction fees and contract management.

(b) Quick Check

The Quick Check service provides miscellaneous services via plumbing trade stores linked to Sydney Water's computer systems. Quick Check was originally targeted at trade customers although residential customers are now beginning to use the service. The services are generally provided to customers over the counter and the benefits to customers include:

- Greater access;
- Opening hours suitable for trade customers;
- One stop shopping for plumbers and builders; and
- Faster turnaround time for most services.

As at July 2002, 60% of eligible service transactions were conducted via QuickCheck outlets.

The cost structure of services delivered via these outlets differs from Sydney Water's costs of providing the same services. Differing cost structures and the current rates of service usage by customers have been taken into account in the prices proposed for over-the-counter service delivery. This is an example of Sydney Water's efforts to provide a better level of service convenience and value to customers. At this stage, however, it has not led to prices that differ from those of the same services delivered via Sydney Water's Customer Service Centres.

(c) Water Servicing Coordinators

Sydney Water has recently engaged licensees who deal with the development industry to assist in specifying Sydney Water's requirements for new property developments and connections. The use of these licensees may ultimately lead to cost reduction. However at this stage, the cost of establishing and supporting the licensing arrangements and associated technology have not resulted in any savings. In future pricing submissions, Sydney Water expects to have a better understanding of cost implications for some of the ancillary services delivered via the Water Servicing Coordinators.

A2.2 Contestable Services

Presently there are a number of services, which were originally considered to be monopoly services, but could now be supplied by others. In addition a number of other services may involve the unbundling of the elements of the service to enable Sydney Water to concentrate on the parts over which it must have control. For example, Sydney Water must control new connections to its water mains to ensure that the mains have sufficient capacity and that the connection does not adversely affect the asset integrity or life. However, another party accredited by Sydney Water but chosen by the customer or developer could perform the actual connection. In this example, the service is considered to be partially contestable and the Tribunal may no longer need to determine a price for the actual connection.

The monopoly component, however, will require a price to be determined by the Tribunal. Proposed costs for this component include the costs of accrediting third party providers, auditing or inspecting their work, data management costs and some administration costs.

Furthermore, there are some services that may be totally supplied by third party providers chosen by the customer where Sydney Water does not require an application or approval step. These services are considered to be fully contestable and do not require a regulated price.

Sydney Water is progressing towards making more services contestable or partially contestable. By July 2003, Sydney Water intends to have restructured the following services to introduce contestability:

Application for Water Service Connection – up to and including 25mm	Partially contestable
Application to Water Service Connection – 32mm to 65 mm	Partially contestable
Application for Water Service Connection – 80mm or greater	Partially contestable
Sewer Junction Connection	Partially contestable
Sewer Sideline Connection	Partially contestable
Sewer Ventshaft Adjustment	Partially contestable
Watermain Fitting Adjustment	Partially Contestable
Sewer Service Protection (peg out)	Fully contestable

Currently there are a number of products provided by Sydney Water, that are partially contestable or non-contestable, which can be provided by accredited contractors. Specific examples are as listed below:

- Sydney Water and accredited contractors currently perform water service connections up to 25mm, signifying an existing market. Sydney Water generally undertakes water service connections between 32mm and 80mm. However, accredited licensed plumbers can also carry out these connections. Cut in tee junctions greater than 80mm are currently undertaken by licensed plumbers, through the Developer Works process. The developer has the choice of using Sydney Water or an accredited contractor;
- Sewer connections and sideline extensions are currently non-contestable. However, accredited plumbers provide similar services on new developments and provide a readily accessible market;
- Sewer service protection (peg out) services are also currently non-contestable. It is envisaged that where developers engage surveyors, these services can be completed as part of the site establishment/survey; and
- Contractors are currently providing ventshaft maintenance services on behalf of Sydney Water. In calling for this contract there were at least three tenderers who can form part of the service provision for this product, thereby creating a contestable market.

The cost of auditing or inspecting the work of third party providers is a significant part of the remaining cost to Sydney Water. It is intended that audits will be undertaken on a basis of:

Application for Water Service Connection – up to and including 25mm	20% inspections/audits for first 2 years, reducing to 5% thereafter
Application to Water Service Connection – 32mm to 65 mm	100% inspections/audits
Application for Water Service Connection – 80mm or greater	100% inspections/audits
Sewer Junction Connection	100% inspections/audits
Sewer Sideline Connection	100% inspections/audits
Sewer Ventshaft Adjustment	100% inspections/audits
Sewer Service Protection (peg outs)	Nil inspections/audits

The costs of these audits will be incorporate d in the application fee. In the case of water service connections up to 25mm, the price will reflect the long term rate of 5% inspections/audits. Sydney Water will absorb the additional costs in the interim.

A2.3 Change to Free Services

The miscellaneous services are ancillary to the core water and wastewater products supplied by Sydney Water. It is important to ensure that the desire to recover cost on every activity does not involve Sydney Water or its customers in unnecessary administrative work. For very low volume services, administrative and transaction costs may outweigh any benefits of revenue or price signals.

For some services, the effect of applying a fee may act as a disincentive to customers using the correct process, which could result in the bypass of necessary application and approval processes.

Sydney Water believes that it should supply the following services free of charge and therefore is not requesting a price be determined by the Tribunal:

- Maintenance Hole Adjustment;
- Lamp Hole Adjustment;
- Pump To Sewer Application; and
- Cancelled Plumber's Permit where both parties sign the application.

The provision of the above services free of charge is a goodwill gesture by Sydney Water in an endeavour to maintain infrastructure integrity, and system access at short notice to minimise impacts on customers. Providing pump to sewer applications free of charge minimises the cost for customers to connect to Sydney Water's sewerage system.

A2.4 Pricing Methodology

A key outcome of previous Determinations by the Tribunal was the endorsement of the 'cost-plus' methodology used by Sydney Water to calculate miscellaneous service charges. For this submission, Sydney Water has continued to apply the fully distributed cost methodology to calculate proposed charges for miscellaneous customer services. The methodology used by Sydney Water to price its miscellaneous customer services is represented as:

Miscellaneous Service Charge	=	Base Costs	+	Material Costs	+	Margin

Base Costs

Base costs reflect the direct costs that vary with the provision of an additional unit of a miscellaneous service (including costs such as labour and transport). The base cost also includes associated labour on-costs.

Where a service is contestable, the base cost also incorporates the cost of inspection/auditing, along with supplier accreditation and management.

The base cost includes overhead costs for the Customer Service Division and the corporation and is the same as applied by the Tribunal in its September 2000 Determination.

Material Costs

Material costs include the cost of materials directly related to the provision of an additional unit of a miscellaneous service.

