Dear Treasurer and Minister

Report on performance for the year ended 30 June 2006

We are pleased to submit the Annual Report of Sydney Water Corporation for the year ended 30 June 2006.

This year’s Annual Report covers Sydney Water’s performance against a range of economic, social and environmental indicators.

The Annual Report was prepared in accordance with Section 24A of the State Owned Corporations Act 1989 and the Annual Reports (Statutory Bodies) Act 1984.

The Financial Statements for 2005-06, which form part of the Annual Report, have been submitted to and certified by the Auditor-General of New South Wales.

Yours sincerely

Gabrielle Kibble
Chairman

Kerry Schott
Managing Director
With drought conditions persisting, ensuring a secure water supply remains a prominent issue for governments and communities alike.

The year has seen significant progress on a range of water supply projects. In May, the NSW Government released the 2006 Metropolitan Water Plan; a comprehensive plan that ensures that the Sydney region can meet its water needs well into the future in a sustainable way.

The plan will drive many of our activities in the years ahead. It is a critical time for Sydney Water, with groundbreaking schemes such as the Western Sydney Recycling Initiative and the Camellia Recycling Scheme already in the design stage.

Along with a focus on recycling, our water efficiency program has played a key role − expanding on the significant savings that have already been made by the community.

In particular, water saving programs such as the Every Drop Counts Business Program continued to gain momentum, culminating in Sydney Water receiving the prestigious 2006 Stockholm Industry Water Award.

This reward was exceptional. It is the first time the award has been won by an Australian company and by a government owned utility. The EDC Business Program, with 334 participants now on board, is saving more than 20 million litres every day. There are hundreds of success stories from business, industry and government.

In addition, our Waterless Wok Stove project took out the Banksia Eco Innovation Award, which recognises businesses and individuals that make a positive difference to our environment. With approximately 2000 wok stoves in greater Sydney, the Waterless Wok Stove has the potential to save up to 3.6 billion litres of water a year.

New guidelines have been set recently to open the way for the private sector to enter the water industry. Sydney Water welcomes this development.

Most of our water treatment plants are privately owned and operated and this year around 90 per cent of our $520 million capital works program was outsourced.

Sydney is expected to grow by 41,000 people a year or 1.1 million people over 25 years. The continuing expansion of our city will require significant investment in services to meet these new residents’ requirements.

Over the next four years we will increase our investment in renewing, upgrading and expanding our assets, spending an estimated $3.1 billion. We will continue to be commercially prudent and manage our assets and investment on a “whole of life” basis.

A new Operating Licence came into effect on 1 July 2005 and while many provisions in the old licence remain, there have been a number of significant additions. These reflect shifting public expectations of our performance. This includes new mandatory timeframe requirements for responding to and stopping visible loss of water from breaks and leaks in our mains.

Zero workplace injuries is the goal we have set to ensure we all go home safe to our families each day and the Board is committed to ensuring this is achieved. We have strengthened the governance and profile of safety across Sydney Water. Individual responsibilities have been made clear and reporting requirements tightened. This will provide a strong foundation as we move forward, though there is plenty more to be done.

I am delighted to welcome Dr Kerry Schott who joined Sydney Water in August this year as the new Managing Director and Dr Greg Stewart who joined the Board in December 2005. Kerry brings both extensive private and public sector experience to Sydney Water while Greg has a strong background in health.

On behalf of my colleagues on the Board, I would also like to acknowledge David Evans for his significant contribution as Managing Director during the past two and a half years and Professor Peter Baume and Garry McCully for their valuable support as Board members.

Lastly, I thank the management and staff of Sydney Water for their continued hard work and dedication.

Gabrielle Kibble
Chairman
What we do

Sydney Water is responsible for supplying water, wastewater, recycled water and some stormwater services to nearly 4.3 million people in Sydney, Illawarra and the Blue Mountains. Sydney Water is Australia’s largest water utility with an area of operations covering around 12,600 sq km. Sydney Water has 3180 employees.

Water services
More than 1.4 billion litres of water is supplied to over 1.6 million homes and businesses each day. Sydney Water buys untreated water from the Sydney Catchment Authority and then treats the water in accordance with the Australian Drinking Water Guidelines 2004.

Most of the water is treated at privately owned filtration plants, operated under contract to Sydney Water. The largest filtration plant at Prospect treats more than 80 per cent of this water. Organic matter, sediment and minerals such as iron and manganese are removed, the water is disinfected with chlorine, and fluoride is added to prevent tooth decay.

Treated water is distributed to customers via a network of about 21,000 km of water mains, 259 reservoirs and 151 pumping stations. At present there are 309 km of recycled water mains though the provision of recycled water is increasing over time.

Ninety-three per cent of customers are residential and use about 70 per cent of the drinking water supplied. Business, industry and government use 30 per cent.

Wastewater services
Sydney Water collects and treats more than 1.2 billion litres of wastewater a day. The sewerage network consists of about 23,500 km of sewer pipes and 659 sewage pumping stations. There are 25 separate sewerage systems, each of which is licensed by the Department of Environment and Conservation.

Collected wastewater is transported to 30 sewage treatment plants where it is treated before being reused or discharged to rivers or the ocean in accordance with licence conditions. All biosolids captured (100 per cent) are used for agricultural or horticultural purposes.

Around 75 per cent of the wastewater is processed at Malabar, North Head and Bondi Sewage Treatment Plants and discharged through ocean outfalls. The effect of discharges on water quality and aquatic life is monitored weekly by the Department of Environment and Conservation to ensure performance standards are met. The 17 inland plants discharge highly treated tertiary-level wastewater into the Hawkesbury-Nepean River and the Gerringong-Gerroa catchment.

Recycled water
Sydney Water recycles almost 42 million litres of wastewater a day. There are a number of water recycling schemes in place that reduce demand on water supplies and discharges of treated wastewater to the environment.

Use of recycled water has increased from 6.2 billion litres a year in 1995 to approximately 15.3 billion litres a year. The commissioning of various residential and industrial recycled water schemes and greater use of recycled water at the sewage treatment plants has enabled this increased use.

Stormwater services
Most stormwater channels and drains are the direct responsibility of local councils. Sydney Water manages 436 km of trunk stormwater channels and conduits predominantly in south and south-west Sydney, as well as flood prone areas and trunk drainage at Rouse Hill.

By length, this represents less than 5 per cent of the total metropolitan stormwater network and around 25 per cent of runoff. Approximately 127 billion litres a year is discharged through Sydney Water’s trunk drainage system to Port Jackson, the Georges River, Cooks River and Botany Bay.

The different ownership of stormwater assets means partnerships with local councils and/or other parties is needed to coordinate stormwater outcomes such as protection from flood, improving waterway health and amenity, and providing for growth and integrated water cycle opportunities.
This report reviews Sydney Water’s economic, social and environmental performance in 2005-06.

It provides an assessment of:

- financial performance against the Statement of Corporate Intent
- economic and social performance against the Corporate Plan
- overall performance against the Operating Licence

The report also considers sustainability reporting guidelines developed by the Global Reporting Initiative (GRI), an official collaborating centre of the United Nations Program. A GRI content index appears in the Appendix.

Detailed data and other regulatory information

A range of more detailed data and other regulatory information is available in the Annual Report 2006 Appendix PDF on the CD attached to the inside back cover of the report, and at [www.sydneywater.com.au](http://www.sydneywater.com.au).

Financial statements

Detailed financial statements in PDF format for Sydney Water Corporation and its related entities are contained on the CD. The year’s financial highlights are presented on page 8 and discussed on page 31.

Alternative access to report

The full contents of this report can be found online at [www.sydneywater.com.au](http://www.sydneywater.com.au) and copies of the report and CD are available at Sydney Water’s Customer Centres and at public libraries in the area of operations.

Area of operations map

![Area of operations map](image.png)
**Sydney Water at a glance**

- **Area of operations** – Sydney, Illawarra and the Blue Mountains
- **Number of employees** – 3180 people
- **Manages** $10.5 billion in physical plant, property and equipment
- **More than** $1.5 billion in products and services purchased each year
- **More than** $520 million annual capital expenditure
- Regulated primarily by an Operating Licence, issued under the Sydney Water Act 1994, and by the Independent Pricing and Regulatory Tribunal (IPART)
- Accountable under the State Owned Corporations Act 1989

### Water services

<table>
<thead>
<tr>
<th></th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
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<tbody>
<tr>
<td>Estimated population supplied by Sydney Water*</td>
<td>4,227,567</td>
<td>4,267,165</td>
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<tr>
<td>Properties with a water main available*</td>
<td>1,684,617</td>
<td>1,706,217</td>
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<tr>
<td>Total drinking quality water supplied</td>
<td>526,367 ML</td>
<td>528,260 ML</td>
</tr>
<tr>
<td>Average daily consumption of drinking quality water</td>
<td>1406 ML</td>
<td>1411 ML</td>
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<tr>
<td>Per person consumption per day</td>
<td>343 L</td>
<td>341 L</td>
</tr>
<tr>
<td>Climate corrected per person consumption per day**</td>
<td>342 L</td>
<td>335 L</td>
</tr>
<tr>
<td>Drinking water saved through demand management programs during year***</td>
<td>34,574 ML</td>
<td>40,135 ML</td>
</tr>
<tr>
<td>Length of Sydney Water drinking water mains</td>
<td>20,669 km</td>
<td>20,752 km</td>
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<tr>
<td>Water mains inspected for leaks</td>
<td>7988 km</td>
<td>18,011 km</td>
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<tr>
<td>Drinking water saved through leak detection</td>
<td>16,800 ML/year</td>
<td>18,600 ML/year</td>
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</tbody>
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### Wastewater services

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<tr>
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<th>2004-05</th>
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<tbody>
<tr>
<td>Estimated population served by Sydney Water*</td>
<td>4,101,160</td>
<td>4,140,765</td>
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<tr>
<td>Properties for which a sewer was available*</td>
<td>1,634,608</td>
<td>1,655,986</td>
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<tr>
<td>Amount of wastewater collected (excluding Sydney Olympic Park Authority)</td>
<td>454,262 ML</td>
<td>432,542 ML</td>
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<tr>
<td>Length of Sydney Water sewer mains</td>
<td>23,247 km</td>
<td>23,404 km</td>
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</table>

### Recycled water

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<tr>
<th></th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
</thead>
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<tr>
<td>Estimated residential population receiving non-drinking recycled water</td>
<td>45,700</td>
<td>48,050</td>
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<tr>
<td>Residential properties receiving non-drinking recycled water</td>
<td>15,245</td>
<td>16,027</td>
</tr>
<tr>
<td>Commercial, industrial properties receiving non-drinking recycled water</td>
<td>81</td>
<td>101</td>
</tr>
<tr>
<td>Amount of wastewater recycled (reused) during year</td>
<td>12,751 ML</td>
<td>15,282 ML</td>
</tr>
<tr>
<td>Estimated amount of drinking water saved through recycling during year*</td>
<td>4079 ML</td>
<td>5597 ML</td>
</tr>
<tr>
<td>Length of Sydney Water recycled water mains</td>
<td>291 km</td>
<td>309 km</td>
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### Stormwater services

<table>
<thead>
<tr>
<th></th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater channels under Sydney Water control</td>
<td>436 km</td>
<td>436 km</td>
</tr>
<tr>
<td>Properties with drainage available**</td>
<td>465,864</td>
<td>473,721</td>
</tr>
<tr>
<td>Stormwater Quality Improvement Devices (SQIDs)‡</td>
<td>41</td>
<td>60</td>
</tr>
</tbody>
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* Estimated population is based on the most recent information available from the Department of Planning and relates only to properties serviced by Sydney Water
* Property numbers are calculated using a methodology developed by Water Services Association of Australia, which records the individual number of property connections to a Sydney Water water main
** Climate correction adjusts data to account for weather conditions significantly above or below average, and which influence customer use
*** Total length of water and sewer mains is the total from previous year, plus new mains laid in the reporting year, plus the mains laid data lag from previous year, minus mains disused
* Estimated annual water savings are calculated for each Sydney Water demand management program and summmed to calculate the overall estimated savings. Estimated savings are initially based on assumptions and best estimates from literature data and overseas studies. As programs are delivered, estimates are revised based on observed data, e.g. customer water meter data. Assumptions are also reviewed and verified through processes including peer review, independent audits and independent data analysis
‡ Based on use at sewage treatment plants during 1994-95 as a baseline. Excludes savings from recycled water at Sydney Olympic Park Authority
‡ Number of properties declared for rating purposes in catchments draining to stormwater infrastructure owned by Sydney Water
† SQIDs improve the quality of stormwater by removing litter and/or sediment from it before it enters waterways. There are various types of SQIDs, including litter booms, sediment basins and gross pollutant traps
Managing Director’s message

I have been fortunate enough to become Managing Director of Sydney Water at a time of intense interest in the water industry. Recycled water schemes are being pursued; better technology is improving leak detection; and households and businesses are beginning to focus on more efficient water use.

At a more general level, the appropriate price of water is being debated; the private sector is seeking more involvement in the water industry; the Commonwealth Government is taking an increasing interest in urban water issues; and the Metropolitan Water Plan to balance supply and demand for water in Sydney is being implemented.

Sydney’s water supply is marked by its variability. The prolonged droughts of the 1890s, the 1930s-40s and the current drought are in this longer-term view tempered by short periods where dams spill. The Metropolitan Water Plan addresses this variability through an adaptive management approach to balance Sydney’s water supply and demand. Sydney Water’s responsibilities in this plan are to reduce reliance on dam supplies by encouraging wastewater recycling to replace potable water use; to encourage the efficient use of water in households and business; and closer to home, to limit water leaks and main breaks.

Water restrictions have been in place since the drought began and Level 3 restrictions have been operating since June 2005. I would like to thank our customers for their patience and understanding of this policy while the current drought continues.

Sydney Water, for its part, has made good progress with its demand management program, and water leaks and main breaks have been reduced significantly.

This approach has allowed Sydney’s water reserves to remain above the 40 per cent capacity mark. While this is partly due to some rainfall in the catchment, it also reflects the restraint of our customers and Sydney Water’s efforts to enable more efficient water use and thus reduce demand, to minimise water losses, and to increase the level of wastewater recycling.

Reducing demand

During 2005-06, Sydney’s water consumption was 528 billion litres. This was the second lowest level of consumption since 1974, despite an increase in population of 1.16 million since that time.

Without the various measures taken by Sydney Water to reduce demand, the amount of water consumed in 2005-06 would have been about 621 billion litres. Consumption levels of this kind were last experienced in the late 1980s and 1990s. The significant decline in consumption is related to permanent measures to be more efficient with water, and to temporary drought associated water restrictions.

Sydney Water’s demand management program is the largest ever undertaken in Australia and has reduced the demand for water by about 40 billion litres per year. Water restrictions saved about 93 billion litres in 2005-06.

Under our program we have formed water conservation partnerships with 334 businesses, installed water saving devices in around 350,000 homes, distributed 37,000 “Do-It-Yourself” water saving kits, paid rebates to support the installation of almost 25,000 rainwater tanks, and provided more than 7000 rebates for the purchase of water efficient washing machines.

Sydney Water will continue to review and adapt the demand management strategy. This includes investigating and piloting a range of potential additional demand management initiatives to ensure we meet the 2011 Operating Licence target of 329 litres per person per day.
Leak reduction

Water lost through leaks has been reduced to 8.5 per cent of water supply, saving 18 billion litres a year. We are still losing a lot of water in leaks – mainly not visible on the surface – but over a network of 23,000 km of pipe, our performance compares favourably with the major cities we have been able to examine, with the exception of Singapore. Sydney Water is in the top tier of major world cities for leakage control performance and we will improve further.

Commencing in 2004-05, Sydney Water committed to $400 million in expenditure over four years to reduce leakage by 25 per cent. As part of this program, 18,000 km of water mains are now inspected for hidden leaks each year; high water pressure will be reduced in areas where it is excessive; a comprehensive network of flow meters is being installed to monitor leaks; 300 km of water mains are being replaced; and measures put in place to improve response times to leaks and breaks.

Increased focus on recycling

The 2006 Metropolitan Water Plan identified a range of projects to increase recycling. The target is to have 70 billion litres a year of wastewater recycled for non-potable use by 2015. This replaces about 13 per cent of 2015’s anticipated drinking water supply.