Margin

The margin component reflected in the miscellaneous charge represents an approximation of the commercial return that could be earned by Sydney Water in a competitive marketplace. This is consistent with one of Sydney Water's principal objectives of being a successful business. Inclusion of a margin is considered appropriate in the context of the overall price reductions included in this submission and the specific price reductions in the prices of the high volume consumer and property conveyance items. The proposed margin is 10%.

In previous Determinations, the Tribunal has rejected the inclusion of a commercial return in prices for miscellaneous services. However, in this submission, Sydney Water is seeking to restructure the charges for a number of services and make other services contestable. The proposed prices for miscellaneous services fully reflect the cost savings associated with service delivery changes and Sydney Water considers it appropriate for prices beyond 1 July 2003 to include a margin.

A margin has been excluded from the hourly labour rates that are to be charged directly to customers under regulated conditions.

A2.5 Summary of Proposed Price Changes

Table A2.7 provides a summary of current and proposed prices for miscellaneous services, and estimate of expected sales, an indicative customer impact and a brief explanation of the reason for the change in price. The reasons for the price changes vary for each product and with the impact of the drivers for change outlined earlier in this appendix. Restructuring of prices to fixed fees for service rather than hourly rates and changes in product scope make direct comparison with prices in the Tribunal's September 2000 Determination difficult.

(a) High volume services

High volume products such as diagrams, conveyancing certificates and building plan approvals will reduce in price. These are the products which mostly affect, either directly or indirectly, Sydney Water's residential and small trade customers. It is anticipated that revenue from these products will fall from $4.5 million to $2.9 million as a result of passing on efficiency gains to customers in the form of price decreases.

(b) Process and product change impacts:

- Eleven services (low volume services) have been identified that are currently in use but have had no price previously determined by the Tribunal;
- Seven services have been split out to better reflect changes in processes, service channels and to facilitate future contestability (eg: building plan approval and inspections have been separated, diagrams reflect both electronic and counter service channels);
- Eleven services have moved from an hourly rate or an administrative fee and hourly rate to a fixed price in accordance with the recommendations of the working group. This will provide customers with a known price and has reduced prices in the majority of cases; and
- A new service has been introduced to align with the Tribunal Working Group's direction (ie: application for disconnection). This service covers all sizes, reducing current prices charged to customers. (Item No. 9 in Table A2.7)

(c) Changes in pricing alignment:

- Eighteen services have decreased in price as a result of efficiency gains. Another eleven have decreased in price after moving to a fixed charge;
- Five services have increased in price. Two based on changes in cost to process and three due to change in scope to enable contestability or mergers in services. A further two services increased in price as a result of moving from an hourly rate to a fixed rate; and
- Prices for four services have not changed.

(d) Net effect on revenue

Direct comparisons of revenue are difficult due to the restructuring of prices to fixed charges rather than hourly rates and the change in scope of a number of products. In addition, the move to make products contestable means that sales volume cannot be reliably predicted. Furthermore, improved access to products may generate additional demand and revenue. The net effect of direct price changes (excluding revenue from hourly labour rates for installation of fittings and passed through direct costs) is expected to lead to a reduction in annual miscellaneous services revenue of $0.6 million from the current $13.5 million. In addition, current revenue from those services that will be made contestable is of the order of $3.8 million per annum. This revenue will be at risk once alternate suppliers can provide these services.

A2.6 Products not offered beyond 1 July 2003

The following products will no longer be offered:

- Special Date of Connection Enquiry; and
- Approval of Lawn Watering/Irrigation System Application .

A2.7 Proposed Prices for Miscellaneous Services in ($2002/03):

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
1(a)#	**Conveyancing Certificate - over the counter** Statement of outstanding charges (Section 66).	$15.00	N	$14.00	N	42,000	-7%	New delivery systems have reduced cost.
1(b)#	**Conveyancing Certificate - electronic** Statement of outstanding charges (Section 66).	$15.00	N	$7.00	N	98,000	-53%	Now provided by fully electronic system.
2(a)#	**Property Sewerage Diagram - over the counter** Uncertified diagram showing the location of the house service line, building and sewer for a property. Up to and including A4 size – where available.	$15.00	N	$14.50	N	60,000	-3%	New delivery systems have reduced cost.
2(b)#	**Property Sewerage Diagram – electronic** Uncertified diagram showing the location of the house service line, building and sewer for a property. Up to and including A4 size – where available.	$15.00	N	$7.00	N	75,000	-53%	Now provided by fully electronic system.
3(a)#	**Service Location Diagram - over the counter** Diagram showing the location of sewer and/or water mains in relation to a property's boundaries.	$15.00	N	$14.50	N	8,600	-3%	New delivery systems have reduced cost.
3(b)#	**Service Location Print - electronic** Diagram showing the location of sewer and/or water mains in relation to a property's boundaries.	$15.00	N	$7.00	N	14,000	-53%	Now provided by fully electronic system.
4#	**Special Meter Reading Statement** Customer requested meter reading.	$21.00	N	$16.00	N	1,100	-24%	Better understanding of process, cost structures and use of contractors has reduced costs.
5#	**Billing Record Search** Up to and including five (5) years.	$27.00	N	$30.00	N	200	+11%	Proposed price reflects increased cost of service.
6#	**Building Over or Adjacent to Sewer Advice** Statement of Approval Status for existing building over or adjacent to sewer.	$30.00	N	$29.00	N	3,400	-3%	New delivery systems have reduced cost.

Appendix Two – Miscellaneous Charges

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
7(a)#	**Water Reconnection - During business hours**	$25.00	N	$30.00	N	1,900	+20%	Proposed price reflects increased costs of service.
7(b)#	**Water Reconnection - Outside business hours**	$125.00	N	$132.00	N	200	+6%	Proposed price reflects increased costs of service.
8#	**Workshop Test of Water Meter** Removal and full mechanical test of the meter by an accredited organisation at the customer's request to determine the accuracy of the water meter. This involves dismantling and inspection of meter components.	$150.00	Includes meter replacement cost ($175-$520)	$178.00	+ Meter replacement cost ($211-623)	N/A	+19%	Meter prices remain unchanged. Proposed price reflects increased cost of service. Range of meter sizes has increased from 5 to 8.
9#	**Application for Disconnection - all sizes**	N/A	N	$33.00	N	6,000		New product from IPART Working Group previously included in items 10, 11 and 12.
10#^	**Application for Water Services Connection - up to and including 25mm** This covers the administration fee only. There will be a separate charge payable to the utility if they also perform the physical connection.	$20.00	N	$33.50	N	24,000	+68%	Current price does not cover costs. Currently, customers pay additional administrative fees. Proposed that product be partially contestable. Future prices will cover all administrative costs that are currently charged separately.
11#^	**Application for Water Services Connection - 32mm - 65mm** This covers administration and theoretical system capacity analysis as required.	$57.00 (single) $110.00 (joint)	N N	$223.00	N	830	+167%	Last submission - approval for single connection $57.00, double connection $110.00. Currently, customers pay additional fees for application to install and records management. Proposed price now includes all approval and installation administration fees currently charged separately. It is proposed that this product is partially contestable from 1 July 2003. Impact calculated by assuming average of the 2 prices multiplied by the quantity.
12#^	**Application for Water Service Connection - 80mm or greater** This covers administration and theoretical system capacity analysis as required.	$225.00	N	$257.00	N	850	+14%	Currently, customers must pay additional fees for application to install and records management. Proposed price includes previously separate approval and installation administration fees. It is proposed that this product is partially contestable from 1 July 2003.

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
13 #	**Application to Assess a Watermain Adjustment** Moving a fitting and/or adjusting a section of watermain up to and including 25 meters in length. This covers preliminary advice as to the feasibility of the project and will result in either: 1. A rejection of the project in which the fee covers the associated investigation cost; OR 2. Conditional approval in which case the fee covers the administrative costs associated with the investigation and record amendment.	N/A	N/A	N/A	N/A	N/A	N/A	Not offered by Sydney Water. Included as part of the 20 standard charges recommended by the Working Group.
14#	**Standpipe -** Security bond	N/A	N/A	N/A	N/A	N/A	N/A	
15#	**Standpipe Rental Fee -** Annual Fee	N/A	N/A	N/A	N/A	N/A	N/A	
	Standpipe Rental Fee - Quarterly Fee	N/A	N/A	N/A	N/A	N/A	N/A	
	Standpipe Rental Fee - Monthly Fee (or part thereof)	N/A	N/A	N/A	N/A	N/A	N/A	
16#	**Standpipe Water Usage Fee**	Service and usage charges as per water periodic charges – see Appendix One						
17#	**Backflow Prevention Application and Registration Fee** This fee is for the initial registration of the backflow device.	N/A	N/A	N/A	N/A	N/A	N/A	
18#	**Backflow Prevention Application Devise Annual Administration Fee** This fee is for the maintenance of records including logging of inspection reports.	N/A	N/A	N/A	N/A	N/A	N/A	Not offered by Sydney Water. Included as part of the 20 standard charges recommended by the Working Group.
19#	**Major Works Inspection Fee** this fee is for the inspection, for the purposes of approval, of water and sewer mains, constructed by others, that are longer than 25 meters and/or greater than 2 meters in depth: - Water Mains ($ per meter) - Sewer Mains ($ per meter)	N/A	N/A	N/A	N/A	N/A	N/A	

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
20#	**Statement of Available Pressure and Flow** This fee covers all levels whether modelling is required or not.	Enquiry fee $43.00 + up to $193.00 dependent on flows required.	N	$157.00	N	2,000	-19%	Changes as per Sydney Water's 1999 submission application $43, standard investigation $48 and full investigation $102. New systems and better understanding of process and cost structures have enabled a fixed price to be derived.
21	**Diagram Discrepancy - known as HS85** Application for Sydney Water to undertake a Property Sewerage Diagram estimation for a property where no diagram currently exists.	$198.00	N	$115.00	N	160	-42%	Price not previously determined. Cost reductions have been passed onto the customer.
22	**Request for Asset Construction Details** Detailed map of Sydney Water assets indicating water, sewer and drainage.	Variable	N	$60.00	N	150		Price not previously determined. Current changes vary according to the complexity and coverage of individual task. Charges for this service range from $50 to $3,000.
23^	**Sydney Water Supply System Diagram** Large Hydra Plan showing water, sewer and drainage assets, covering a large area in a single plot.	Variable	N	$13.00	$105.00	2,000		Price not previously determined. Current changes vary according to the complexity and coverage of individual task. Charges for this service range from $50 to $3,000.
24	**Building Plan Approval** Approval of building/development plans certifying that the proposed construction does not adversely impact on Sydney Water's assets.	$20.00	N	$18.00	N	3,400	-10%	New delivery systems have reduced cost.
25	**Determining conditions for building over/adjacent to sewer** Attaching conditional approval requirements to Council approved building/development plans to safeguard Sydney Water's assets.	N/A	$105.00	$85.00	N	7,200	-19%	New systems and better understanding of process and cost structures enabled a fixed price to be derived. Impact calculation based on 1 hours work, the current duration charged.
26	**Watermain Adjustment Application** Application for Sydney Water to investigate the feasibility of relocating or adjusting an existing watermain.	$40.00	$105.00	$149.00	N	30	-40%	Price not previously determined. Price restructure to fixed fee. Impact calculation based on 2 hours work, the current duration charged.

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
27^	**Watermain Fitting Adjustment Application** Application for an Accredited Supplier to lower or raise an existing watermain fitting.	$40.00	$60.00	$96.00	N	30	-40%	Price restructured to fix fee. Impact calculation based on 2 hours work, the current duration charged. Proposed that this be partially contestable from 1 July 2003.
28^	**Pump Application - Water** Application for approval of an installation of a pump on the domestic or fire service, serving a property.	$40.00	$105.00	$128.00	N	50	-49%	Price not previously determined. Price restructured to fixed fee. Impact calculation based on 2 hours work, the current duration charged.
29^	**Extended Private Service Application** Application for Sydney Water to investigate the feasibility of permitting an extended private water service to provide a point of connection.	$40.00	$105.00	$91.00	N	30	-37%	Price not previously determined. Price restructured to fixed fee. Impact calculation based on 1 hours work, the current duration charged.
30^	**Sewer Junction Connection Application** Application for an Accredited Supplier to insert a junction into Sydney Water's sewer line.	$40.00	$60.00	$108.00	N	520	+8%	Currently charging $100.00 for accredited supplier and $40.00 + $60.00/hour for approval, then $231.00 + materials for insertion by Sydney Water. Price restructured to fix fee. Proposed price includes all approval and installation administration costs. It is proposed that the product be partially contestable from 1 July 2003. Impact calculation based on 1 hours work to align with accredited supplier comparison.
31^	**Sewer Sideline Connection Application** Application for an Accredited Supplier to extend a junction to provide a suitable point of connection.	$40.00	$60.00	$108.00	N	320	+8%	Currently charging $100.00 for accredited supplier and $40.00 + $60.00/hour for approval, then $231.00 + materials for insertion by Sydney Water. Price restructured to fix fee. Proposed price includes all approval and installation administration costs. It is proposed that the product be partially contestable from 1 July 2003. Impact calculation based on 1 hours work, the current duration charged.
32^	**Sewermain Adjustment Application** Application for Sydney Water to investigate the feasibility of relocating or adjusting a Sewermain.	$40.00	$105.00	$149.00	N	30	-40%	Price not determined previously. Price restructured to fixed fee. Proposed price includes all approval and installation administration costs. Impact calculation based on 2 hours work, the current duration charged, the current duration charged.