Sydney Water is well positioned to achieve this target with a number of significant projects already under construction. Schemes to deliver recycled water to new homes in Hoxton Park and Ropes Crossing are advanced, along with the West Camden recycled water irrigation scheme. Work also continued this year to extend Australia’s largest residential water recycling scheme in north-western Sydney. More than 16,000 homes are already part of the Rose Hill Recycled Water Scheme and a further 20,000 new homes are being added by 2030.

Sydney Water commissioned a recycled water scheme at North Head Sewage Treatment Plant. This will save around 550 million litres a year. Total water savings at our treatment plants now stands at more than 1.7 billion litres a year.

Commissioning of Australia’s largest industrial recycling scheme at Port Kembla began in September 2006. This plant is currently producing around 16 million litres of high quality water a day, and when fully commissioned will supply BlueScope Steel with 20 million litres a day. This replaces 7.3 billion litres of drinking water a year, an amount that represents about 20 per cent of the Illawarra’s water supply.

The remainder of the 70 billion litres recycled water target will be delivered through a range of new recycling projects supplying water to industry, new homes, open space irrigation and rivers in Western Sydney.

The first stage of the Western Sydney Recycled Water Initiative will recycle water for 160,000 new homes in western Sydney and replace releases from Warragamba Dam, saving up to 27 billion litres of water a year by 2015. The Replacement Flows Project is about to go into tender phase. Further savings of about 6 billion litres a year are expected with the Camellia Recycled Water Project providing recycled water to industrial and open space users at Camellia and nearby areas. This project is in tender phase.

Contingency planning

During the year, the Government confirmed that it was not necessary to proceed with the construction of a desalination plant at this time. What was needed was “a state of readiness” to construct and operate a plant within 26 months if required so that Sydney’s water supply is secure.

Sydney Water has therefore undertaken detailed environmental and engineering assessments, procured a site at Kurnell, applied for planning approvals and is undertaking pilot plant testing. Sufficient planning work is being done in advance so that if storages fall to around 30 per cent, a desalination plant can be quickly built.

Improving our performance

The Independent Pricing and Regulatory Tribunal’s (IPART) annual audit of our Operating Licence in 2004-05 showed the highest overall compliance levels that we have had for the term of the licence.

Full or high compliance was recorded for the majority of our Operating Licence requirements.

Specifically, the audit found that our customers have been able to rely on excellent water quality. Full compliance was also achieved for system performance standards covering water pressure, water supply continuity and sewage overflows.

Customer satisfaction with water and wastewater services was investigated through our Annual Residential Customer Survey. Overall customer satisfaction with tap water was high at 88 per cent and overall satisfaction with sewerage services was 84 per cent.
That stated performance needs to be improved. Performance continued to improve in the area of water conservation, but to meet the 2011 target further work is required.

Given that about 30 per cent of leaks are reported between 3pm and 11pm, in March this year a second shift of Water Services staff was introduced to cover this period and to improve response times.

In September 2005, IPART released its pricing determination for water and sewerage services for the next four years. The new price structure came into effect on 1 October 2005.

The price increases were intended to encourage more efficient water use in both households and business, and to provide Sydney Water with additional funds for essential infrastructure projects. These include improving and upgrading sewer mains and pumping stations, renewing, expanding and maintaining water infrastructure and investing in recycling schemes in new developments.

The additional capital expenditure also enables us to renew and improve reliability at our sewage treatment plants, and upgrade and increase capacity at a number of plants including Liverpool, Rouse Hill and West Camden.

To reduce sewage overflows, the SewerFix Program is continuing and a revised strategy is being implemented to reduce the frequency of tree root chokes, which cause dry weather sewer overflows.

Safe, capable and committed workforce
The tragic deaths of one of our employees and a contractor during the year again highlighted the importance of maintaining a strong focus on safety. Our goal is that there are no accidents.

Ongoing improvements to our safety performance are coming from strong safety leadership, supported by improved training and communications. Over the course of the year the Lost Time Injury Frequency Rate fell from 14.8 to 8.2.

We have also focused on improving the capability and performance of our workforce. This includes attracting, training and retaining younger employees to maintain a balanced workforce age profile.

Looking ahead
We live in interesting times for the water industry. Expectations of customers and regulators increase. The water industry is changing with more recycling and innovations leading to more efficient water use in homes and business. A capable and flexible approach is going to be required and the dedication and focus of Sydney Water employees puts us in a strong position to enjoy the coming challenges and to serve our customers as they expect.

I look forward to working with the Board and staff over the coming year.

Finally, I would like to acknowledge the great work undertaken by the previous Managing Director, David Evans. The achievements of 2005-06 were many and credit is due to him for the part he played in those outcomes. David left Sydney Water in early August and we all wish him well in his future endeavours.

Kerry Schott
Managing Director
Financial highlights

Total income 2005-06
($1541m)

- 44% Service charges
- 33% Usage charges
- 7% Developer contributions
- 6% Social programs subsidy
- 5% Other income

Total expenditure 2005-06*
($1290m)

- 23% Employee benefits
- 18% Bulkwater and filtration
- 11% Maintenance and operational contractors
- 13% Depreciation and amortisation
- 13% Financing charges
- 22% Other expenses

Profit before tax*

Return on net operating assets*

Debt to equity

Capital expenditure

Financial performance summary table

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<thead>
<tr>
<th></th>
<th>2004-05 $M</th>
<th>2005-06 $M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue from continuing operations</td>
<td>1417</td>
<td>1540</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>223</td>
<td>251*</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>70</td>
<td>133*</td>
</tr>
<tr>
<td>Profit after tax</td>
<td>153</td>
<td>118*</td>
</tr>
<tr>
<td>Dividends payable</td>
<td>120</td>
<td>193</td>
</tr>
</tbody>
</table>

*Adjusted to normalise the superannuation expense (see page 31)
Objectives

The Sydney Water Act 1994 sets out Sydney Water’s objectives:

• to protect public health by supplying safe drinking water to its customers and other members of the public
• to protect the environment by conducting its operations in compliance with the principles of ecologically sustainable development
• to be a successful business by:
  – operating at least as efficiently as any comparable businesses
  – maximising the net worth of the State’s investment in the corporation
  – exhibiting a sense of social responsibility by having regard to the interests of the community in which it operates.

Sydney Water is structured around three core operating areas:

• water services
• wastewater services
• wastewater recycling and some stormwater services.

Achieving objectives

Operating Licence

Sydney Water’s current Operating Licence is effective from 1 July 2005 to 30 June 2010. The performance targets and service standards for operational matters and customer service are set out in the Operating Licence, which includes the Customer Contract. Copies of both of these are available on the CD attached to the inside back cover of this report.

Statement of Corporate Intent

The Statement of Corporate Intent specifies annual financial performance targets agreed to with the Shareholder Ministers. Information on financial performance begins on page 31.

Corporate Plan

The Corporate Plan 2005-2010 is the medium-term business plan. It identifies corporate initiatives, actions and performance measures for a five-year period and works to guide Sydney Water in meeting its long-term goals.

For 2005-06 the focus areas were:

• long-term sustainable water strategy
• strategic investment management
• operating and engagement model
• customer service and regulatory strategy
• smart procurement
• people, performance and leadership
• major operating initiatives.

A summary of performance against the Corporate Plan’s focus areas in 2005-06 is presented on page 10.

Stakeholder consultation

Sydney Water consults widely with customers, communities, suppliers (including contractors), the Sydney Catchment Authority and staff. Shareholders are provided information both formally and informally and Sydney Water consults regularly with shareholder representatives.

Regular forums are held with key regulators and in particular the Department of Environment and Conservation, NSW Health and the Independent Pricing and Regulatory Tribunal.

The community and key stakeholders are consulted in the planning and delivery phases of capital projects to ensure their needs and expectations are understood and incorporated into the decision-making process.

Risk management

Sydney Water faces a broad range of risks that can impact the services provided to the community and Sydney Water’s performance.

As a result, a formal and systematic approach to identifying and managing risks exists. Sydney Water’s Risk Management Framework complies with the Australian and New Zealand Risk Management Standard (AS/NZS 4360).

Sydney Water integrates risk management into operational activities and actively manages agreed strategic, high residual and emerging risks to refine, enhance and improve operational practices.

Strategic risks and key mitigation strategies, and emerging risks are reported to the Audit Committee of the Board every six months.

Health and safety

Managing the risks to staff safety is a priority for Sydney Water.

Sydney Water has implemented a program to identify and review areas where the organisation may be susceptible to safety issues. The Key Risk Program is managed through a steering committee consisting of representatives from across Sydney Water.

Areas identified include excavation, driver safety, site control, occupational noise and office ergonomics. The Steering Committee’s recommendations to improve safety will be implemented in 2006-07.

Insurance

Sydney Water retains a comprehensive insurance program that forms part of its risk management strategy.

Reviewed annually, insurance policies cover various exposures the business faces that include existing assets as well as those under construction, and risks associated with Sydney Water’s operations and insurable legal liabilities.

Insurance is placed with various Australian and overseas insurers as well as the NSW Treasury Managed Fund and advice is sought from an appointed insurance broker to assist with the placement and maintenance of the program.
Corporate Plan, Environment Plan summary

The 2005-06 Corporate Plan included focus areas which were outside normal business-as-usual delivery. Sydney Water’s performance in each of these is summarised here.

Efficient use
Sydney Water continued to implement a proactive demand management program. This involved a mix of education, incentives and programs to increase recycling, water efficiency in the community, and reduce leakage. Water savings of 40,135 ML were made during the year.

Under the demand management program, Sydney Water formed water conservation partnerships with 334 businesses, installed around 350,000 homes with water efficient devices, distributed 37,000 ‘Do-It-Yourself’ water efficiency kits, paid rebates to support the installation of almost 25,000 rainwater tanks and provided more than 7000 rebates for the purchase of water efficient washing machines.

Sydney Water also undertook detailed planning work so that if dam storages fall to around 30 per cent, a desalination plant would be able to be constructed and operating within 26 months.

Asset management
With assets valued at $10.5 billion, Sydney Water invested $520 million in capital expenditure over the year, including financing costs.

Sydney Water is improving its management of assets over the whole of their life. Asset plans and decision-making frameworks are in place. Projects are also underway to better track the costs of service delivery at the facility and process levels.

A cost efficiency program has been developed which will see significant cost reductions over the four-year period to 2008-09, in line with the commitments made to the Independent Pricing and Regulatory Tribunal (IPART).

Access regimes
During 2005-06, Sydney Water worked with IPART on third party access issues and the pricing of recycled water. Sydney Water developed policies to allow third parties to tap into sewers to extract wastewater for treatment and reuse as recycled water. This is referred to as sewer mining. Sydney Water is currently negotiating with a number of private sector parties about terms and conditions for sewer mining and other third party access opportunities.

Customer service
A new Customer Service Strategy was developed during 2005-06 to make it easier for customers to deal with Sydney Water and to improve efficiency. Customer satisfaction with drinking water quality and wastewater services remains high at 88 per cent and 84 per cent respectively.

Procurement
Sydney Water purchases around $1.5 billion of goods and services every year. To ensure that this is done efficiently, procurement training was provided to around 300 employees. In addition, to gain economies of scale, contracts were bundled. Where appropriate, Sydney Water continued to use alliancing with performance incentives. There was also a move towards greater use of electronic transactions.

Safety
During 2005-06, Sydney Water had two fatalities. While Sydney Water’s Lost Time Injury Frequency Rate (LTIFR) fell to its lowest ever level of 8.2, this is still well above the target of zero. LTIFR for major contractors rose to 7.7 during the year, against a target of 6.0. A number of improvement programs have now been jointly developed with contractors.

Employee competency and performance
Five employee competency programs commenced during 2005-06, and improved staff performance management and appraisal systems were implemented.

Operations improvements
Sydney Water is implementing a range of improvement projects for major assets, including long-term strategies to assess the condition of critical infrastructure. Major sewage treatment plants at Bondi, North Head and Wollongong are being upgraded. While some delays have been experienced at North Head and Wollongong, progress is being made.

Sydney Water’s performance against the Department of Environment and Conservation’s licence requirements for sewage treatment improved with a downward trend in non-compliances. Similarly, the sewer overflow reduction program is on schedule with 92 per cent of sewer catchment areas already meeting 2010 performance targets.

A project is underway to automate and increase the mobility of the maintenance workforce and a depot consolidation program is well advanced.

Environment Plan
The Environment Plan identifies the ways in which Sydney Water addresses one of its principal objectives – to protect the environment. Operations are conducted in compliance with the principles of ecologically sustainable development.

For 2005-06 key achievements in environmental performance included:

- conserving water supplies by achieving water savings and reducing the amount of water drawn from all sources
- contributing to improvements in ecosystem health in waterways through effective wastewater management. This included the commissioning of sewer related programs and compliance with licence conditions
- responsibly managing natural and cultural resources and reducing the environmental impact of activities through sound practices in areas such as energy management and waste minimisation
- continuing to improve environmental management practices in line with international standards.

While Sydney Water has made good progress against most objectives, ongoing effort is required in the areas of water efficiency, statutory compliance and energy management.

Summary review of operations

Sydney Water monitors its economic, social and environmental performance against a number of indicators, including those determined by the Operating Licence 2005-2010. A range of other indicators is also included.

The Summary Review of Operations provides a structured review of Sydney Water’s sustainability performance against key performance areas.

<table>
<thead>
<tr>
<th>Performance area</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water quality</strong></td>
<td></td>
</tr>
<tr>
<td>Water quality compliance</td>
<td>Full compliance with the new Australian Drinking Water Guidelines 2004</td>
</tr>
<tr>
<td>Guideline compliance</td>
<td>All health and aesthetic guidelines met</td>
</tr>
<tr>
<td><strong>Wastewater management</strong></td>
<td></td>
</tr>
<tr>
<td>Licence compliance</td>
<td>Improved environmental performance and compliance with statutory instruments</td>
</tr>
<tr>
<td>Sewage treatment plant effluent quality</td>
<td>Plant upgrades and improved reliability deliver reduced loads to waterways</td>
</tr>
<tr>
<td>Sewage treatment system discharges</td>
<td>Variations in performance have resulted from weather conditions and population growth</td>
</tr>
<tr>
<td>Trade waste agreements</td>
<td>Industry partnership and education improve trade waste management</td>
</tr>
<tr>
<td>Stormwater</td>
<td>Revised capital program delivers planned outcomes</td>
</tr>
<tr>
<td>Aquatic ecosystem impacts</td>
<td>Local recovery of ecosystem health is evident where sewage treatment plants have been decommissioned</td>
</tr>
<tr>
<td>Recreational water quality</td>
<td>Recreational water quality responds to plant upgrades and improved reliability</td>
</tr>
<tr>
<td><strong>Efficient water use</strong></td>
<td></td>
</tr>
<tr>
<td>Demand management</td>
<td>Demand management programs achieved significant water savings</td>
</tr>
<tr>
<td>Potable water drawn</td>
<td>Potable water drawn reflects demand under drought restrictions, population growth and climatic variations</td>
</tr>
<tr>
<td>Water recycled</td>
<td>Water efficiencies and recycling delivered off site and at sewage treatment plants</td>
</tr>
<tr>
<td>Water leakage</td>
<td>Active detection and repair of system significantly reduced water leakage</td>
</tr>
<tr>
<td><strong>Business and financial management</strong></td>
<td></td>
</tr>
<tr>
<td>Operating costs per customer property</td>
<td>Operating costs per customer property continued to improve</td>
</tr>
<tr>
<td>Funds flow from operations</td>
<td>2005-06 improvement largely reflects first year of new price path</td>
</tr>
<tr>
<td>Financial contribution to the community</td>
<td>Increased core profitability lifts return on community investment</td>
</tr>
<tr>
<td>Financial return on assets</td>
<td>Return on investment in assets meets target</td>
</tr>
<tr>
<td>Maintenance and renewal of assets</td>
<td>Close to 100 per cent achieved</td>
</tr>
<tr>
<td><strong>Customer service</strong></td>
<td></td>
</tr>
<tr>
<td>Service quality and system performance</td>
<td>Most requirements met except for delays in response times to water main breaks and leaks</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>Level of customer satisfaction with water and sewerage services remained high</td>
</tr>
<tr>
<td>Customer complaints</td>
<td>Increase in complaints from 5.3 to 5.5 per 1000 properties linked to increased works program and Malabar Sewage Treatment Plant odour complaints</td>
</tr>
<tr>
<td>Mitigation of negative social impact</td>
<td>Special needs customers continue to be assured access to services</td>
</tr>
<tr>
<td>Community investments</td>
<td>Maintained community investment program and took up new sponsorships</td>
</tr>
<tr>
<td><strong>Efficient use of resources</strong></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>Higher wastewater and recycling standards required increase in energy use</td>
</tr>
<tr>
<td>Beneficial use of by-products</td>
<td>Captured biosolids and water treatment residuals continued to be beneficially used</td>
</tr>
<tr>
<td>Waste minimisation</td>
<td>Improvements in waste reuse and recycling reflects internal and supplier commitment</td>
</tr>
<tr>
<td>Natural and cultural resources</td>
<td>Appropriate environmental management practices protect natural resources and cultural heritage sites</td>
</tr>
<tr>
<td>Contaminated land</td>
<td>Management practices deliver planned environmental outcomes</td>
</tr>
<tr>
<td><strong>Employees</strong></td>
<td></td>
</tr>
<tr>
<td>Employee capability</td>
<td>Employee capability measurement system established and senior managers measured</td>
</tr>
<tr>
<td>Employee engagement</td>
<td>Employee engagement measurement model adopted</td>
</tr>
<tr>
<td>Employee safety</td>
<td>While LTI FR improved there is more work to do in safety, particularly in the area of lead indicators</td>
</tr>
<tr>
<td>Workforce performance</td>
<td>Objectives achieved in preparing to measure performance drivers</td>
</tr>
</tbody>
</table>
Water quality
Performance summary

Providing clean, safe drinking water
Sydney Water’s most important responsibility is to protect public health by supplying safe drinking water. More than 1.4 billion litres of water is supplied to over 1.6 million homes and businesses each day.
To supply safe drinking water and protect public health, a Drinking Water Quality Management Plan is developed and approved by NSW Health. Progress against this plan is reported and reviewed annually.

The Operating Licence specifies that the Australian Drinking Water Guidelines 2004 (ADWG) quality standards be met. Each year an independent audit is conducted on behalf of NSW Health and the Independent Pricing and Regulatory Tribunal (IPART) to assess compliance with the licence and the Memorandum of Understanding (MoU) held with NSW Health.

Water is sourced primarily from the Sydney Catchment Authority (SCA). The raw water is treated at nine water filtration plants to ensure that the drinking water complies fully with the health and aesthetic standards of the ADWG 2004. The largest filtration plant is at Prospect, which treats more than 80 per cent of Sydney’s water supply.

All water supplied is chemically treated and filtered to significantly reduce organic matter, sediments and materials such as iron and manganese. It is disinfected with chlorine and ammonia is added in larger distribution systems to prolong the life of the disinfection agent. As required by legislation, fluoride is then added for dental health purposes.

The water is tested at each stage of the supply chain – before and after treatment at water filtration plants, and at the customer’s tap. Each month samples are taken from numerous sites and tested for compliance.

Customer complaints regarding taste, odour and other water quality issues are investigated to further reduce risk to public health. These are referred to in Customer service, page 39.

Water quality test results in 2005-06 show drinking water quality to have again complied with all guidelines. Test results are available at www.sydneywater.com.au and a summary is mailed to customers with their quarterly bill.

Key performance area

Water quality compliance

Full compliance with new Australian Drinking Water Guidelines 2004

Performance

Operating Licence requirements for system performance monitoring was again complied with, as 99.92 per cent of water tests met ADWG 2004*

The ADWG recommend that *E.coli* is the most suitable indicator organism for the possible presence of pathogens arising from faecal contamination and require that at least 98 per cent of scheduled samples contain no *E.coli*.

As a result, *E.coli* is routinely monitored and reported on for compliance.

* ADWG 2004 were adopted in January 2006 in agreement with NSW Health following updates to the 1996 guidelines.
Other performance area

Water quality guidelines

All health and aesthetic guidelines met

Performance

Water quality test results in 2005-06 again complied with all guidelines. There were no detections of Cryptosporidium or Giardia in treated water during the year.

There has been an improvement in reported performance for 2005-06 compared with 2004-05, partly due to aligning compliance monitoring with the ADWG 2004 where Total Coliforms are no longer a compliance characteristic.

Six samples tested positive for E.coli in 2005-06 and two samples had a fluoride level below the level required under the Fluoridation of Public Water Supplies Act 1957.

Further samples did not detect any evidence of contamination and, after being forwarded to NSW Health as required by the MoU, were cleared of having any risk to public health.

This year, improved performance in regard to aesthetic characteristics is largely due to a decrease in the number of pH exceptions through improved pH management in systems supplied by the Prospect, Illawarra, Macarthur and Woronora water filtration plants.

This will be maintained by continuing the work at these plants and systems.

OUTLOOK

The focus is to ensure public health by continuing to provide high quality drinking water.

This will be maintained by:

• managing drinking water quality during drought
• preparing for the impact that drought breaking rains may have on drinking water quality
• managing issues that might arise from a reduction in drinking water demand
• making sure of the security of the drinking water supply system
• working with the guiding principles and framework for managing drinking water quality as set out in the ADWG 2004
• identifying and acting upon any emerging water quality issues through collaborative research and investigations.

Water quality test results year ending 30 June 2006

<table>
<thead>
<tr>
<th>Microbiological</th>
<th>Physical/Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.coli (EC)</td>
<td>Fluoride*</td>
</tr>
<tr>
<td></td>
<td>Chlorine</td>
</tr>
<tr>
<td></td>
<td>Trihalomethanes</td>
</tr>
<tr>
<td></td>
<td>Turbidity</td>
</tr>
<tr>
<td></td>
<td>True Colour</td>
</tr>
<tr>
<td></td>
<td>Iron</td>
</tr>
</tbody>
</table>

ADWG 2004 performance criteria (for assessment over 12-month period)

Health – (H) Aesthetic – (A)

At least 98% of results contain no E.coli (H)

At least 95% of results < 0.9-1.5 mg/L (H)

At least 95% of results < 5 mg/L or 3 mg/L (H)

At least 95% of results < 0.25 mg/L (H)

Average result < 5 NTU (A)

Average result < 15 HU (A)

Average result < 0.3 mg/L (A)

Actual test results for 12 months from 1 July 2005 to 30 June 2006 taken from customers' taps

<table>
<thead>
<tr>
<th>Customer supply system</th>
<th>All parameters comply</th>
<th>% of results complying</th>
<th>% of results complying</th>
<th>% of results complying</th>
<th>% of results complying</th>
<th>Average result (NTU)</th>
<th>Average result (HU)</th>
<th>Average result (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Richmond²</td>
<td>✓</td>
<td>100</td>
<td>99.2</td>
<td>100</td>
<td>100</td>
<td>0.12</td>
<td>&lt; 2</td>
<td>0.018</td>
</tr>
<tr>
<td>Orchard Hills²</td>
<td>✓</td>
<td>99.8</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0.19</td>
<td>&lt; 2</td>
<td>&lt; 0.010</td>
</tr>
<tr>
<td>Prospect South</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>97.0</td>
<td>100</td>
<td>0.13</td>
<td>&lt; 2</td>
<td>0.014</td>
</tr>
<tr>
<td>Prospect North</td>
<td>✓</td>
<td>99.9</td>
<td>100</td>
<td>98.8</td>
<td>100</td>
<td>0.15</td>
<td>&lt; 2</td>
<td>0.016</td>
</tr>
<tr>
<td>Prospect East</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0.13</td>
<td>&lt; 2</td>
<td>0.014</td>
</tr>
<tr>
<td>Ryde</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>99.5</td>
<td>100</td>
<td>0.13</td>
<td>&lt; 2</td>
<td>0.038</td>
</tr>
<tr>
<td>Potts Hill</td>
<td>✓</td>
<td>99.8</td>
<td>100</td>
<td>99.9</td>
<td>100</td>
<td>0.13</td>
<td>&lt; 2</td>
<td>0.015</td>
</tr>
<tr>
<td>Warragamba²</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0.11</td>
<td>&lt; 2</td>
<td>0.011</td>
</tr>
<tr>
<td>Nepean²</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>98.1</td>
<td>100</td>
<td>0.20</td>
<td>&lt; 2</td>
<td>0.022</td>
</tr>
<tr>
<td>Macarthur</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>95.2</td>
<td>100</td>
<td>0.14</td>
<td>&lt; 2</td>
<td>0.028</td>
</tr>
<tr>
<td>Illawarra²</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0.14</td>
<td>&lt; 2</td>
<td>0.019</td>
</tr>
<tr>
<td>Woronora</td>
<td>✓</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>0.12</td>
<td>&lt; 2</td>
<td>0.011</td>
</tr>
<tr>
<td>Cascade²</td>
<td>✓</td>
<td>100</td>
<td>99.2</td>
<td>100</td>
<td>100</td>
<td>0.17</td>
<td>&lt; 2</td>
<td>0.027</td>
</tr>
</tbody>
</table>

² Although the ADWG 2004 specifies that 95% of fluoride test results should be less than 1.5 mg/L, the Fluoridation of Public Water Supplies Act 1957 requires that, over a year, greater than 95% of all routine samples fall within the range 0.90 to 1.50 mg/L

² Required standard for chlorine is < 5 mg/L in these systems.
Wastewater management
Performance summary

Promoting clean beaches, oceans, rivers and harbours
Sydney Water collects and treats more than 1.2 billion litres of wastewater a day. All biosolids are reused and wastewater recycling is more than 3.5 per cent of the total. The sewerage network consists of about 23,500 km of sewer pipes and 659 sewage pumping stations.
Wastewater management

Sydney Water provides wastewater services to more than four million people.

**Sewage treatment and storm flow plants**

Of the 30 sewage treatment plants, Sydney Water operates 29. Veolia Water Pty Ltd operates the Gerringong-Gerroa plant.

There are 10 coastal sewage treatment plants. The North Head, Bondi and Malabar treatment plants treat 75 per cent of Sydney’s wastewater to a primary level before discharging it via deep ocean outfalls. The Malabar plant also takes wastewater from three plants on the Georges River.

Three storm sewage treatment plants at Fairfield, Bellambi and Port Kembla only come on line during large storm events, treating excess flows to an acceptable level before discharging to receiving waters.

A further 17 inland plants discharge highly treated tertiary-level wastewater into the Hawkesbury-Nepean River and Gerringong-Gerroa catchment.

**Environment Protection Licences**

The Department of Environment and Conservation issues Environment Protection Licences for each of Sydney Water’s 25 sewage treatment systems. Collecting over 1.2 billion litres of wastewater daily, these systems consist of 23,404 km of sewer pipes and 659 sewage pumping stations.

The licences set various conditions for the operation of the plants and acceptable levels for substances discharged in the effluent.

**Stormwater**

Most stormwater channels and drains are the responsibility of local councils.

Sydney Water manages 436 km of trunk stormwater channels and conduits predominantly in the south and southwest of Sydney, as well as flood prone areas and trunk drainage at Rouse Hill.

Stormwater can carry pollutants such as litter, coarse sediment, grease and oil, and metals collected from roads and property. These can affect the quality of receiving waterways.

Sydney Water’s stormwater management programs include operating and maintaining Stormwater Quality Improvement Devices (SQIDs) to remove litter and sediment from the stormwater system.

**Key performance area**

**Licence compliance**

**Improved environmental performance and compliance with statutory instruments**

This performance area addresses breaches of statutory instruments applying to Sydney Water’s operations, i.e. licence breaches by sewage and water treatment systems, and prosecutions and notices, including penalty notices issued to both Sydney Water and its contractors under the Protection of the Environment Operations Act 1997.

**Performance**

Over the past five years there have been no Tier 1 or Tier 2 breaches against any of Sydney Water’s licences. There were also no breaches by its contractors in 2005-06, the first year for reporting this data.

Sewage treatment systems have incurred several Tier 3 breaches in the past five years, including three received this year, two of which actually occurred in 2004-05. These were for a wet weather overflow at Glenfield Sewage Pumping Station, high concentrations of ammonia in treated wastewater at West Hornsby Sewage Treatment Plant and odour complaints relating to Malabar Sewage Treatment Plant.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tier 2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tier 3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Tier 1: up to $5 million fine and/or seven years imprisonment; Tier 2: up to $1 million fine; Tier 3: minor fines and/or enforceable undertakings

**Total number of prosecutions and penalty infringement notices issued to Sydney Water under the Protection of the Environment Operations Act 1997**

**Total mass of nitrogen discharged to streams/rivers from inland sewage treatment plants**
Upgrades to the controls at Sewage Pumping Station 353 means the risk of a similar malfunction at Glenfield has been reduced.

Sydney Water has put in place control measures to help maintain a stable process at the West Hornsby Sewage Treatment Plant.

A major review of odour issues at the Malabar plant is underway. Action is being taken to manage the emission of odours, including the adjustment of Odourlock doses upstream of the plant and refurbishment of odour scrubbers.

Other performance areas

**Sewage treatment plant effluent quality**

**Plant upgrades and improved reliability deliver reduced loads to waterways**

This performance area evaluates Sydney Water’s overall impact on waterways by grouping together the total mass of sewage treatment plant discharges to inland and coastal receiving waters.

The important indicators for inland waterways are the total mass of phosphorus and nitrogen discharged. For coastal waters, the important indicators are the total mass of suspended solids and oil and grease discharged.

Since 1995, significant reductions in nutrients discharged from treatment plants have been achieved, particularly in the Hawkesbury-Nepean catchments, contributing to the protection of rivers.

These have occurred despite rapid population growth in western Sydney and are the direct result of asset investment strategies including the decommissioning of old and poorly performing plants, and the transfer of flows to newer facilities treating wastewater to a higher standard.

In terms of coastal discharges, 2005-06 saw the completion of Stage 1 of the Illawarra Wastewater Strategy, designed to deliver water quality improvements at a number of Illawarra beaches, particularly those near the Bellambi, Wollongong and Port Kembla plants.

The upgrade will end dry weather discharges from the Bellambi and Port Kembla treatment plants and, through water recycling, will reduce total ocean discharges and save about 7300 ML of fresh water each year.

The Wollongong plant was amplified and upgraded from secondary treatment to provide filtration, ultra violet (UV) disinfection and a new ocean outfall 1 km offshore, replacing the existing nearshore outfall.

These upgrades contributed to the downward trend in suspended solids experienced this year.

Even though wastewater discharge volumes decreased overall, oil and grease concentrations in both incoming and outgoing wastewater at Bondi, Malabar and North Head Sewage Treatment Plants increased during 2005-06. While performance is still within licence limits, Sydney Water is reviewing data to identify contributing factors.
Wastewater management

**Sewage treatment system discharges**

Variations in performance have resulted from weather conditions and population growth

More than 99 per cent of all wastewater collected is transported to a treatment plant for further treatment before being reused or discharged into the environment.

Wastewater volumes reflect seasonal weather patterns and population growth. Since 1998-99, volumes at ocean plants have declined steadily while volumes at inland plants have remained relatively static.

The general decline at ocean plants is a result of recent drought conditions. Inland plants have not experienced a similar decline as the reduction in flows caused by the drought have been offset by continued population growth in outer suburbs, particularly in the north-west sector.

Wastewater overflows can occur in dry weather because of blockages and breaks, and in wet weather due to the high volume of rainfall.

Reducing wet weather overflows with major capital works such as the Northside Storage Tunnel, the Upper Georges River Wastewater Strategy and SewerFix which manages dry weather and wet weather flows into sewers, assists harbour and estuary protection.

SewerFix prioritises catchments on the basis of performance issues, including repeat overflows to customer properties, environmental sensitivity or high growth. During 2005-06, work focused on reducing wet weather overflows in the Port Hacking and Georges River catchments.

As 2005-06 was a relatively dry year, the number of wet weather overflows remained low. Less than 1 per cent of untreated wastewater overflowed in either dry or wet weather conditions.

Trade waste agreements

Industry partnership and education improve trade waste management

Sydney Water’s Trade Waste Policy focuses on protecting the safety of its workers and contractors, sewerage assets and reducing the mass of pollutants discharged to sewers.