Appendix Two – Miscellaneous Charges

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
33	**Lamphole Adjustment Application** Application for an existing lamphole to be raised or lowered.	$40.00	$60.00	Nil	N	5	-100%	Charge is a disincentive for customers to adjust lampholes. Cost to be borne by Sydney Water.
34	**Maintenance Hole Adjustment Application** Application for an existing maintenance hole to be raised or lowered.	$40.00	$60.00	Nil	N	300	-100%	Charge is a disincentive for customers to adjust maintenance holes. Cost to be borne by Sydney Water.
35^	**Vent Shaft Adjustment Application** Application for Sydney Water to investigate the feasibility of relocating or disusing a sewer vent shaft and an Accredited Supplier to undertake the work.	$40.00	$60.00	$205.00	N	30	-7%	Price restructured to fixed fee. Proposed price includes all approval and installation administration costs. Proposed that the product be partially contestable from 1 July 2003. Impact calculation based on 3 hours work, the current duration charged.
36^	**Disuse of Sewer Application** Application for a Sydney Water to investigate the feasability to disuse an existing Sydney Water sewer.	$40.00	$60.00	$126.00	N	50	+26%	Price not previously determined. Impact calculation based on 1 hours work (average 93 minutes)
37	**Pump to Sewer Application** Application for Sydney Water to approve pumping of sewage or effluent to the sewer or house service line.	N/A	N	Nil	N	100		This is a free service.
38	**Service Protection Application (also known as a peg out).** Application for Sydney Water to locate/peg-out the position of Sydney Water's sewer/stormwater to avoid damage during construction activities. This may be required for approval to build over or adjacent to a Sydney Water sewer/stormwater as part of determining building requirements. An Accredited Supplier may also provide this service.	Nil	$105.00	N/A - fully contestable product	N	7,200	-100%	Product will be fully contestable.

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
39	**Pier Supervision Application** Application for Sydney Water to supervise the piering of an existing sewer. The application and work must be carried out by an approved Supplier.	Nil	$105.00	$65.00	$105.00	1,450	-19%	Currently charging minimum of 2 hours. Administrative price and hourly rate should reduce overall cost to customers as hourly rate charged in single units.
40	**Concrete Encasement Supervision Application** Application for Sydney Water to supervise the encasement of an existing sewer. The application and work must be carried out by an approved Supplier.	Nil	$105.00	$65.00	$105.00	150	-19%	Currently charging minimum of 2 hours. Administrative price and hourly rate should reduce overall cost to customers as hourly rate charged in single units.
41(a)	**Plumbing and Drainage Inspection Application** Application for Sydney Water to inspect any new sewer or drainage connections. This includes the drawing up of property sewerage diagrams on completion.	$30.00	N	$50.00	N	23,300	+67%	Part of building plan options in last submission, charging $30.00 administration. Product has been restructured to reflect a better understanding of process and cost structures. Proposed price reflects an increase in cost of service.
41(b)	**Plumbing and Drainage Inspection Fee** Fee per inspection for Sydney Water to inspect any new sewer or drainage connections. NB: Application fee also applies.	$45.00	N	$70.00	N	36,700	+56%	Part of building plan options in last submission, charging $45.00 per inspection. Product has been restructured to reflect a better understanding of process and cost structures. Proposed price reflects an increase in cost of service.
41(c)	**Plumbing and Drainage Re-inspection Fee** Fee per re-inspection for Sydney Water to inspect any sewer or drainage connections. NB: Application fee does not apply.	$45.00	N	$70.00	N	4,100	+56%	Part of building plan options in last submission, charging $45.00 per re-inspection. Product has been restructured to reflect a better understanding of process and cost structures. Proposed price reflects an increase in cost of service.
42^	**Connection to Stormwater Channel Approval Application** Application for approval to connect to Sydney Water's stormwater channel greater than 300mm.	$40.00	$60.00	$260.00	N	80	+63%	Better understanding of process and cost structures enabled a fixed price to be derived. Variation does not reflect hours currently charged out. Impact calculation based on 2 hours work (average 145 minutes)

Appendix Two – Miscellaneous Charges

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
43	**Inspection of Break In Stormwater Channel Application** Application for an inspection of a connection to Sydney Water's stormwater channel greater than 300mm.	$200.00	N	$193.00	N	60	-4%	Changes in processes have led to cost reductions. These reductions are being passed onto customers in the form of lower prices.
44	**Inspection of Drainage Lines Application** Application for an inspection of drainage lines from stormwater connection to silt arrestor and updating of records.	N	$50.00	$103.00	N	80	+3%	Better understanding of process and cost structures enabled a fixed price to be derived. Variation does not reflect hours currently charged out. Impact calculation based on 2 hours work, the current duration charged.
45	**Review of Hydraulic Plans** Application for Sydney Water to examine hydraulic drawings to determine if internal drainage meets plumbing regulations. Water and fire hydraulics to be submitted and examined individually.	N	$105.00	$41.00	$105.00	300	-30%	Currently charging minimum of 2hours. Administrative price and hourly rate should reduce overall cost to customers as hourly rate charged in single units.
46	**Subdivider/Developer Compliance Certificate (also known as a Section 73)** Application for a subdivider/developer compliance certificate stating whether a proposed development complies with Section 73 of the Sydney Water Act (1994). In addition, developer charges and various requirements may apply.	$305.00	N	$323.00	N	5,400	+6%	Proposed price reflects increase in cost of service provision identified as a result of changes to service delivery.
47^	**Developer Investigation Fee** Investigation of expanding reticulation systems to cater for developments requirements and to safeguard Sydney Water's assets.	N	$105.00	$86.00	$105.00	440	-9%	Currently charging minimum of two hours. Administrative price and hourly rate should reduce overall cost to customers as hourly rate charged in single units.
48	**Design and Construct Contract Administration** Performance of various activities to ensure the quality of the work under contract during the development and to safeguard Sydney Water's assets.	N	$105.00	Nil	$105.00	7,200	0%	Unchanged.
49	**Minor Extension Approval Application** Application for approval to undertake a minor extension of an existing service or for expanding reticulation systems for a development.	$305.00	N	$139.00	N	100	-54%	Price not previously determined. Changes in processes have led to cost reductions. These reductions are being passed onto customers in the form of lower prices.