Sector-specific Trade Waste Management Plans for commercial and industrial customers outline the policy, which combines a range of implementation mechanisms including strict acceptance standards, financial incentives and monitoring.

Agreements with commercial and industrial customers work to ensure that the quality of wastewater discharges and biosolids production is not adversely affected.

Performance

For commercial customers whose agreements specify scheduled maintenance of pre-treatment systems, 93.4 per cent complied with requirements during 2005-06, an increase from 83.9 per cent in 2004-05.

This improvement is due to Sydney Water working more closely with customers to increase their awareness of their responsibilities. The 6.6 per cent of commercial customers who did not comply were reminded and ultimately carried out the required maintenance.

At June 2006, trade waste agreements were held with 798 industrial customers. On average, these customers had between five and six pollutants for which standards had to be met.

Controlled sewage overflows in dry and wet weather expressed as a percentage of total sewage effluent discharged

<table>
<thead>
<tr>
<th></th>
<th>2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry weather controlled sewage overflows</td>
<td>0.001%</td>
</tr>
<tr>
<td>Wet weather controlled sewage overflows</td>
<td>0.863%</td>
</tr>
</tbody>
</table>
Based on sampling by both customers and Sydney Water, compliance with these standards was 98 per cent in 2005-06, an improvement from 94 per cent in 2004-05.

Where a specific standard was not met, remedial actions to improve future compliance were negotiated with the customer and incorporated into a variation to their agreement with a specified timeframe for compliance.

Although the mass of metals has increased this year, the totals discharged were within agreed limits. The increases are due to more properties undergoing site remediation throughout Sydney and the change to sample protocols for metals in wastewater. The increases have not impacted the quality of effluent or biosolids.

**Stormwater**

**Revised capital program delivers planned outcomes**

Stormwater management programs include ensuring appropriate Stormwater Quality Improvement Devices are installed and maintained to collect silt and litter.

The mass of silt and litter removed each year depends on the number of devices operating as well as variable catchment conditions including factors such as rainfall, development activity and associated environmental impacts.

**Performance**

Forty-four stormwater devices prevented more than 1900 m³ of litter and 2970 tonnes of sediment from polluting waterways in 2005-06. A further 4148 tonnes of sediment was removed from stormwater channels.

For 2005-06, the amount of silt removed from these devices increased from previous years while the total mass of litter removed remained relatively constant.

A lower amount of silt was removed from stormwater channels due to changes in silt removal practices, which include desilting only in channels where sediment removal is needed to address capacity constraints and odour and aesthetic issues.

**Aquatic ecosystem impacts**

**Local recovery of ecosystem health is evident where sewage treatment plants have been decommissioned**

This indicator measures the effect treatment plants have on the environment. For inland plants, this involves measuring water quality and freshwater macro invertebrates both upstream and downstream of discharges.

Sydney Water’s cyclical three-year Ocean Sediment Program samples marine sediments to evaluate ecosystem impacts from deep ocean outfalls. Sediment samples are taken from 12 locations between Terrigal in the north and Shoalhaven Bight in the south, incorporating sites adjacent to the North Head, Bondi and Malabar deep ocean outfalls.

In the first year of the cycle – the assessment year – sampling involves analysing both physical and chemical elements such as metals, organic compounds and nutrients, and identifying and counting benthic macrofauna, i.e. macro invertebrates larger than 1 mm such as corals, shellfish and starfish.

In the second and third years – the surveillance years – total organic carbon and particle size distribution are measured. The program also involves monitoring treatment plant effluent quality and analysing data from the Ocean Reference Station and the Department of Environment and Conservation’s Beachwatch.

The monitoring programs assist in determining how treatment plant discharges affect waterway ecology and biodiversity.

**Performance**

**Inland waters**

Drier environmental conditions cause creek pools to dry out, compromising upstream health.

Improvement downstream of the Rouse Hill plant was observed for the first time since 2000-01. However, intermittent deterioration occurred at Quakers Hill and Hornsby Heights. Negative impacts on ecosystem health at Blackheath, St Marys and Glenbrook Sewage Treatment Plants have occurred since at least 1998-99.

Based on observations from other decommissioned sites, recovery of ecosystem health downstream of Glenbrook Sewage Treatment Plant should start next year, following its closure in August 2005.

**Coastal waters**

2005 was an assessment year – the first year of a new three-year cycle – and sediment samples were collected and analysed.

The detailed assessment report released in December 2005 indicated that no ecosystem impacts could be attributed to any of the deep ocean outfalls. This includes no apparent build up of material from the outfalls over time.

A new sewage treatment plant at Wallacia will further reduce nutrient loads to the Nepean River.

**Recreational water quality**

*Recreational water quality responds to plant upgrades and improved reliability*

Beach protection is contributed to through improving treatment at ocean plants, introducing disinfection processes, reducing wastewater overflows, operating deep ocean outfalls and consolidating treatment plants, as is currently occurring in the Illawarra.

This indicator reports on the percentage of Beachwatch and Harbourwatch sites complying with Beachwatch Swimming Water Quality Guidelines more than 90 per cent of the time.

**Performance**

With compliance heavily influenced by rainfall, recent drier weather conditions have impacted the number of sites complying with Beachwatch guidelines more than 90 per cent of the time.

Regardless, the percentage of sites complying more than 90 per cent of the time in the summer season has steadily improved since the upgrade of the Cronulla Sewage Treatment Plant in April 2001.

In 2005-06, the Beachwatch sites were 90 per cent compliant for summer and 94 per cent for winter.

This year saw the introduction of Harbourwatch sites to this indicator.

Because of poorer flushing in estuaries, Harbourwatch sites generally comply at lower rates than Beachwatch sites. As a result, overall compliance was reduced to 88 per cent in summer and 86 per cent in winter.

The decrease in winter in 2005-06 compared to 2004-05 can be attributed to the inclusion of the Harbourwatch sites failing on *enterococci* as these indicator organisms survive longer in the environment than faecal coliforms.

**OUTLOOK**

Treatment plants are continuing to be upgraded. Further upgrades are planned particularly at Shellharbour, which is currently being amplified to cater for population growth within the catchment area.

The Mulgoa, Wallacia and Silverdale sewerage scheme will enable the old Warragamba plant to be decommissioned and transfer flows to a new plant at Wallacia, resulting in a further reduction of nutrient loads to the Nepean River.
The amplification and upgrade of the West Camden Sewage Treatment Plant is planned for completion in 2006 and will have the ability to supply recycled water to nearby customers via a recycled water transfer pipeline. The upgrades will ensure these plants continue to meet the current effluent licence requirements set by the Department of Environment and Conservation.

As part of the Western Sydney Recycled Water Initiative under the 2006 Metropolitan Water Plan, Sydney Water is also working to review future options for further improvements to receiving water quality while providing for environmental flows.

Continuing with SewerFix to reduce wastewater overflows, a revised strategy is being introduced to reduce the frequency of tree root chokes causing dry weather overflows. The priority is to reduce or eliminate wastewater overflows into the local environment, especially sensitive waterways.

A prioritised program of works agreed with the Department of Environment and Conservation is being undertaken to reduce wet weather overflows in waterways across Sydney. The initial areas include Werrima, Georges River, Bondi, Cronulla and Sydney Harbour.

More information is available in the Annual Report 2006 Appendix on the CD and at www.sydneywater.com.au

Providing sewerage services beyond metropolitan areas

39 villages to be serviced

Challenge
Achieve environmental and social benefits by providing improved wastewater services to Jamberoo as part of the NSW Government’s Priority Sewerage Program, and maximise early connection.

Solution
By working closely with the local community as well as Kiama Council and local plumbers, Sydney Water fostered local support and translated it into a high rate of connection. Construction commenced in early 2004 and was completed in April 2005 at a cost of $18 million.

Before the scheme began, project staff walked every Jamberoo street, speaking with residents and noting issues needing to be addressed if a sewerage service was to be provided to all 350 properties. Home plans identifying work to be done were developed and agreed with residents.

Project staff participated in local community activities, taking each opportunity to explain the scheme’s benefits. By minimising impacts to customers and the environment during construction, high levels of support were maintained. Keeping customers informed at all stages, together with a positive relationship with Kiama Council and local plumbers also contributed to the scheme’s smooth delivery.

More than a year after completion, Jamberoo has the highest connection rate of any of Sydney Water’s village sewerage schemes with 85 per cent of households and businesses connected. This means that the scheme’s environmental and public health benefits, such as improved water quality in the Minnamurra River, have been realised early.

Benefits
- Improved wastewater services
- Reduced public health risks
- Improved water quality in local waterways.

“Good planning, innovative work practices and a supportive community have led to the Jamberoo Sewerage Scheme having the highest connection rate of any Sydney Water village sewerage scheme.”

Allan Henderson
Priority Sewerage Program Manager, Asset Solutions

The Priority Sewerage Program delivers environmental and social benefits through improved wastewater services. Better river water quality is a key environmental benefit.
Efficient water use
Performance summary

Helping develop a water efficient city
Annual recycled water use has increased from 6.2 billion litres in 1995 to 15.3 billion litres in 2005-06. Projects under the 2006 Metropolitan Water Plan are estimated to see up to 70 billion litres a year of wastewater being recycled by 2015. This target saves about 13 percent of estimated total water use in 2015.
Per capita daily water usage is now 341 L, down from 506 L in 1991, a drop due to the combined effects of pricing reforms, investment in water efficiency programs and drought related water restrictions.

Water efficiency is integral to a sustainable water supply.

While Sydney, Illawarra and the Blue Mountains enjoy periods of reasonably strong rainfall, they are also subject to climate fluctuations.

This cycle of drought and rain has helped shape Sydney’s water supply system. With a storage capacity of 2600 billion litres, this is equivalent to about four years’ supply with zero inflow.

This is more stored water per head of population than many other major cities across the world and reflects heavy reliance on storages for water supply and highlights the need to balance supply and demand.

This year Sydney Water supplied a little over 528,000 ML of water to almost 4.3 million customers.

Per capita daily water usage is now 341 L, down from 506 L in 1991, a drop due to the combined effects of pricing reforms, investment in water efficiency programs and drought related water restrictions. After removing the impact of water restrictions, per person water demand is estimated to have been 400 L a day in 2005-06.

There remains potential to reduce per capita demand through further efficiencies.

Water use targets
Sydney Water has implemented demand management activities since the early 1990s.

The first demand management strategy was developed in 1995 to meet targets set by the 1995 Operating Licence. A water efficiency target of 329 L per capita a day is to be met by 2011, a reduction of 35 per cent from the 1990-91 baseline.

More recent years have seen an increasingly proactive demand management strategy involving a mix of education, incentives and programs to increase recycling, increase water efficiency in the community and reduce leakage.

It is constantly reviewed and refined to ensure that an effective and cost efficient strategy is implemented.

Drinking water savings
In 2005-06, estimated drinking water savings of more than 40,000 ML were achieved.

These came from a number of areas and include:

- over 18,500 ML a year in reduced leakage from the water system
- more than 8000 ML a year through working cooperatively with businesses, industry and government to improve water efficiency and reduce water use
- 9000 ML a year through a range of programs targeting the residential sector
- over 3500 ML a year through water recycling.

Australia’s largest residential dual reticulation scheme developed by Sydney Water at Rouse Hill in western Sydney has been operating since 2001. Australia’s largest industry recycling scheme at BlueScope Steel in Wollongong, also developed by Sydney Water, began commissioning in September 2006.

Examples of other schemes include the Picton irrigation scheme and golf course irrigation schemes at Dunheved and Liverpool, operating since 2000 and 2004 respectively.

Efficient water use

Helping business and councils save precious drops

Saving billions of litres of water

Challenge
Work with business customers who collectively consume over 140 billion litres of water a year, to achieve sustainable water savings and develop a framework for continuous improvement.

Solution
Engage the Every Drop Counts (EDC) Business Program* to change the way business and government manage water use through developing innovative and sustainable solutions to reduce water consumption, improve operational water efficiency and reduce costs.

More than 330 customers have joined EDC since 2001, with 58 new customers joining in 2005-06.

They are now saving around 8 billion litres a year, having undertaken a formal water management diagnostic process and acting on recommendations such as water efficiency audits, reuse studies and process modelling tools.

The management diagnostic, known as One-2-Five® Water, identifies gaps in current water management systems, creates a stepwise improvement plan and sets a framework for constant improvement. Four businesses and a council have achieved a 4 star rating out of 5 stars.

Since joining in 2004, Rockdale Council has undertaken four diagnostics, assisting it to reduce its water use by over 20 per cent.

Investa Property Group, Australia’s largest listed owner of commercial property, joined in 2003 and has undertaken water efficiency audits of 15 buildings and reduced water use by 470 kL a day.

Benefits
• Reduced and more efficient use of water
• Identifying potential replacement of drinking water with alternative sources
• Building capacity to more sustainably manage water resources
• Reduced operational costs.

“EDC Business Program is an exemplary model... demonstrating the business case for water efficiency in diverse sectors of activity.”

Björn Rosén
Chair, Stockholm Industry Water Award Committee

* Awarded the 2006 International Stockholm Industry Water Award by the Stockholm International Water Institute in recognition of its outstanding efforts in working with business to conserve water

Metropolitan Water Plan
Under the plan, Sydney Water is implementing a range of additional activities to reduce water demand and increase the amount of water recycled to 70,000 ML by 2015.

Sydney Water assisted in the development of water efficiency regulations including the national Water Efficiency Labelling and Standards (WELS) scheme and the NSW Government’s BASIX scheme for improving water efficiency in new homes.

Sydney Water is also completing the blueprint for a desalination plant as a contingency should storage levels drop to around 30 per cent.

One-2-Five® Water rating

- Best practice and continuous improvement
- Water management integrated into business systems
- Water management systems established
- Basic water management practised
- Understanding regulatory water management and wastewater requirements (default rating).

Sydney Water’s One-2-Five® Water rating management diagnostic sets a framework for constant improvement and creates a stepwise plan for water management.
Key performance areas

**Demand management**

Demand management programs achieved significant water savings

**Performance**

During 2005-06, demand management programs increased water savings by more than 8000 ML a year, bringing total savings to 40,000 ML a year since 1999.

This was at a cost of more than $140 million, of which $35 million has been of a capital nature and has not yet fully contributed to savings.

By 30 June 2006, almost 340,000 homes had participated in the residential WaterFix Program, saving nearly 7300 ML a year. Through expanding demand management programs to include a washing machine rebate in March 2006, a further 142 ML a year has been saved.

The Active Leak Detection Program, which involves listening for leaks in the water system and then repairing them, has delivered additional savings of 1700 ML in 2005-06.

The Every Drop Counts (EDC) Business Program achieved valuable increases in savings of 2200 ML in 2005-06 with a number of businesses implementing large projects. It was awarded the Stockholm Industry Water Award by the Stockholm International Water Institute for its work with business, industry and government.

Further effective savings in the business sector are expected as projects funded under the NSW Government’s Water Savings Fund or identified through its Water Savings Action Plans are implemented. Sydney Water is a partner in both programs.

A recycled water scheme was commissioned at North Head Sewage Treatment Plant, saving approximately 641 ML during the year. In combination with all ongoing work at treatment plants, and the continued growth of the Rouse Hill recycled water scheme, this increased water savings from recycling to approximately 3500 ML during 2005-06.

It was expected that the BlueScope Steel recycling project would be commissioned during 2005-06, achieving a reduction in demand of 7300 ML a year. Commissioning was delayed and did not begin until September 2006. This delay was, in part, related to concerns by fire brigade employees about the use of recycled water. These concerns have now been allayed by a water-testing regime on the BlueScope Steel water.

**Potable water drawn**

Potable water drawn reflects demand under drought restrictions, population growth and climatic variations

**Performance**

Demand for water from the Sydney Catchment Authority has fluctuated at around 600,000 ML a year for the past 20 years.

Between 1 July 2005 and 30 June 2006, dam storage levels increased slightly from 40.2 per cent to 41.7 per cent, helped by deep water dam access and transfers from the Shoalhaven River.

Total Sydney Water demand was about 528,000 ML, 12 per cent less than the 10-year average of 600,000 ML, a saving of 72,000 ML.

Under the Metropolitan Water Plan, the amount of water available each year from Sydney’s supply system is estimated to be 575,000 ML. Demand in 2005-06 was 92 per cent of this.