Appendix Two – Miscellaneous Charges

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
50	**Hydrant Resealing** Charge levied on the property owner to reseal a fire hydrant to prevent illegal use of unmetered water.	$20.00	N	$18.00	N	1,200	-10%	New systems and better understanding of process and cost structures have reduced costs.
51	**Product Approval Application** Application for a product to be approved for use with Sydney Water's infrastructure.	$170.00	$85.00	$49.00	$105.00	15	-40%	Administrative price and hourly rate should reduce overall cost to customers.
52	**Dishonoured or Declined Payment Fee** Fee for dishonoured reversal/payment processing where a financial institute declined a payment to Sydney Water.	Cheque $20 Direct Debit $11 Credit Card $10	N	$20.00	N	N/A		Administrative cost is identical for each type of payment dishonour. The cost includes agency charges, manual reversal of payment, re-issue of account, response to customer enquiries and updating records. Bank charges are additional and vary between type of payment declined.
53(a)	**Supplement to WSAA Documents** Covers Sydney Water's variations to the Water Reticulation Code of Australia for the design and construction of water reticulation mains.	$300.00	N	$300.00	N	300	0%	No margin on this item to maintain cost structure. Price based on recovery of cost to undertake standards, review and print.
	Supplement to Sewerage Code of Australia – now one item under 53(a)	$300.00	N	N/A	N	300	-100%	Supplement to Water Reticulation Code of Australia and supplement to Sewerage Code of Australia now combined in item 53(a). Supplement to WSAA documents.
53(b)	**Minor Construction Standards** Standards set in construction of sewer sidelines and/or sewermains of length not greater than 25 meters.	$100.00	N	$110.00	N	260	+10%	Price based on recovery of cost to undertake standards, review and print.
54(a)	**Cancellation of Plumbers Permit** Application for Sydney Water to cancel a plumber's permit where both parties sign the application.	$85.00	N	Nil	N	100	-100%	Price not previously determined. Currently charging $85.00. Sydney Water does not intend to charge when both parties sign application.
54(b)	**Cancellation of Plumbers Permit** Application for Sydney Water to cancel a plumber's permit where only one signatory is received.	$85.00	N	$42.00	N	100	-51%	Price not previously determined. Currently charging $85.00. Better understanding of process and cost structures have identified cost reductions.

Appendix Two – Miscellaneous Charges

	Product or Service (Abbreviated Tribunal Description)	Current Price		Proposed Price*		Vol.	Impact (%)	Reason for change
		Fixed	Hourly	Fixed	Hourly			
55##	**Plumbing and Drainage Quality Assurance Application**	N/A	N/A	$152.00	N			See note at end of table
Tech	**Hourly Rate - Technical Services** Hourly rate for provision of expertise and technical services.	N/A	$105.00	N/A	$105.00		0%	Unchanged. This covers the provision of expert and technical services per hour at lower than market rates.
Std	**Hourly Rate - Civil Maintenance**	N/A	$60.00	N/A	$75.00		+25%	This covers the provision of physical fieldwork on Sydney Water infrastructure per hour at lower than market rates.

* - Price excluding GST

- 'Common' products and services as designated by the Tribunal led working group. Agreed descriptions and scope aimed at improving transparency of service provision across Water suppliers.

^ A fixed administration fee applies where there is an administrative and hourly rate (or an administrative rate only for partially contestable services). The administrative process remains unchanged regardless of the number of hours required to evaluate or undertake the work.

- It is anticipated that during this Determination period this new product type will be utilised when the Quality Assurance audit role becomes effective. As part of Sydney Water's ongoing process improvement, Plumbing and Drainage Inspections will move towards a Quality Assurance process, reducing the total costs to customers for inspection services. The fixed fee will cover all inspections and administration. On implementation, services number 41 (a) and 41 (b) will be discontinued.

N/A – not applicable

Appendix Three – Trade Waste

Consistent with proposed movements in core service charges, it is proposed that trade waste charges generally move in line with changes in the CPI. To facilitate trade waste management, better reflect costs and reduce complexity in the charging system, minor changes to some aspects of existing trade waste pricing arrangements are proposed as follows:

A3.1 Administration Charges

Administration charges are set out in Table A1. There are to be some reductions in agreement fees for industrial customers.

All industrial customers are assigned a Risk Index (RI), which determines their agreement fees and the frequency of monitoring and inspections. In 2002/03, Sydney Water will introduce a new customer information and billing system (CIBS), which will allow analytical results of monitoring to be accepted electronically, directly from laboratories. Cost savings will be realised through reduced time needed to process customer information and will eventually be passed on to customers in reduced agreement fees. Until these cost-savings are quantified, and as an incentive, customers who participate in direct electronic reporting (DER) will qualify for a 10% concession in agreement fees.

On-line monitoring (OLM) of high-risk industrial customers' trade wastewater will also be introduced progressively from 2002/03. This proposal involves the use of remote analysing devices located at customer's discharge points, monitored continuously at Sydney Water's Systems Operation Centre using the existing telemetry system (IICATS). Industrial customers with a RI of 1 to 4 will be targeted in the program, beginning at the higher risk customers. Savings will ultimately be realised in reduced man-hours necessary for inspections and sampling, however the main benefit of the proposal will be that potential incidents will be managed in real-time, allowing an immediate indication of hazardous conditions within the sewerage system. Purchase, installation and servicing costs of the analysers will be the customer's responsibility. Quarterly agreement fees will be reduced by $1,000 for RI 1 & RI 2 participants and by $750 for RI 3 & RI 4 participants.

A3.2 Quality Charges – Domestic Substances

CPI price changes are proposed for domestic substances, as indicated in Table A2.

Charges for domestic substances only apply to masses in excess of domestic equivalents as the domestic equivalent portion is recovered in sewerage usage charges. Sydney Water will introduce COD, to replace BOD, in 2005. This will be addressed in the 2005 price submission.

Sulphate, has now been included as a domestic substance with a domestic equivalent of 50 mg/L. As a consequence, sulphate charges will decrease.

Charging rates for domestic substances are fixed at dollars per kilogram, except for BOD and sulphate, the charges for which increase with concentration to reflect resultant higher rates of sewerage system corrosion. The formulae for calculating BOD charges, expressed separately in previous determinations, have now been incorporated into Table A2. The nominated acceptance standard and the domestic equivalent strength for each substance have also been included in the table.