Total customer demand was 341 L per capita a day. On a climate corrected basis which adjusts demand to account for weather conditions significantly above or below average and which influence customer use, demand was 335 L per capita a day.
The 2005-2010 Operating Licence requires demand for water to be reduced to 329 L per person a day by 2011, a 35 per cent reduction from the 1990-91 baseline.

Demand management programs have significantly helped to reduce total and per person water demand since 1991. Drought related water restrictions also assisted in achieving lower demand in 2005-06, with Level 3 water restrictions introduced in June 2005.

After removing the impact of water restrictions, per person water demand is estimated to have been 400 L a day in 2005-06. It is expected that with the current suite of demand management programs and new initiatives to be implemented over the next four years, the 2011 Operating Licence target will be met.

Other performance areas

Water recycled

Water efficiencies and recycling delivered off site and at sewage treatment plants

Not only does recycling reduce demand for drinking water, it also reduces wastewater discharges into the environment and helps to manage wastewater as an important community resource.

Performance

In 2005-06, 15,282 ML of wastewater was recycled, just over 3.5 per cent of total wastewater collected.

The recycled water treatment facility at North Head Sewage Treatment Plant and the new UV reactor at Rouse Hill Sewage Treatment Plant contributed a significant portion of this.

Sewage treatment plants used 12,000 ML of this recycled wastewater. Except for the Bondi, Malabar, Shellharbour, Blackheath and Mount Victoria plants, all other sewage treatment plants use at least 85 per cent recycled wastewater for their treatment processes.

Water usage has been optimised at both Blackheath and Mount Victoria which account for less than 1 per cent of drinking water used at sewage treatment plants. These are planned to be decommissioned in 2008 and projects to reduce drinking water use and increase recycled water use at the other three plants are being investigated.

A further 599 ML of wastewater was recycled by the Sydney Olympic Park Authority in its Water Reclamation Management Scheme sewer mining facility.

In 2005-06, an additional $6.86 million was spent on operating and capital costs for recycled water schemes. Historically, operating expenditure for recycling at sewage treatment plants has not been separated from general expenditure and so costs are understated.
Water leakage

Active detection and repair of the system significantly reduced water leakage

Water leakage is the difference between the volume of bulk water supplied by water filtration plants and the volume of water delivered to customers. This figure is adjusted to include estimates for legitimate uses such as fire fighting and system maintenance, and the illegal use of water.

Performance

Leakage decreased by more than 15 per cent during 2005-06 to 8.5 per cent of total water supplied. This compares favourably to the 10 per cent figure recorded in 2004-05.

According to the International Water Association’s Water Loss Task Force (2005) “Australia’s urban water utilities are world leaders in leakage management.”

Sydney Water’s leakage management is comparable to the best performing authorities both in Australia and the UK where extensive programs to manage leakage have been in place for more than a decade.

Rouse Hill Recycled Water Plant

Providing recycled water to north-western Sydney

Challenge

Use Sydney’s precious drinking water supply efficiently by providing recycled water to the rapidly growing population in Sydney’s north-west.

Solution

Provide Australia’s largest residential recycled water scheme in the Rouse Hill area with two water supplies – recycled water and drinking water. This is known as dual reticulation.

Started in 2001, the plant now supplies over 16,000 homes with 1.7 billion litres of recycled water a year for flushing toilets, watering gardens, washing cars and other outdoor uses.

The area includes parts of Acacia Gardens, Beaumont Hills, Castle Hill, Glenwood, Kellyville, Kellyville Ridge, Quakers Hill, Parklea, Stanhope Gardens and Rouse Hill.

The Rouse Hill Recycled Water Plant and recycled water pipelines are now ready for the next 4400 homes in Second Ponds Creek. Pipelines will be in place to serve another 5600 homes at Balmoral Road in 2007. Eventually there will be 35,000 houses in the area with recycled water.

Over the next 30 years, more than 160,000 new Sydney homes in western Sydney will use recycled water supplied by dual reticulation systems.

Benefits

• Provision of recycled water to service a rapidly growing area
• Reduced demand for Sydney’s drinking water.

“Australia’s largest residential recycled water scheme in Rouse Hill has on average reduced demand for drinking water by almost 30 per cent.”

Ron Thompson
Area Reuse Manager, Asset Management

System Operations Officer Peter Tonks inspects the 60 ML drinking water Parklea Reservoir. The 2 ML recycled water reservoir behind him is one of several supplying recycled water to residents in north-western Sydney.
Efficient water use

Leak reduction saves drinking water

50 ML saved daily = 23,700 ML a year since 1999

Challenge
To reduce leakage by a further 15 per cent to 105 ML a day by June 2009 across 21,000 km of water mains, and save drinking water to sustain Sydney’s water supply.

Leakage occurs for many reasons including weather-generated ground movement, the impact of road traffic over mains, excessive water pressure and accidental damage.

Solution
Invest around $100 million during 2005-06 and up to $300 million over the next three years on the Leakage Reduction Program, making it the largest leakage management program of any Australian water authority.

The program includes employing Sydney Water crews to respond to and repair reported leaks, using sophisticated listening devices to inspect 18,000 km of underground pipes a year for hidden leaks, managing excessively high water pressure that can cause leaks, improving water flow measurement, and implementing an extensive program of replacing poorly performing water mains.

Since the Leakage Reduction Program began in 1999, we have reduced leakage by 50 ML of water a day. For 2005-06, leakage is equivalent to 8.5 per cent of the total water supplied, which is lower than the 2004-05 leakage rate of 10 per cent.

Sydney Water’s leakage management is comparable to the best performing authorities both in Australia and the United Kingdom where extensive programs to manage leakage have been in place for more than a decade.

Benefits
• Saves drinking water
• Provides energy savings
• Trims operating costs
• Ensures reliability of the water supply network
• Supports community efforts to save water.

“Australia’s urban water utilities are world leaders in leakage management.”

International Water Association
Water Loss Task Force (2005)

Sophisticated listening devices assisted Sydney Water in inspecting 18,000 km of underground water supply pipes in 2005-06, helping to reduce water leakage by 50 ML a day in since 1999.
A second shift was introduced to enable maintenance teams to deliver improved response times to main breaks. As a result, performance is being lifted (see Customer service, page 38).

OUTLOOK

Ongoing implementation of current water efficiency, leakage reduction and recycling programs together with activities under the 2006 Metropolitan Water Plan will see an increasing amount of time spent working with government, the private sector and the community.

Key initiatives in 2006-07 will be:

• commissioning the BlueScope Steel project (September 2006)
• continued planning and implementation of the Western Sydney Recycled Water Initiative which involves the use of recycled water in homes, industry and agriculture, and replacement of dam releases
• awarding the contract to construct the Camellia Recycled Water Project which could provide up to 6 GL of recycled water each year to commercial and industrial customers in western Sydney
• other local recycling projects

In all there are five water recycling schemes in the delivery phase including expansion of the existing residential dual reticulation scheme at Rouse Hill.

Ultimately 36,000 new homes in Acacia Gardens, Beaumont Hills, Castle Hill, Glenwood, Kellyville, Kellyville Ridge, Quakers Hill, Parklea, Stanhope Gardens and Rouse Hill will receive 4.7 billion litres of recycled water each year.

Other industrial and irrigation schemes include Hoxton Park and Ropes Crossing, and an agricultural irrigation scheme at West Camden.

Together with BlueScope Steel, these schemes are expected to recycle approximately 11,560 ML a year by 2011, working to increase the amount of water recycled to up to 70,000 ML by 2015.

The demand management strategy will continue to be reviewed and adapted to meet the Operating Licence target of 329 L per person a day by 2011.

A range of potential additional demand management initiatives for both residential and business that could be implemented over the next five years will be investigated and piloted to ensure that the target is met.

More information is available in the Appendix on the CD and at www.sydneywater.com.au

Water leakage as percentage of potable water drawn 2001-2006

These schemes are expected to recycle approximately 11,560 ML a year by 2011, working to increase the amount of water recycled to up to 70,000 ML by 2015.
Business and financial management
Performance summary

Delivering an economically efficient, viable business
Sydney Water has to balance its responsibilities to protect public health and the environment while providing affordable services and a return to shareholders. The challenge is to do this while developing an efficient business.
As a State-owned corporation, Sydney Water is required to operate at least as efficiently as any comparable businesses, and maximise the net worth of the State’s investment.

Statement of Corporate Intent
A Statement of Corporate Intent (SCI) is agreed each year between the Board of Directors and shareholders, the NSW Treasurer and the Minister for Finance. It specifies key business directions and commercial performance targets and is based on the business’s revenue, operational and capital budgets.

Performance
Profit in 2005-06 did not meet the SCI target. For the 12-month period, adjusted pre-tax operating profit was $251 million, compared with the 2005-06 SCI target of $280 million.

Sydney Water’s adjusted pre-tax 2005-06 operating profit of $251 million compares favourably with the previous financial year’s adjusted result of $223 million.

The 2005-06 performance was affected by low developer contributions related to the housing development slowdown.

Revenue
Total income was $47 million below the original SCI budget.

Service and usage revenue was largely in line with expectations as rising water prices offset water sales reductions. However, capital contributions from developers were $58 million below the original forecast, reflecting developer delays and slower housing market conditions.

Increased income from other sources enabled a stronger performance.

Costs
Total expenditure during the year was $17 million favourable to the SCI budget.

Contributing to lower overall expenditure were savings in contractors, partly due to cost deferrals from delayed capital projects, and lower than expected depreciation and insurance provision write-backs.

When combined with some improved cost management and operating efficiencies, these factors enabled some additional costs to be offset in 2005-06. These included contributions to the NSW Government’s Water Savings Fund and demand management activities requiring increased expenditure.

However, increased asset renewal activity and some negative adjustments to fixed assets during 2005-06 – the result of moving to the Australian equivalents to International Financial Reporting Standards (AEIFRS) – counteracted this reduced expenditure to some extent.

For Sydney Water to continue to provide current levels of service to an ever-increasing population, it must deliver on its business plan initiatives and be financially sound, particularly through controlling operating costs.

<table>
<thead>
<tr>
<th>SCI 2005-06</th>
<th>Result 2005-06*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating profit (before tax)</td>
<td>$280m</td>
</tr>
<tr>
<td>Operating profit (after tax)</td>
<td>$193m</td>
</tr>
<tr>
<td>Earnings before interest and tax (before capital contributions)</td>
<td>$289m</td>
</tr>
<tr>
<td>Return on net operating assets</td>
<td>2.8%</td>
</tr>
<tr>
<td>Funds flow interest cover</td>
<td>2.4</td>
</tr>
<tr>
<td>New borrowings</td>
<td>$367m</td>
</tr>
<tr>
<td>Debt to equity</td>
<td>39%</td>
</tr>
<tr>
<td>Dividend payable</td>
<td>$193m</td>
</tr>
</tbody>
</table>

* Adjusted to normalise the superannuation expense

The 2005-06 result was abnormally impacted by a large, negative superannuation expense of -$191 million. This resulted from much higher than expected superannuation fund earnings together with a large reduction in the gross superannuation liability as calculated by an external actuary Sydney Water is required to reflect movements in its defined benefit superannuation position, notwithstanding that such movements are largely non-cash and beyond its control.

<table>
<thead>
<tr>
<th>Items</th>
<th>Budget 2005-06 $M</th>
<th>Result 2005-06* $M</th>
<th>Budget 2006-07 $M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service and usage revenue</td>
<td>1354</td>
<td>1349</td>
<td>1467</td>
</tr>
<tr>
<td>Capital contributions</td>
<td>167</td>
<td>109</td>
<td>105</td>
</tr>
<tr>
<td>Other income</td>
<td>68</td>
<td>83</td>
<td>70</td>
</tr>
<tr>
<td>Total income</td>
<td>1588</td>
<td>1541</td>
<td>1642</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>947</td>
<td>948</td>
<td>1051</td>
</tr>
<tr>
<td>Depreciation</td>
<td>183</td>
<td>170</td>
<td>180</td>
</tr>
<tr>
<td>Borrowing costs</td>
<td>177</td>
<td>172</td>
<td>188</td>
</tr>
<tr>
<td>Total expenses</td>
<td>1307</td>
<td>1290</td>
<td>1419</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>280</td>
<td>251</td>
<td>223</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>88</td>
<td>133</td>
<td>75</td>
</tr>
<tr>
<td>Profit after tax</td>
<td>193</td>
<td>118</td>
<td>148</td>
</tr>
<tr>
<td>Capital investment program</td>
<td>592</td>
<td>520</td>
<td>609</td>
</tr>
</tbody>
</table>

* Adjusted to normalise the superannuation expense
**Capital expenditure**

Capital expenditure in 2005-06 was $72 million below the original SCI budget.

Capital efficiency savings over a range of projects contributed $17 million of the $72 million. A further $32 million resulted from changes to the desalination plant in line with the 2006 Metropolitan Water Plan, and $23 million was the result of changes in scope, and delays in the capital expenditure program.

Total capital expenditure in 2005-06 was $500 million, excluding borrowing costs of $20 million. The allocation of expenditure was:

- $248 million for asset renewal and reliability works
- $103 million on the extension of sewerage services and desalination design and land acquisition
- $84 million on infrastructure to service population growth
- $46 million on projects to meet regulated service delivery and system performance standards
- $19 million on business improvements including the property rationalisation and information management programs.

**2006-07 budget**

Revenue is expected to increase in 2006-07 driven by IPART-determined price increases and property growth. While there is a risk that profitability could be restrained through increased service delivery costs and government commitments, expenditure will be tightly managed.

**Pricing**

As a government-owned monopoly service provider, Sydney Water’s prices are regulated by IPART. Price determinations covering the costs of doing business while generating an adequate return on assets are integral to long-term financial viability.

Prices for water, wastewater, stormwater, and trade waste and ancillary services were determined by IPART in October 2005 and are expected to apply until 30 June 2009. Real prices will increase over the determination period.

IPART noted the increases are necessary to:

- send signals to water users about the cost of water and the need to conserve
- cover the costs of maintaining and renewing the infrastructure required to provide these services
- cover the operating costs resulting from the increasing complexity of supplying water and wastewater services.

The price increases should assist in achieving a more commercial rate of return on assets by 30 June 2009.

A two-tiered water usage tariff was also introduced in 2005-06, complemented by a reduced fixed water service charge. The new pricing structure aims to better reflect the value of water and to encourage households and businesses to use water more wisely.

A significant capital works program designed to improve water, wastewater and stormwater services is to be delivered as a result of the new pricing regime.

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### Major capital works projects completed 2005-06

<table>
<thead>
<tr>
<th>Project</th>
<th>$M</th>
<th>Project benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illawarra Wastewater Strategy</td>
<td>211</td>
<td>Completed major components of the Illawarra Wastewater Strategy comprising dry weather transfer of flows, conversion of sewage treatment plants to storm treatment plants and upgrading treatment processes at Wollongong Sewage Treatment Plant including a 20 ML per day recycled water plant and 1 km ocean outfall. The project caters for growth and improved beach water quality in the Illawarra.</td>
</tr>
<tr>
<td>Liverpool STP Upgrade Stage 4a</td>
<td>116</td>
<td>Completed upgrade of Liverpool Sewage Treatment Plant to accommodate future growth and reduce environmental impacts.</td>
</tr>
<tr>
<td>Shellharbour Sewage Treatment Plant Amplification</td>
<td>33</td>
<td>Substantially completed construction of the amplification of Shellharbour Sewage Treatment Plant providing for growth and minimising the impacts of development on marine ecosystems of the southern Illawarra. This project also brings benefits of improving local beach water quality and enhancing public amenity by reducing odour.</td>
</tr>
<tr>
<td>Blue Mountains SewerFix Stages 1 and 2</td>
<td>26</td>
<td>Completed Blue Mountains SewerFix Stages 1 and 2 comprising rehabilitation of small sewers to address repeat overflows, overflows to waterways, and works to upgrade and amplify sewers.</td>
</tr>
<tr>
<td>Stormwater Environment Improvement Program</td>
<td>18</td>
<td>Substantially completed a program of improving stormwater quality across a further 18 of 20 targeted hotspots in stormwater operating areas and preventing sediment pollution. Remaining targeted hotspots scheduled for completion in August 2006.</td>
</tr>
</tbody>
</table>
Further information on the IPART price determination is available in the Appendix on the CD and at www.sydneywater.com.au

Capital expenditure forecast
An estimated $3.1 billion will be spent on large-scale capital works over the next four years. In 2006-07, the capital works program targets three areas:

Water and recycled water infrastructure
• $183 million for water main renewals, recycled water plant amplifications, and improvements and completion of the desalination plant blueprint design.

Wastewater and stormwater infrastructure
• $331 million for critical sewer main renewals, sewage pumping station renewals, sewage treatment plant renewals and amplifications; the Wet Weather Overflow Abatement Program; the South Western Sydney Sewerage Scheme; and the Priority Sewerage Program.

Corporate capital program
• $95 million for projects including information technology renewals.

Technology reduces water mains failures and keeps costs down

Saving costs and communities

Challenge
To cost-effectively prevent failures in Sydney’s 3000 km of critical water mains, minimise public inconvenience and ensure the ongoing delivery of clean, safe drinking water.

Many critical water mains are made of cast iron lined with cement mortar. They may be up to 100 years old and buried beneath roads, footpaths and other critical infrastructure. Local soil environments can corrode cast iron pipes and, combined with pressure variations from pumping, cause mains failures.

Potential replacement costs are in the order of $4000/m and, together with disruptive excavations impacting the community, the assessment process to better target renewals is essential.

Solution
Use state of the art technology to determine pipe condition and predict pipe corrosion to pre-empt costly and inconvenient mains failures, and to avoid total asset replacement by selective renewal or renovation in high-risk sections of critical mains.

Testing surrounding soils using the Linear Polarisation Resistivity (LPR) technique and scanning pipes with equipment such as Earth Tech’s Mainscan™, which utilises advanced technology, assists in assessing a main’s condition and enables hundreds of kilometres of buried mains to be quickly assessed for likelihood of failure.

Benefits
• Improved condition assessment of critical water mains for targeted renewals and prevention of main failures
• Quick, accurate forecasts of pipe failure risk are achieved non-destructively
• Significantly less impact on local communities
• Significant cost savings.

“Using these technologies to assess the 10 km Bankstown-Ashfield main isolated 2 km of main requiring replacement at a cost of $2 million, saving around $18 million in capital costs.”

Greg Kane
Manager, Strategic Asset Management

Replacing critical water mains can cost up to $4000 a metre. Combining advanced technologies brings financial and social benefits as the condition of water mains – some of which are 1200 mm in diameter – can be more accurately assessed.
### Major capital works in progress as at 30 June 2006

<table>
<thead>
<tr>
<th>Project</th>
<th>2005-06 expenditure $M</th>
<th>Forecast expenditure $M</th>
<th>Forecast completion date</th>
<th>Project benefits/comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Distribution and Treatment Systems</td>
<td>79</td>
<td>553</td>
<td>2010</td>
<td>Commenced a five-year program to improve water distribution and treatment systems and reduce system leakage across Sydney. The program includes renewal works on water treatment plants, water storage reservoirs and water pumping stations.</td>
</tr>
<tr>
<td>Desalination Plant (Blueprint Design and Pilot Plant)</td>
<td>57</td>
<td>102</td>
<td>End 2006</td>
<td>Completed the feasibility study of a desalination plant and acquisition of land at Kurnell. Commenced the blueprint design to ensure a plant could be constructed relatively quickly and efficiently if dam levels were to fall to critical levels. This project is part of a mix of strategies to secure Sydney's water supply for the future.</td>
</tr>
<tr>
<td>Malabar System Risk Reduction Program Stages 1, 2 and 3 (part of Critical Sewer Main Renewals Program)</td>
<td>48</td>
<td>143</td>
<td>Late 2006</td>
<td>Program of works to slow down corrosion of concrete sewers, working with industry to reduce the impacts of discharges to the sewer, rehabilitating sections damaged by corrosion and siltation control works. The project will enhance public amenity by reducing odour.</td>
</tr>
<tr>
<td>Mulgoa, Wallacia and Silverdale Sewerage Scheme (part of Priority Sewerage Program (PSP) Stage 1)</td>
<td>40</td>
<td>64</td>
<td>Sept 2006</td>
<td>Substantially progressed construction on a reticulated sewerage system to be provided to 1200 existing and future properties in the villages of Mulgoa, Wallacia and Silverdale. The scheme will improve water quality in the Hawkesbury-Nepean River system and reduce septic system related public health risks.</td>
</tr>
<tr>
<td>West Camden Sewage Treatment Plant Amplification and Upgrade</td>
<td>22</td>
<td>48</td>
<td>Mid 2007</td>
<td>Progressed construction on the amplification and upgrade of West Camden Sewage Treatment Plant. By doubling plant capacity, this project provides for growth and recycled water for agricultural reuse in the local area. The upgrade will also improve effluent quality discharging to the Hawkesbury-Nepean River.</td>
</tr>
<tr>
<td>South Western Sydney Sewerage Scheme (SWSS)</td>
<td>19</td>
<td>180</td>
<td>Late 2008</td>
<td>Formerly part of the Georges River Program, the scheme is a program designed to provide wastewater services to rapidly growing areas of south-west Sydney. The project comprises the design and construction of a 24 km pipeline between Liverpool and Ashfield and other related sewer works to accommodate population growth in the Hoxton Park release areas. Construction of the Liverpool Sewage Treatment Plant Stage 5a Amplification to provide additional treatment capacity for wastewater generated by population growth and transfer of assets at Holsworthy from the Commonwealth to Sydney Water.</td>
</tr>
<tr>
<td>Bondi Sewage Treatment Plant Reliability, Improvement and Modernisation Project (RIAMP)</td>
<td>17</td>
<td>92</td>
<td>Dec 2006</td>
<td>Substantially progressed construction of the Bondi Sewage Treatment Plant RIAMP to renew and modernise the plant to improve operability and reduce risk of process failure that would adversely impact beach quality.</td>
</tr>
<tr>
<td>North Head Sewage Treatment Plant Performance and Reliability/Reinews/PARR</td>
<td>11</td>
<td>139</td>
<td>Late 2009</td>
<td>The PARR improvements at North Head Sewage Treatment Plant will cater for projected growth in the catchment to 2023 and provide reliable sewage treatment services to the community. A 2 ML/d recycled water project was commissioned in August 2005 and construction of the new biosolids management facility has commenced and is scheduled to be completed mid 2007.</td>
</tr>
<tr>
<td>Brooklyn/Dangar Island PSP Scheme (part of PSP Stage 1)</td>
<td>5</td>
<td>55</td>
<td>Late 2007</td>
<td>Commenced the Brooklyn/Dangar Island PSP Scheme delivered as part of a regional scheme which will provide improved sewerage services to about 500 properties in Brooklyn and Dangar Island and a new sewage treatment plant at Brooklyn that will provide tertiary treatment of wastewater and high-level disinfection. Benefits include improving water quality in the Hawkesbury River system.</td>
</tr>
<tr>
<td>Upper Blue Mountains Sewerage Scheme (part of PSP Stage 2)</td>
<td>4</td>
<td>124</td>
<td>Mid 2009</td>
<td>Stages 1 and 2 will provide reticulated sewerage services to more than 3000 properties to meet the 2005-2010 Operating Licence. Under Stage 1 of the program (Lower Blue Mountains), approximately 1600 properties between Hazelbrook and Katoomba were provided with a new sewerage system. Stage 2 will provide services from Medlow Bath to Mount Victoria. The project provides environmental protection in the World Heritage areas of the Blue Mountains from septic effluent runoff and improves public health.</td>
</tr>
<tr>
<td>Rouse Hill Sewage Treatment Plant and Recycled Water Plant Amplification</td>
<td>2</td>
<td>77</td>
<td>2009-10</td>
<td>Commenced the upgrade of the Rouse Hill Sewage Treatment Plant and Recycled Water Plant amplification to accommodate urban growth, reduce environmental impacts and provide recycled water to the region. The upgrade will also improve effluent quality discharging to the Hawkesbury-Nepean River.</td>
</tr>
</tbody>
</table>
**Investments**

At 30 June 2006, Sydney Water’s financial investments were $17.5 million.

To maximise investment returns while maintaining appropriate risk controls, and consistent with NSW Treasury guidelines, the portfolio’s investment performance is benchmarked against the NSW Treasury Corporation (TCorp) hourglass cash facility.

In 2005-06, investment performance exceeded the hourglass benchmark of 5.69 per cent by 0.57 per cent.

Continued use of TCorp’s short-term Come & Go borrowing facility helped all 2005-06 cash flow obligations to be met with a reduced volume of additional fixed borrowings.

**Debt management**

Financial liabilities had a market value of approximately $2.9 billion at 30 June 2006.

Mostly to fund capital investments, the debt portfolio is managed by Sydney Water’s Treasury Management Unit with the majority of transactions processed through TCorp. The portfolio is managed to minimise risk against financial market volatility, to protect equity, and to minimise the cost of liabilities.

During 2005-06, $253.5 million in new loans was raised with an initial average interest rate of 5.65 per cent.

In May 2006, $643.7 million of fixed term debt matured and was initially renegotiated to short-term floating debt. The percentage of fixed rate debt was 72 per cent at 30 June 2006 with the remaining 28 per cent at short-term floating rates.

Debt portfolio performance for 2005-06 exceeded the internal benchmark by 0.08 per cent, with the debt benchmark portfolio constructed and maintained in accordance with NSW Treasury guidelines.

**Property sales**

During 2005-06, 13 surplus properties were sold at a total value of $10.85 million net of GST, with the proceeds going to general revenue. All properties were disposed of by public auction or tender, and none had a value of more than $5 million.

**Research and development**

Sydney Water’s research and development program spans a range of projects from improving the delivery of water, wastewater and reuse/recycled water services to developing an improved understanding of water consumption.

It also seeks collaboration with others to assess and implement international best practice in providing drinking water and wastewater services, the environment and public health.

Projects are managed collaboratively with other research organisations. As a member of several research groups, Sydney Water’s aim is to deliver a research and development portfolio that is invested across a spectrum of projects covering new services and technologies, and improved operations and processes.

Details of all research and development are available in the Appendix on the CD and at [www.sydneywater.com.au](http://www.sydneywater.com.au).

### Debt portfolio 2005-06

<table>
<thead>
<tr>
<th></th>
<th>Corporation</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market valuation 30 June 2006</td>
<td>$2900m</td>
<td>$2871m</td>
</tr>
<tr>
<td>Generalised cost of funds</td>
<td>3.70%</td>
<td>3.78%</td>
</tr>
</tbody>
</table>

### Operating costs per property 2001-02 to 2005-06

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2001-02 $*</th>
<th>2002-03 $*</th>
<th>2003-04 $*</th>
<th>2004-05 $*</th>
<th>2005-06 $*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total operating costs per property (excl. depreciation financing charges and superannuation)</td>
<td>590</td>
<td>587</td>
<td>503</td>
<td>513</td>
<td>505</td>
</tr>
<tr>
<td>Underlying costs per property (total excl. Build, Own, Operate, water purchases and filtration, employee and insurance provisions and asset impairments and losses)</td>
<td>314</td>
<td>322</td>
<td>303</td>
<td>304</td>
<td>295</td>
</tr>
</tbody>
</table>

* Constant $ 2005-06
Key performance area

Operating costs per customer property

Operating costs per customer property continued to improve

Performance

Dropping by almost 3 per cent from $304 to $295 in 2005-06, progress continued in improving controllable operating costs per property.

This measure excludes the impact of short-term or one-off factors such as superannuation, and costs outside the core operations of the business such as depreciation and financing charges.

Further significant controllable cost reductions will be challenging given the business’s short-term fixed cost structure, and increasing regulatory and drought management requirements.

Other performance areas

Funds flow from operations

2005-06 improvement largely reflects first year of new price path

Funds flow from operations improved markedly in 2005-06, mostly driven by higher service and usage revenue. This was the first year of the current price determination which delivers real price increases that cover the costs of doing business and assist in achieving an appropriate commercial rate of return on assets.

Financial contribution to the community

Increased core profitability lifts return on community investment

Sydney Water’s financial contribution to the community increased in 2005-06. Contributions were made to the NSW Government’s Water Savings Fund to foster and encourage water efficiency initiatives.

Financial return on assets

Return on investment in assets meets target

The return on the Regulated Asset Base (RAB) estimated by IPART is in line with expectations. The table also includes a return on assets valued at depreciated replacement cost, the Modern Equipment Engineering Replacement Asset values (MEERA). This return is very low at 2.1 per cent.

This reflects the fact that many of Sydney Water’s older assets are not included in the RAB used by IPART.

The current RAB value of Sydney Water’s assets is $8.5 billion, while the MEERA value is $22.8 billion.

Funds flow from operations 2001-02 to 2005-06

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2004-05 $M</th>
<th>2005-06 $M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds flow from operations</td>
<td>245</td>
<td>315</td>
</tr>
</tbody>
</table>

Financial contribution to the community 2001-02 to 2005-06

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax payable</td>
<td>103</td>
<td>67</td>
<td>58</td>
<td>41</td>
<td>55</td>
</tr>
<tr>
<td>Dividend payable</td>
<td>110</td>
<td>115</td>
<td>115</td>
<td>120</td>
<td>193</td>
</tr>
<tr>
<td>Net contributions to Water Savings Fund</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Financial contribution to the community</td>
<td>213</td>
<td>182</td>
<td>173</td>
<td>161</td>
<td>263</td>
</tr>
</tbody>
</table>

Financial return on assets

<table>
<thead>
<tr>
<th>Indicator's</th>
<th>2005-06 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on RAB*</td>
<td>5.7</td>
</tr>
<tr>
<td>Return on depreciated replacement cost asset base (MEERA**)</td>
<td>2.1</td>
</tr>
</tbody>
</table>

* The RAB rate of return is calculated using earnings before interest, tax, depreciation and amortisation (EBITDA) on the RAB, which is a notional asset valuation assigned by IPART for determining the return on assets. Currently valued at $8.5 billion, the RAB is rolled forward each year for efficient capital expenditure after deducting for regulatory depreciation and asset disposals, and adjusted for superannuation impacts

** The MEERA rate of return is also calculated using earnings before interest, tax, depreciation and amortisation (EBITDA) but on the MEERA value. This is the depreciated replacement cost of Sydney Water’s property, plant and equipment (PP&E) in today’s dollars. The current MEERA value of Sydney Water’s assets is $22.8 billion. Further information on MEERA is found in Note 10 on page 38 of Sydney Water’s Financial Statements found on the CD attached to the inside back cover of this report.
Maintenance and renewal of assets

Close to 100 per cent achieved

Performance

Maintenance

Sydney Water spent 98 per cent of its planned maintenance expenditure on water and sewer mains during the year.

In 2005-06, key programs such as the Leakage Reduction Program and CCTV Avoid Fail Inspection Program for sewer mains were successfully completed.

Renewals

In all, 137 km of water mains were renewed at a cost of $56.7 million compared to the forecast renewal of 97 km at a cost of $57.5 million.

With the planned renewal of 94 km of sewer mains completed at a cost of $26.1 million, a saving of $2.3 million from planned expenditure of $28.4 million was achieved.

OUTLOOK

Looking forward, a continuing focus will be on further operating cost reductions. Substantial cost reductions of this kind are challenging in view of increasing regulator requirements and Sydney Water’s fixed cost structure, which is difficult to adjust in the short term.

The relatively fixed nature of Sydney Water’s cost structure means that initiatives to reduce costs have a significant lead-time before savings flow through. However, efficiencies were identified in IPART’s 2005 determination and will continue to be driven and monitored.

Operating cost reductions need to be weighed against an increasing maintenance program driven by more rigorous maintenance planning, enhanced demand management and drought measures.

Sydney Water has to balance its responsibilities to protect public health and the environment while also providing affordable services and a return to shareholders. The challenge is to do this while developing an efficient business.

Greater operating efficiencies and smarter procurement will be sought through improvements in systems and processes, and a more thorough understanding of the true costs of the business.