A3.3 Quality Charges – Non Domestic Substances

For non-domestic substances, charging rates are determined by the acceptance standard of the substance and are designed to act as an incentive to decrease concentrations and loads of these substances in trade wastewater. Charges are levied according to risk, or the threat to the sewerage system, Sydney Water personnel and/or the environment. In previous determinations, charges were substance specific, although there was commonality of charges across substances with the same acceptance standard. In recognition of this, and to allow the inclusion of new substances if and when they are identified as imposing a threat, it is proposed to replace the current substance specific charges with a system of charges based on threat levels determined by acceptance standards. If new substances are identified, they will be assigned an acceptance standard and associated threat level, and charged accordingly. Table A3 sets out acceptance standards and charges for each threat level. Table B1 has been included to demonstrate the impact of the new proposal on currently identified substances. For most substances, it means that current charges merely move in line with CPI.

The exceptions are as follows:

Petroleum hydrocarbons: It is proposed that a concentration limit and charge be introduced for a new category, **petroleum hydrocarbons- flammable.** The acceptance standard will be set at 10 mg/L based on flammability, meaning the substance will have a threat level of 10 and be charged accordingly.

Total dissolved solids (TDS): In catchments where Sydney Water is planning effluent reuse and where TDS in the effluent may limit reuse options, an acceptance standard for TDS of 10,000 mg/L has been established. This will result in a threat level of 1 and corresponding charge for the substance in those catchments.

Anionic surfactants: Formerly referred to as methylene blue active substances, anionic surfactants can cause serious operational difficulties at sewerage treatment plants due to foaming. The acceptance standard for the substance was set at 100 mg/L, meaning it would have had a threat level of 6. To accommodate industry best practice used in the waste treatment of anionic surfactants, however, it is proposed to increase this acceptance standard to 1000 mg/L. This will lower the threat level to 3, reducing charges by 90%.

Chlorine: It is proposed to change the acceptance standard for chlorine, ie from hypochlorite, from the current level of 50mg/L to 10mg/L. This is necessary to protect the health of sewer workers and brings the standard into line with that recommended by the Guidelines for Sewerage Systems, Acceptance of Trade Waste, 1994, issued by ARMCANZ/ANZECC. This will mean a change in threat level from 7 to 10, increasing charges by almost 400%. Annual revenue from chlorine charges is minimal (less than $1,000) and involves only 7 customers. Notification of the change will be managed as part of existing trade waste agreements, with individual customers written to, allowing appropriate time to install pre treatment or modify processes.

Cadmium and Selenium: Charging rates for Cadmium and Selenium previously contained a component associated with EPA load based licencing charges. Re-evaluation of the costs of disposing of these substances and alignment with their threat levels will result in significant reductions to current charging rates.

A3.4 Quality Charges – Commercial Processes

Standard effluent characteristics were used to determine volumetric charges for various businesses, based on quality charging rates for domestic and non domestic substances, presence of on site pre treatment and whether the receiving sewerage system drained to a primary or secondary/tertiary sewage treatment plant. The charges were business process specific, although many diverse businesses attracted the same unit charge because the overall impact of managing their waste was essentially the same.

Customers whose discharge was actually gauged, or determined as a percentage of metered water use, paid for each kilolitre discharged. For customers without discharge meters or discharge factors, a charge was determined based on the size of the business or the process generating the wastewater. Their charge was not always based on assessed flows. For example, the charge for a restaurant may have been calculated from the number of seats, or the charge for a hospital or motel may have been calculated from the number of beds. In all cases, customers were subject to a minimum charge.

To simplify the system, avoid listing a myriad of processes when charges are frequently common, and to allow the inclusion of new processes as and when they are identified as a trade waste problem, it is proposed to introduce a system of charging codes. Similar to the proposals for non domestic substances (see Section A3.3), commercial processes will be assigned a charging code commensurate with their trade waste imposts and charged accordingly. Proposed charging codes and corresponding charges are listed in Table A4.

All charges are expressed simply as $/kilolitre. Customers with charges currently assessed on some basis other than kilolitre flows will be assigned a flow that maintains their current charge, and the current minimum charge will be maintained in real terms (ie adjusted for CPI only).

Indicative impacts on existing business processes are detailed in Table B2. Some 5,000 businesses that currently pay minimum charges or assessed charges based on other than per kilolitre flows will have bill increases in line with CPI. Charges for the majority of processes will decrease, resulting in lower bills for most of the remaining 10,000 commercial trade waste customers. Sydney Water's revenue from trade waste quality charges to commercial customers is also expected to decrease.

A3.5 Critical Substances Charges

These charges apply to substances that are declared critical in certain STP catchments and apply to excess masses discharged. The charges are designed to limit the loads of substances in affected catchments where there is insufficient or reduced capacity for treatment.

It is proposed to simplify the charging formulas for critical substances by reducing the critical categories to two, critical and over capacity**,** and simplify the associated multipliers. Proposed charging formulas associated with critical substance charges are outlined in Table A5.

A3.6 Revenue Implications of All Proposed Changes

Sydney Water currently receives around $19.8m in revenue from all trade waste related charges each year. The expected net result of the changes proposed in this submission, and forecast demands, is that trade waste revenue will reduce by almost 7% in real terms by 2004/05. The income will be in line with costs associated with accepting and managing trade waste discharges.

A3.7 Proposed Trade Waste Charges

Table A1: Administrative Charges

Industrial Agreement Fees – per quarter					
Risk Index	**Current**	**Proposed (to be adjusted by CPI)**			
		Standard	**With direct electronic reporting (DER)**	**With on line monitoring (OLM)**	**With DER and OLM**
1	$4,992.56	$4,992.56	$4,493.30	$3,992.56	$3,493.30
2	$4,506.79	$4,506.79	$4,056.11	$3,506.79	$3,056.11
3	$2,104.97	$2,104.97	$1,894.17	$1,354.97	$1,144.47
4	$1,187.41	$1,187.41	$1,068.67	$437.41	$318.67
5	$458.76	$458.76	$412.88	N/A	N/A
6	$161.91	$161.91	$145.77	N/A	N/A
7	$107.94	$107.94	$97.15	N/A	N/A

Commercial Agreement Fees – per quarter		
	Current	**Proposed (to be adj by CPI)**
First process	$16.19	$16.19
Each additional process	$5.39	$5.39

Industrial & Commercial Inspections – per hour		
	Current	**Proposed (to be adj by CPI)**
With one Sydney Water representative	$64.76	$64.76
With two Sydney Water representatives	$129.53	$129.53
Minimum increment	$32.38	$32.38

Application Fees			
	Industrial		Commercial
	Current	**Proposed (to be adj by CPI)**	
Application fee	$215.88	$215.88	No Charge
Variation	$259.05	$259.05	

	Current	**Proposed (to be adj by CPI)**
Wastesafe Charges	$0.10 per litre	$0.10 per litre
Product authorisation /assessment	$194.29 per application plus $64.76 per hour ($32.38 increments)	$194.29 per application plus $64.76 per hour ($32.38 increments)
Sale of trade waste data	$64.76 per hour	$64.76 per hour