Full financial statements are available on the CD and at www.sydneywater.com.au

### Maintenance and renewal of assets 2005-06

<table>
<thead>
<tr>
<th>Planned maintenance</th>
<th>Planned $M</th>
<th>Actual $M</th>
<th>% achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water mains</td>
<td>8.3</td>
<td>8.0</td>
<td>96</td>
</tr>
<tr>
<td>Sewer mains</td>
<td>10.4</td>
<td>10.3</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2005–06 renewals</th>
<th>Planned km</th>
<th>Actual km</th>
<th>% achieved</th>
<th>Planned $M</th>
<th>Actual $M</th>
<th>% achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water mains</td>
<td>97</td>
<td>137</td>
<td>141</td>
<td>57.5</td>
<td>56.7</td>
<td>99</td>
</tr>
<tr>
<td>Sewer mains</td>
<td>94</td>
<td>94</td>
<td>100</td>
<td>28.4</td>
<td>26.1</td>
<td>92</td>
</tr>
</tbody>
</table>
Customer service
Performance summary

Servicing customers effectively
Sydney Water’s principal service goal is to provide excellent quality, reliable water and wastewater services to almost 4.3 million people. Another important goal is providing customers with easy access to advice or services.
Sydney Water’s principal service goal is to provide excellent quality, reliable water and wastewater services to almost 4.3 million people. Other important goals are the timely management of billing 1.7 million paying residential and commercial customers, and providing them with easy access to any additional advice or services they may need.

The Operating Licence 2005-2010 sets out a range of system and service performance targets and indicators to be met. The Customer Contract sets the minimum standards for how these services are delivered. It describes the terms under which drinking water, wastewater, recycled water and stormwater services are provided as well as customer rights and obligations, including customer rights in the event of disputes.

Meeting customer service expectations

Most customers have little need to interact with Sydney Water beyond having safe and reliable water and wastewater services. When they do need to contact Sydney Water, a number of options are provided to meet the increasing customer expectations for convenience and the ability to self serve.

During 2005-06, the in-house Customer Contact Centre staff answered almost 890,000 telephone calls. Wherever possible, customer enquiries are dealt with at the point of contact. During the year, more than 95 per cent of general enquiries were managed by the person initially contacted.

A further 380,000 enquiries and transactions were completed through the website and other automated options, including requesting account statements and advising address changes.

User sessions on Sydney Water’s website have grown 14 per cent over the past year and increasingly feature in customer research as a preferred contact method for many customers for certain transaction types such as bill payment.

Understanding customers

A variety of customer research is undertaken throughout the year to help understand and improve customers’ service experience.

Summary of programs achieving additional water savings 2005-06

<table>
<thead>
<tr>
<th>Program</th>
<th>Additional water savings achieved 2005-06 ML/year</th>
<th>Total program water savings to datea ML</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WaterFix</td>
<td>973</td>
<td>6643</td>
</tr>
<tr>
<td>WaterFix (Department of Housing)</td>
<td>460</td>
<td>627</td>
</tr>
<tr>
<td>“Do-it-Yourself” water saving kits</td>
<td>210</td>
<td>250</td>
</tr>
<tr>
<td>2006 Washing Machine Rebate</td>
<td>142</td>
<td>142</td>
</tr>
<tr>
<td>Rainwater Tank Rebate</td>
<td>482</td>
<td>986</td>
</tr>
<tr>
<td>Landscape Assessment</td>
<td>50</td>
<td>234</td>
</tr>
<tr>
<td>Business sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business programsb</td>
<td>2186</td>
<td>7953</td>
</tr>
<tr>
<td>Pilot Water Savings Fund</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>Schools programs</td>
<td>27</td>
<td>48</td>
</tr>
<tr>
<td>Leak detection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Leak Detection</td>
<td>1716</td>
<td>18,506</td>
</tr>
<tr>
<td>Pressure Management</td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>Recycling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sewage treatment plant reuse and minor recyclingc</td>
<td>526</td>
<td>1197</td>
</tr>
<tr>
<td>North Head Sewage Treatment Plant</td>
<td>641</td>
<td>641</td>
</tr>
<tr>
<td>Rouse Hill – Stage 1d</td>
<td>328</td>
<td>1698</td>
</tr>
<tr>
<td>Sydney Olympic Park Authority (SOPA; non-Sydney Water scheme)e</td>
<td>11</td>
<td>599</td>
</tr>
</tbody>
</table>

a Only water savings achieved since 1999 are included
b This includes savings from the Every Drop Counts Business Program, Water Savings Fund and Water Savings Action Plans
c Based on the 1998-99 potable water use at sewage treatment plants, as baseline (2555 ML/year)
d Costs for Rouse Hill Stage 1 not captured before 2005-06
e WRAMS facility at Homebush is operated by SOPA
As well, Corporate Customer Council members are encouraged to provide comments and suggestions in how services are delivered.

**Helping customers save water**

Over many years, Sydney Water has expanded its work with different customer segments to help them conserve water and save money.

By the end of 2005-06, the Every Drop Counts (EDC) Business Program’s 335 participants had reduced water consumption by 8000 ML a year.

A number of residential customer water saving programs have also been implemented. These include the installation by Sydney Water of almost 350,000 water efficient devices in homes, and the distribution of more than 37,000 “Do-It-Yourself” water efficiency kits.

There have also been rebates offered to encourage the use of water efficient appliances in and around the home, including washing machines and rainwater tanks.

**Supporting customers**

Through its Trade Waste and Backflow Prevention Programs, Sydney Water works with industrial and commercial customers to ensure they operate in ways that do not compromise Sydney Water’s systems, while having minimal impact on customers’ operating efficiency.

Through a network of trained and approved Water Services Coordinators, Sydney Water works with the building industry on the development of new infrastructure and new connections, adding around 30,000 new properties to the network each year.

Sydney Water also works with the plumbing industry to improve the quality and safety of plumbing, particularly in the growing area of residential recycled water.

In conjunction with NSW TAFE, a new recycled water systems installation training course for plumbers was developed during 2005-06. Sydney Water is currently working with the Office of Fair Trading to have the course accredited.

**Communications**

Sydney Water provides information and advice to customers through a range of channels including key reports and a wide range of publications. These are all published on the Sydney Water website.

The website’s Ask Sydney Water facility provides answers to commonly asked questions covering many facets of the business. Customers can obtain the information they require at any time and can also create their own profile of responses to receive automatic updates should responses to specific questions change over time.

Providing specialist information for specific target audiences has been a focus in 2005-06. Simplified policies and procedures for customers extending or building new properties were developed to assist with connecting to, and building over or alongside, Sydney Water’s pipelines and other assets.

Sydney Water’s Ethnic Affairs Priorities Statement 2005-06 (see CD) outlines all work and plans in relation to communicating with customers from diverse cultural and linguistic backgrounds.

**Embracing social responsibility**

Sydney Water, as a provider of essential services, has other responsibilities. These include the protection of personal information, support for the local communities in which it works, and assisting those with special needs to have affordable access to Sydney Water’s products and services.

**Privacy**

Sydney Water treats customers’ personal information in accordance with the provisions of the NSW Privacy and Personal Information Protection Act 1998. This commitment is incorporated into the Customer Contract, Section 13.3, and staff are provided with guidance and material outlining Sydney Water’s obligations.

Sydney Water dealt with 18 external and 18 internal requests for information with one breach. Following review, Sydney Water implemented a number of improvements and notified the NSW Privacy Commissioner’s Office. The case is now closed with both the complainant and the Commissioner receiving copies of the final report.

**Social programs**

Each year, Sydney Water carries out a number of non-commercial activities at the direction of the NSW Government, for which it receives reimbursement from the State Budget.

In 2005-06 these activities included:

- $73.9 million for pensioner rebates
- $8.8 million for property exemptions
- $1.9 million for priority sewerage
- $0.8 million for Blue Mountains septic pumpout subsidy
- $0.7 million for price impact offsets.

The pensioner rebate on water, sewerage and drainage service charges helps to ensure that all residential customers have adequate access to these vital services.

Exempted properties predominantly comprise land owned and used by organisations that provide non-profit community services.

Under the Priority Sewerage Program, Sydney Water is extending sewerage services to unsewered areas in line with Government priorities. In 2005-06, reimbursement was provided for the Mulgoa, Wallacia and Silverdale sewerage scheme.

As in previous years, Sydney Water subsidised septic pumpout services in the Blue Mountains World Heritage Area. Demand for this service is expected to fall as properties gain access to new reticulated sewerage systems.

Price impact offsets comprise a number of Government-backed initiatives to ease the impact of increased water prices on qualifying large families and vulnerable customers.

In 2005-06 these included no interest loans for buying water efficient appliances, free residential water saving devices, rebates for low income, large families with water consumption in excess of 100 kL a quarter, and the Payment Assistance Scheme.

Details of Sydney Water’s social program funding for the past five years are available in the Appendix on the CD and at [www.sydneywater.com.au](http://www.sydneywater.com.au)
Supporting the community
Sydney Water works closely with the local communities impacted by its major capital works and maintenance programs.

This includes regular and timely communication and working with the community to address local issues. In 2005-06 this involved community meetings, working with councils and participation in local community events.

Customer surveys are often used at the end of major projects to assess the effectiveness and impact of projects to ensure that successful practices are used in the future.

In addition, Sydney Water’s Community Investment Program supports the communities in which it operates. It incorporates corporate and community partnerships, in-kind support and philanthropic commitments with support ranging from short-term commitments to long-term partnerships, such as the 16-year partnership with Taronga Zoo.

Dry weather sewer overflows targeted with new high-powered jetters

Getting tough with sewer overflows

Challenge
To respond faster to sewer system faults, including chokes or blockages in sewer mains, which lead to overflows of sewage – in turn achieving service quality and system performance targets in the Operating Licence.

Solution
Purchase three new Scania P380 jetter trucks that are fitted with state-of-the-art safety features including weight sensors to prevent them from being driven while overloaded.

These larger combination units are capable of both water jetting and vacuuming sewer pipes. They can also be used to suck manholes and pumping stations dry, enabling maintenance crews to minimise the impact of or potential for sewage escaping from sewers.

Helping us better meet regulatory requirements, the jetters’ improved safety features include LED flashing lights for increased daytime visibility, and gas lights for night works benefiting not only maintenance crews but also the community.

Benefits
• Improved response to sewer system faults and emergencies
• Meet Operating Licence requirements for response times
• Improved safety conditions for maintenance workers and the community
• Increased staff morale and higher job success.

“The new jetters will make quite a difference. They will enhance our capability in the more difficult, specialised jobs and they have a greater range of safety features.”

Richard Petterson
Manager, Civil Maintenance

Sydney Water’s Nick Kociski puts a new jetter to work at South Hurstville. The three new Scania P380 jetter trucks will speed up response times to sewer system faults and emergencies, and provide greater safety conditions.
Sydney Water’s Streamwatch Program operates a dual function of developing closer ties with the community, including schools, as well as providing opportunities for the community to actively engage in monitoring water quality, extending the education experience.

Key performance areas
Service quality and system performance

Most requirements met except for delays in response times to water main breaks and leaks

The Operating Licence 2005-2010 sets clear performance targets in water and wastewater service quality and system performance.

There are a number of requirements that cover Sydney Water’s response to water and wastewater services. These include planned and unplanned service interruptions, unscheduled low water pressure events and uncontrolled sewage overflows. In addition, the effectiveness of the response to customer enquiries is closely monitored.

### Performance

#### Water continuity

There was an increase in the number of properties affected by planned water interruptions in 2005-06, largely due to the expanded water mains renewal and leakage reduction programs.

These programs have successfully helped reduce overall water leakage by an estimated 15 per cent, from around 145 ML a day in 2004-05 to 123 ML a day in 2005-06.

The extended period of dry weather, especially from March to June 2006, resulted in an increase in main breaks as dry soil contracted, leading to a greater number of customers affected by unplanned interruptions.

However, with less than 28,000 properties affected by unplanned shut-offs exceeding five hours this year, Sydney Water was within the Operating Licence’s water continuity standard. This requires that no more than 35,000 properties be affected by unplanned shut-offs for more than five hours.

#### Main breaks and leaks response times

Visible leaks impact the perception customers have in regard to system performance.

All breaks and leaks are prioritised according to their severity. The Operating Licence 2005-2010 introduced target response times for Priority 4, 5 and 6 breaks and leaks from July 2005. In 2005-06, Priority 4, 5 and 6 breaks and leaks represented about 62 per cent of all recorded breaks and leaks.

The new response times are estimated to have contributed about 2 ML a day to overall leakage reduction in 2005-06. By comparison, Sydney Water’s Active Leak Detection Program has contributed water savings of around 50 ML a day since it began in 1999 (see Efficient water use, page 22 of this report).

The response time targets posed two issues for Sydney Water. The first was implementing new workforce arrangements to enable the response times to be met, and the second was how to balance meeting both the response time targets and the Operating Licence’s water continuity standard.

To reduce the potential impact on customers from the new response times, Sydney Water introduced a number of measures from July 2005, including:

- moving maintenance crews to the worst affected areas

### Performance

#### Water main breaks and leaks response times 2005-06

<table>
<thead>
<tr>
<th>Operating Licence target</th>
<th>% achieved 2005-06</th>
<th>Total breaks/leaks 2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70% of jobs within 2 hours</td>
<td>72</td>
<td>249</td>
</tr>
<tr>
<td>90% of jobs within 3 hours</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Priority 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65% of jobs within 3 hours</td>
<td>58</td>
<td>6910</td>
</tr>
<tr>
<td>85% of jobs within 6 hours</td>
<td>80</td>
<td></td>
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<tr>
<td>Priority 4</td>
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</tr>
<tr>
<td>50% of jobs within 1 working day</td>
<td>67</td>
<td>2408</td>
</tr>
<tr>
<td>100% of jobs within 5 days (Operating Licence notes the likelihood of not meeting this target)</td>
<td>91</td>
<td></td>
</tr>
</tbody>
</table>

#### Satisfaction with tap water

![Graph showing satisfaction with tap water from 2001 to 2005, indicating quite satisfied, very satisfied, and total satisfied categories.](image)
• extending overtime
• using construction staff on maintenance crews
• increasing the use of contractors.

A decision to turn off water must consider the loss of supply to customers. Sometimes, greater benefit lies in maintaining continuity of supply, particularly for critical customers such as hospitals and industry, or at critical times of the day such as mornings and evenings.

Water pressure
Eleven per cent fewer customers experienced low water pressure this year compared to 2004-05.

Sewage overflows
Over 2005-06 the number of dry weather sewage overflows increased by 18 per cent though the number of properties affected is below the Operating Licence limit of 25,000.

More than $21 million was spent during 2005-06 improving the wastewater system’s performance by cleaning and relining pipes. A program of works has commenced and will continue to be developed and implemented in future years.

Telephone contacts
Fewer than 27 per cent of the 890,000 customer telephone contacts received in 2005-06 reported difficulties and faults with water or sewerage services. The balance of enquiries concerned bills and accounts, changes of address, and general information about matters such as water restrictions.

Customer satisfaction
Level of customer satisfaction with water and sewerage services remained high

In addition to ongoing tracking studies and ad hoc research to monitor customer views, Sydney Water undertakes research on customers affected by capital infrastructure projects. The findings are used in the planning and delivery of future projects and community liaison activities.

Performance
Sydney Water continues to focus on improving business performance to ensure customer satisfaction with its products and services. A survey of residential customers showed that 86 per cent of customers who contacted Sydney Water were satisfied with their contact experience.

A high level of customer satisfaction was maintained with water and sewerage services – 88 per cent were satisfied with their tap water and 84 per cent were satisfied with the sewerage system.

Other performance areas
Customer complaints

Increase in complaints from 5.3 to 5.5 per 1000 properties linked to increased works program and Malabar Sewage Treatment Plant odour complaints

Performance
Sydney Water’s aim is to resolve customer enquiries and complaints efficiently and to the customer’s satisfaction with 90 per cent of all complaints resolved within 10 days.

If customers are dissatisfied with the solution proposed for their complaint, they may contact the Energy and Water Ombudsman NSW (EWON). EWON provides an independent and alternative means to review customer complaints.

In 2005-06, EWON received 536 complaints concerning Sydney Water, which is 16 per cent less than in 2004-05. These complaints mainly concerned billing.
In 2005-06, Sydney Water received 9313 complaints, 6 per cent more than last year and equivalent to 5.46 complaints per 1000 properties. This increase is partly attributed to the expanded water main renewal and leakage reduction program that led to an increase in the number of planned water service interruptions.