Table A2: Acceptance Standards and Quality Charges for Domestic Substances

Substance	Acceptance Standard (mg/L)	Domestic Equivalent (mg/L)	Charges ($/kg)	
			Current	Proposed (to be adj by CPI)
Suspended solids	600	200	0.689	0.689
BOD – to primary STP	*see notes 2 and 3*	230	0.096+[0.0161 x (BOD mg/L) / 600]	0.096+[0.0161 x (BOD mg/L) / 600]
BOD – to sec/ tertiary STP	*see notes 2 and 3*	230	0.539+[0.0161 x (BOD mg/L) / 600]	0.539+[0.0161 x (BOD mg/L) / 600]
Grease	Primary 110 Sec/tert 200	50	0.971	0.971
Ammonia (as N)	50 *see note 4*	35	1.610	1.610
Nitrogen (inland only)	150 *see note 5*	50	0.140	0.140
Phosphorus (inland only)	50 *see note 5*	10	1.080	1.080
Sulphate	2000	50	0.107 x [SO_4 mg/L]/2000	0.107 x [SO_4 mg/L]/2000

Notes to Table A2:

1. The mass of any substance discharged at a concentration which exceeds the nominated acceptance standard will be charged at double the rate for the entire mass for non-domestic substances (including any critical substance charges), and for the mass above domestic equivalent for domestic substances. Concentration is determined by daily composite sampling by either the customer or Sydney Water.
2. The oxygen demand of effluent is specified in terms of BOD_5. Where a reliable correlation can be shown to exist between BOD and another test, Sydney Water may be prepared to accept results based on this alternative test.
3. Acceptance standards for BOD_5, COD and total dissolved solids are to be determined by the transportation and treatment capacity of the receiving system and the end use of sewage treatment products.
4. An ammonia limit of up to 100mg/L may be negotiated for individual customers depending on site specific conditions and controls. Where ammonia is present with other nitrogenous compounds, the amount of nitrogen in the ammonia is deducted from the total nitrogen before calculating the charge for nitrogen.
5. Nitrogen and phosphorus limits do not apply where a sewage treatment plant (to which the Customer's sewerage system is connected) discharges directly to the ocean.

Table A3: Threat Level based Acceptance Standards and Associated Charges for Non Domestic Substances

Threat Level	Acceptance Standard (mg/L)	Proposed Charge ($/kg) (to be adj by CPI)	Notes
0	Provisional	0	Substance under investigation
1	10,000	$0.0054	
2	5,000	$0.011	
3	1,000	$0.054	
4	500	$0.108	
5	300	$0.193	
6	100	$0.539	
7	50	$1.08	
8	30	$1.78	
9	20	$2.67	
10	10	$5.39	
11	5	$10.79	
12	3	$17.80	
13	2	$26.95	
14	1	$53.97	
15	0.5	$107.94	
16	0.1	$539.71	
17	0.05	$1,079.47	
18	0.03	$1,781.09	
19	0.01	$5,397.00	
20	0.005	$10,794.00	
21	0.0001	$539,700.00	
22	0	N/A	Banned substance

Notes to Table A3:

1. The mass of any substance discharged at a concentration which exceeds the nominated acceptance standard will be charged at double the rate for the entire mass for non domestic substances (including any critical substance charges), and for the mass above domestic equivalent for domestic substances. Concentration is determined by daily composite sampling by either the customer or Sydney Water.
2. Sydney Water may introduce charging rates for new substances or revise charging rates for existing substances based on a revision of the risks of accepting the substance and is reflected in the acceptance standard of the substance. The acceptance standard will determine the charging rate of the substance according to the table above.

Table A4: Charging Codes and Charges for Commercial Customers

Charging Code	Charge ($/kL) (to be adj for CPI)	Charging Code	Charge ($/kL) (to be adj for CPI)
A	Deemed $0.00	K	$3.00
B	$0.00	L	$5.00
C	$0.02	M	$7.00
D	$0.05	N	$10.00
E	$0.10	O	$12.00
F	$0.30	P	$15.00
G	$0.50	Q	$20.00
H	$0.70	R	$30.00
I	$1.00	S	$50.00
J	$2.00		
Minimum Annual Charge (all Codes)			$53.97

Notes to Table A4:

1. Volumes can be assessed or monitored, ie the latter based on either a discharge or check meter or a water meter and discharge factor. Assessed volumes may be based on business size, production capacity or an agreed alternative.
2. Sydney Water can introduce charging rates for new commercial processes, or vary charging rates for existing processes based on an assessment of effluent characteristics from representative businesses. The assessment, based on results from six sampling locations, may be initiated by a customer or Sydney Water.

Table A5: Charges for Critical Substances

Substance status	Charging rate multiplier
Critical	2
Over capacity	3

Notes to Table A5: Assessment of the status of substances discharged to sewerage system:

1. The maximum allowable industrial loading (MAIL) for all sewage treatment plants is assessed using a biosolids and effluent quality model. Wherever the total mass of any substance from all industrial customers within a sewerage catchment, either measured or agreed exceeds 60% of MAIL it will be regarded as a critical substance for charging purposes. Wherever the total mass exceeds MAIL, it will be regarded as over capacity for charging purposes.
2. Where a sewerage system, or sub-system, is determined to be affected by significant corrosion related to the discharge of excessive loads of BOD and sulphate, or likely to be affected by such corrosion, the system, or sub-system will be regarded as over-capacity with respect to these substances. The criteria used for determining that a system is likely to be affected by corrosion will be that the average concentration of BOD and/or sulphate are demonstrated by regular composite sampling to be at levels likely to lead to corrosion.

Notes to Table A5: Charges for critical substances:

1. Where the measured daily mass of a critical substance discharged by a customer exceeds 1.5 times that customer's long term average daily mass (LTADM), the charging rate for the component of mass above 1.5 LTADM is doubled.
2. Where the measured daily mass of a critical (over capacity) substance discharged by a customer exceeds LTADM, the charging rate for the component of mass above LTADM is tripled.

Table B1: Indicative impact of pricing proposals on quality charges for non domestic substances

Substance	Threat Level	Real price change
Acid demand, pH > 10	6	Nil
Alkali demand, pH < 7	6	Nil
Aluminium	6	Nil
Anionic Surfactants	3	-90% (Replaces MBAS)
Arsenic	14	Nil
Barium	13	Nil
Boron	6	Nil
Bromine	11	Nil
Cadmium	14	- 79% - see text
Chlorinated Phenolics	17	Nil
Chlorine	10	+ 399% - see text
Chromium	12	Nil
Cobalt	11	Nil
Copper	11	Nil
Cyanide	14	Nil
Fluoride	9	Nil
Formaldehyde	7	Nil
General Pesticides (excl OC and OP)	16	Nil
Herbicides and Defoliants	16	Nil
Iron	7	Nil
Lead	13	Nil
Lithium (specified systems only)	10	Nil
Manganese	10	Nil
Mercaptans	14	Nil
Mercury	18	Nil
Molybdenum	6	Nil
Nickel	12	Nil
Organoarsenic Compounds	16	Nil
Petroleum Hydrocarbons (non-flammable)	8	Nil
Petroleum Hydrocarbons (flammable)	10	New substance
Phenolic compounds (non-chlorinated)	10	Nil
Poly.Aromatic Hydrocarbons	11	Nil
Selenium	11	- 71% - see text
Silver	11	Nil
Sulphide	11	Nil
Sulphite	7	Nil
Thiosulphate	5	Nil
Tin	10	Nil
Total Dissolved Solids (specified systems only)	1	New substance
Uranium	10	Nil
Volatile Halocarbons (formerly chlorinated hydrocarbons)	13	Nil
Zinc	11	Nil

Table B2: Indicative Impact on Trade Waste Charges for Commercial Customers (real percentage change in bill)

Process Description	With pre treatment				Without pre treatment			
	To Primary STP		To Secondary/Tertiary STP		To Primary STP		To Secondary/Tertiary STP	
	code	% change	code	% change	code	% change	code	% change
Hamburger restaurant, BOD<2000 mg/L	F	21.5%	G	-14.7%	N/A – see note 1			
Cafeteria, canteen & school (hot meals)	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Take-away hot food	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Wastesafe only, including school domestic science	B	Nil	B	Nil	B	Nil	B	Nil
Snack bar - coffee lounge - hot foods	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Restaurant, food court	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Kitchen - hospital, nurs home, commercial etc	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Fried chicken, BOD>2000 mg/L	I	-28.1%	J	-11.1%	N/A – see Note 1			
Hamburger restaurant, BOD>2000 mg/L	G	-15.7%	I	-18.0%				
Pizza restaurant	H	-16.8%	I	-28.1%				
Function centre	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Fried chicken, BOD<2000 mg/L	E	-6.5%	F	-25.0%	I	-6.5%	L	22.2%
Delicatessen with hot food	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Wholesale food <12kL/day, Caterer	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Hotel / motel kitchen	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Ice cream parlour	K	3.1%	L	13.9%	N/A – see Note 1			
Butchers – retail	G	11.1%	H	20.7%	H	-12.5%	I	-20.0%
Fish (fresh outlets) no cooking	G	-7.2%	J	25.8%	N/A – see Note 1			
Chicken (fresh retail) no cooking	G	-15.7%	I	-18.0%	M	-7.4%	N	-7.2%
Smallgoods < 12kL/day maximum	E	-6.5%	F	27.1%	F	-20.4%	G	-3.3%
Wholesale butcher < 12 kL/day maximum	E	-6.5%	F	27.1%	F	-20.4%	G	-3.3%
Bakery retail - hot bread – cakes	I	17.4%	J	-2.4%	N/A – see Note 1			
Bakery retail - pies - sausage rolls	E	4.2%	G	13.6%				
Screen printing	E	nil-note 2	F	nil-note 2				

Battery room – commercial	B	-100.0%	B	-100.0%	B	-100.0%	B	-100.0%
Ceramic & pottery (hobby club)	H	1.4%	H	1.4%	N/A – see Note 1			
Stoneworking	J	19.5%	J	19.5%				
Glass finishing <12kL/day	E	Nil-Note 2	E	Nil-Note 2	E	Nil-Note 2	E	Nil-Note 2
Small lab, hosp & uni lab, path lab, morgue	E		E		E		E	
School laboratory	B	Nil	B	Nil	B	Nil	B	Nil
Service station (no mechanical workshop)	E	Nil-Note 2	G	Nil-Note 2	N/A – see Note 1			
Panel beating & spray painting	E	Nil-Note 2	E	Nil-Note 2	N/A – see Note 1			
Car detailer	F	-7.1%	H	8.2%				
Vehicle wash - hand wash & pressure spray	E	-21.9%	E	-21.9%				
Vehicle wash – mechanical (<12 kL/day)	E	Nil-Note 2	E	Nil-Note 2				
Mechanical workshop, auto recyclers	E	-6.5%	G	13.6%				
Mobile Bin Wash	E	Nil-Note 2	E	Nil-Note 2				
Laundromat	C		E					
Laundry - hosp, n. Home, hotel, commercial < 2ML/yr	C		E					
Equipment washing	J	22.7%	K	12.8%				
Municipal pool / aquatic centre	B	-100.0%	B	-100.0%	B	-100.0%	B	-100.0%
Lithographic processing	E	Nil-Note 2	E	Nil-Note 2	N/A – see Note 1			
Waterless minilab - with SRU	S		S					
Waterless minilab-used chemistry offsite	R		R					
Waterwash minilab - with SRU	G		G					
Waterwash minilab - Ag rich transported	D		D					
Xray - with SRU	I		I					
Xray - Ag rich transported	F		F					
Graphic arts film - with SRU	J		J					
Graphic arts film - Ag rich transported	G		G					
Photo outlab - with SRU- Note 3	G	-7.2%	G	-7.2%				
Photo outlab - Ag rich transported- Note 3	D	-29.9%	D	-29.9%				
Professional lab - with SRU- Note 3	G	-6.4%	G	-6.4%				
Professional lab - Ag rich transported- Note 3	D	-28.7%	D	-28.7%				

Wholesale lab - with SRU < 2 kL/day- Note 3	G	-6.4%	G	-6.4%				
Wholesale lab - Ag rich transported- Note 3	D	35.5%	D	35.5%				
Microfilm processing - with SRU	S	Nil-Note 2	S	Nil-Note 2				
Microfilm processing- Ag rich transported	Q	Nil-Note 2	Q	Nil-Note 2				
Educational institution - B&W photo only	I		I					
Dental hospital - with SRU	I		I					
Dental hospital - Ag rich transported	F		F					
Portable toilet waste	B	-100.0%	B	-100.0%	B	-100.0%	B	-100.0%
Ship-to-shore pumpout	G	-24.0%	G	-24.0%	N/A – see Note 1			
Cooling tower, boiler blowdown – comm	E	Nil-Note 2	E	Nil-Note 2				

Notes:
1. Not applicable – pre treatment is compulsory.
2. Existing customers pay either the minimum charge or an assessed charge based on other than per kilolitre flow. These customers will be given assessed per kilolitre flows that result in no real increase in current bills.
3. These processes may require an industrial agreement.