The vast majority of the 1329 drinking water quality related complaints was associated with aesthetics of the water; how it looks, smells or tastes and can be the result of unlined mains and operating changes in the system for technical reasons.

To reduce the likelihood of dirty water problems, Sydney Water continues to renew unlined mains and optimise flow changes during rezoning or asset isolations.

**Mitigation of negative social impact**

**Special needs customers continue to be assured access to services**

**Performance**

Sydney Water has a number of programs designed to assist special needs customers gain and retain access to its services.

Hardship relief is available and over the past seven years the average assistance per case has remained at around $100.

Extended terms or instalment plans can be offered to customers who are finding it difficult to pay their bill. The Payment Assistance Scheme, available through accredited welfare agencies, provides $25 vouchers to help those in difficult circumstances. In 2005-06 Sydney Water provided $324,965 in special assistance.

In line with the Customer Contract and Code of Practice on Debt and Disconnection, these hardship relief options are offered to customers to minimise service restrictions and disconnections.

Rebates for large, low-income households were provided as part of the safety net support following IPART’s price determination effective from 1 October 2005. The Payment Assistance Scheme was extended to private tenants who are responsible for water usage, in line with homeowners.

Community partnerships were entered into with 14 agencies for the delivery of no interest loans to assist low-income consumers to purchase 4-star or SA water efficient washing machines and other water efficient appliances around the home.

Through staff briefing sessions, Sydney Water continued to make sure that staff develop awareness of consumer hardship issues and have the requisite skills for communicating effectively with people experiencing financial stress.

At the same time, increased communication among non-English speaking and indigenous groups regarding this safety net was undertaken. This was achieved by linking with specialist agencies working with these communities, and extending funding for loan capital and administrative support to these agencies.

Additionally, the Sydney Water Foundation, which focuses on community improvement, invested $176,000 in 2005-06 through its Community Grants Program. The focus of this support was on programs that assist disadvantaged and vulnerable people, projects that encourage social and environmental sustainability, and initiatives that engage communities.

**Community investments**

**Maintained community investment program and took up new sponsorships**

**Performance**

In 2005-06, Sydney Water provided more than $991,600 to over 50 organisations covering a broad range of community activities and geographical locations.

New sponsorships were taken up in the year in communities that reflect the geographic focus of Sydney Water’s operations. These included the 2006 Festival of Kurnell, the Katoomba Winter Magic Festival, and the Songlines Blue Mountains World Heritage Arts and Environment Festival.

Sydney Water matched “dollar for dollar” employees’ donations of $44,244 to charities of their choice through the Give As You Earn payroll deduction scheme, and $7169 to the Cancer Council through Australia’s Biggest Morning Tea. Support was also extended to philanthropic causes including the Children’s Hospital at Westmead.

Sponsorship of the Sydney Festival was renewed and naming rights of the Keep Australia Beautiful – Clean Beach Challenge Water Conservation & Resource Management Award maintained.

The Sydney Festival coincides with higher water consumption typical of summer months, enabling Sydney Water to extend its water efficiency messages. The associate sponsorship of the festival’s Parramatta season builds Sydney Water’s presence in western Sydney.

The Keep Australia Beautiful – Clean Beach Challenge Water Conservation & Resource Management Award enables Sydney Water to recognise water efficiency initiatives and achievements at a local community, business or local council level.

**OUTLOOK**

Sydney Water will continue to improve customer services in the following key areas:

- faults and works management, including improved methods to categorise and respond to faults reported
- contact and complaints management to make it easier for customers to deal with Sydney Water
- further simplifying processes for builders and developers to connect to Sydney Water’s infrastructure
- offering greater customer choice and flexibility in payment options

Additional water efficiency programs will be undertaken to complement existing initiatives to help customers further reduce their water usage.

To clearly understand customers’ needs, Sydney Water is revising its customer research focus to obtain more practical insights into customer attitudes and behaviours. This will help Sydney Water concentrate on the issues that customers regard as most important and ensure that responses are appropriate.
Efficient use of resources
Performance summary

Minimising impact, maximising benefit
Providing water and wastewater services places demands not only on water but also on other resources. To reduce operational impacts, environmental assessments of all activities are made.
Providing water and wastewater services places demands not only on water but also on other resources such as energy and land.

To reduce operational impacts environmental assessments of all activities are made. These assessments influence how business is conducted and promote a focus on improving sustainability.

In particular, energy use is monitored and optimised, together with the amount of waste generated, reused or recycled and the beneficial use of any by-products. Natural and cultural resources are managed, as is contaminated land, in Sydney Water’s property portfolio.

**Energy**

Sydney Water is a large consumer of energy, predominantly electricity. Sewage treatment plants and water pumping stations use electricity to treat and distribute water, and to remove wastewater.

Energy management is defined as “the systematic practice to minimise and control both the quantity and cost of energy used in providing a service, while also improving environmental outcomes and the level of service”, consistent with the NSW Government’s Energy Management Policy.

Sydney Water has a dedicated Energy Management Unit and a comprehensive energy management program. The environmental impacts of energy use and greenhouse gas emissions are reduced through energy conservation efforts, the purchase of Green Power, business efficiency initiatives and by generating renewable energy.

**Beneficial use of by-products**

Two by-products of Sydney Water’s treatment processes are biosolids from sewage treatment processes, and water treatment residuals from water treatment processes.

Biosolids are organic matter removed during the treatment of sewage and are rich in plant nutrients and embodied energy. They are a valuable resource with markets in agriculture, composting and land rehabilitation. The biosolids program meets world best practice with the percentage of captured biosolids recycled standing at 100 per cent.

Water treatment residuals are produced from the coagulation and filtration of raw water. This process removes turbidity, colour, bacteria, algae, some organic compounds, and iron and manganese. Water filtration plants use ferric chloride for coagulation and, depending on the water treatment process used, produce waste streams from filter backwashing and/or sedimentation tank desludging.

The Prospect, Illawarra and Woronora filtration plants produce sufficient quantities of water treatment residuals to continuously dispose of them.

Residuals from other plants are initially stored on site in drying beds or lagoons until a reasonable quantity is accumulated for cost effective disposal. For the last six years, 100 per cent of residuals produced by water filtration plants has been either beneficially reused or stored for future use.

**Waste minimisation**

Waste is minimised by avoiding generating it, reducing it and maximising its reuse and recycling.

This applies in four areas: self-generated construction and demolition waste, waste generated by contractors, Sydney Water office waste, and the process waste generated by water treatment, wastewater treatment and stormwater management activities.

In line with the NSW Government’s Waste Reduction and Purchasing Policy (WRAPP), a Waste Minimisation Plan includes strategies to address communication,
measurement and reporting, target setting, procurement, planning and evaluation, and review.

Sydney Water’s 2005-06 WRAPP Statement is in the Appendix on the CD and at www.sydneywater.com.au

Natural and cultural resources
Sydney Water manages a number of wetlands and areas of urban bushland. Some land holdings contain threatened or endangered species, populations and ecological communities of animals and plants. As well, Sydney Water is responsible for a significant number of cultural heritage items.

Sydney Water works with local councils, government agencies and community groups to ensure the natural and cultural assets in its area of operations are there for current and future generations to enjoy.

Construction and operational impacts are identified and avoided where possible. Mitigation efforts are put in place where impacts can not be avoided and include the appropriate restoration of any disturbed areas.

Contaminated land
Of the approximately 2450 sites owned by Sydney Water, some are contaminated. In some cases this contamination was caused by previous owners who may have used the land as tips or for industrial purposes. In other cases Sydney Water has contaminated the land. Sydney Water works to ensure that any practices that could contaminate land no longer occur.

Contaminated Land Management Plans use a risk-ranking strategy to identify and report on the likelihood of contamination of land owned by Sydney Water. These involve analysing previous land uses and environmental site assessments.

Key performance area
Energy
Higher wastewater and recycling standards required increase in energy use
A Renewable Energy Generation Program and active investment in efficiency initiatives, cogeneration facilities together with the purchase of green power, minimise the impacts of energy use.

With a growing population and tighter performance standards, it is difficult to continually reduce impacts in this area.

Performance
Operations consumed 1 per cent more in electricity in 2005-06. However, only 0.6 per cent more was purchased from electricity retailers. This was achieved by managing an 18 per cent increase in the energy produced by cogeneration plants at the Malabar and Cronulla Sewage Treatment Plants.

The main areas where energy use increased were at sewage treatment plants, up by 1.9 per cent, and at water pumping stations, up by 2.3 per cent due to an increase in treatment levels and the amount of water delivered, particularly to pumped systems.

The predominant contributor to energy-related greenhouse emissions is from electricity use, calculated at 96.4 per cent. Transport fuel accounted for 3.2 per cent and natural gas, 0.4 per cent.

Overall, greenhouse gas impact emissions decreased by 6.6 per cent in 2005-06. This was due mainly to a reduction in the consumption of natural gas, vehicle numbers and improved overall fuel efficiency of the vehicle fleet, improved operation of Malabar and Cronulla cogeneration plants, and a change in the electricity emissions factor directed by the Australian Greenhouse Office.
Sydney Water Annual Report 2006

Efficient use of resources

Other performance areas

Beneficial use of by-products

Captured biosolids and water treatment residuals continued to be beneficially reused

This performance area reports on the amount of biosolids and other process wastes captured, produced and reused by water and wastewater treatment processes.

Performance

The total mass of biosolids produced for 2005-06 was 50,489 dry tonnes – 191,296 wet tonnes – which is 6 per cent higher than last year.

This increase is due mainly to population increases, improved removal efficiencies and additional biosolids produced from new treatment processes at several plants where plant and process upgrades have been undertaken. Greatest increases occurred at the Bellambi, North Head and Wollongong plants.

Inland sewage treatment plants captured more than 99 per cent of all solids in wastewater collected, reflecting the high level of tertiary treatment undertaken. Ocean plants achieved a lower suspended solids capture rate of 49 per cent, reflecting the fact that the three main ocean plants provide primary treatment levels.

Beneficial reuse of 100 per cent of all biosolids captured continues.

This year, 2269 tonnes of water treatment residuals was produced, similar to the past two years. This reflects only slight changes in the amount of water produced by filtration plants, and its quality. Of this amount, 69 per cent was reused and the balance stored for future use.

There was a significant increase in the reuse of sewage treatment plant grit and screenings in 2005-06, with 47 per cent reused, up from a minimal 3 per cent in 2004-05, the result of the new grit and screenings disposal contract.

Waste minimisation

Improvements in waste reuse and recycling reflects internal and supplier commitment

Performance

The amount of waste recycled or reused continues to increase. This year, although more operational waste was generated, 95 per cent of it was recycled or reused – the highest amount achieved to date.

This was a significantly active year in terms of capital works projects, particularly with the Priority Sewerage Program which laid 31,111 metres of main at Mulgoa, Wallacia and Silverdale, and 100 metres at Brooklyn, resulting in significantly higher volumes of excavation material, 97 per cent of which was recycled.

Other achievements include:

- recycling 85 per cent of office paper in head office, 5 per cent above target
- recycling 57 per cent of all office waste by putting more emphasis on reuse and recycling
- recycling 76 per cent of process waste, 23 per cent more than in 2004-05 through implementing a new sewage treatment plant grit and screenings disposal contract. A greater portion of grit and screenings, and stormwater sediment is now being recycled.

There has been an ongoing upward trend in the percentage of waste recycled or reused since 2000-01 when comprehensive data was first collated.

Natural and cultural resources

Appropriate environmental management practices protect natural resources and cultural heritage sites

This performance area reports on the amount of native vegetation cleared and replanted through rehabilitation. The number of heritage assets with Conservation Management Plans and impact permits granted in relation to Aboriginal cultural heritage are also covered.

Performance

Environmental assessment is undertaken before work begins on all construction projects, some of which involve land clearing and replanting. Safeguards to prevent or minimise environmental damage are identified and implemented through Environmental Management Plans to help prevent the loss of native plants and animal habitats.

When building new infrastructure and upgrading existing assets, sometimes tracts of land are required to be cleared. Where construction has been completed, active rehabilitation, restoration and replanting of native vegetation occurs to restore the site to its original condition.

A total of 1.37 ha of native vegetation was cleared at the North Head, Mulgoa and Penrith Sewage Treatment Plants, and Glenbrook and Holsworthy transfer pipelines. A further 0.83 ha was rehabilitated in works associated with some of these plants and pipelines, and the Illawarra Wastewater Strategy.

Damage to Aboriginal heritage items and heritage assets listed on the State Heritage Register is avoided where possible. The cultural assets are looked after by Conservation Management Plans and Conservation Management Strategies.

In a small number of instances this year, permits relating to Aboriginal heritage places were applied for. These involved two sites – the Minchinbury Reservoir site which is accommodating urban growth, and The Gully site in the Blue Mountains where SewerFix was working to reduce overflows.

Sydney Water’s Heritage and Conservation Register 2005-06 is in the Appendix on the CD and at www.sydneywater.com.au
Contaminated land

Management practices deliver planned environmental outcomes

Sydney Water currently controls three Significant Risk of Harm (SROH) sites – Astrolabe Park, Alexandra Canal and the Central Workshops site at Waterloo.

The Central Workshops Waterloo site was declared by the Department of Environment and Conservation this year. It was contaminated by an adjoining property not owned by Sydney Water or associated with its activities. The company responsible for its contamination is now implementing this site’s remediation plan.

Botany Bay City Council is responsible for the remediation of Astrolabe Park and the Department of Environment and Conservation has issued a “do not disturb” remediation order on the sediments in the bed of Alexandra Canal.

OUTLOOK

Energy

Sydney Water will implement its Energy Management Plan’s strategies and actions, to:

• raise the profile of energy management through effective communications
• develop its Renewable Energy Generation Portfolio by:
  – constructing a 1.4 MW cogeneration plant at the North Head Sewage Treatment Plant
  – building viable business cases for the next generation of projects
• improve energy performance at major assets by monitoring recently developed key performance indicators at the 50 largest energy consuming assets
• assess, develop and implement energy efficient projects
• expand the use of energy monitoring and information systems, including Enterprize EM and web-based energy tools to provide up-to-date energy use information
• continue successfully implementing the Fleet Management Plan to reduce vehicle fleet emissions.

Beneficial reuse of by-products

Maintaining the current 100 per cent beneficial reuse of biosolids will be helped by upgrading the biosolids, grit and screenings facilities at Bondi and North Head Sewage Treatment Plants. Continuing to investigate diversification of the biosolids market will also contribute.

Optimising existing biosolids facilities to improve the solids content and reduce the amount of water content should mean fewer truck movements, creating an even greater benefit.

Waste minimisation

Waste minimisation will continue to be addressed across a range of activities including construction, operations and in Sydney Water offices. Recycling rates across the business are targeted to increase in 2006-07.

More information is available in the Appendix on the CD and at www.sydneywater.com.au

Overall, greenhouse gas impact emissions decreased by 6.6 per cent in 2005-06.

Cogeneration plants at Malabar and Cronulla Sewage Treatment Plants produced 18 per cent more electricity in the year.
Employees
Performance summary

Developing a safe, capable and committed workforce
Sydney Water is improving the capability and performance of employees. A major effort to improve safety in the workplace is also being made to reach a target of zero injuries for employees, contractors and visitors.
Performance is now linked to corporate objectives.

Sydney Water is improving the capability and performance of its employees. A major effort to improve safety in the workplace and on site for employees, contractors and visitors is also being made.

Current workforce profile
The size of the workforce has declined steadily with a decrease of 3.5 per cent in 2005-06, to 3180 employees. This is due to both restructures and natural attrition.

The current average age of staff is 44.8, and voluntary turnover for 2005-06 was 3.3 per cent. This compares to an industry average turnover of almost 8 per cent.

While the profile of the workforce remained relatively constant, there were small proportional increases in the number of women, Aboriginal and Torres Strait Islanders, and people from non-English speaking backgrounds.

Safety
Sydney Water’s target is to provide a safe and efficient workplace with zero injuries to employees, contractors and visitors (Sydney Water Health and Safety Policy 2006).

There has been a strong focus on improving safety performance with a wide range of initiatives rolled out over the years. This has resulted in a steady improvement in the standard safety measure, Lost Time Injury Frequency Rate (LTIFR), over the past decade.

While performance as measured by the LTIFR deteriorated through 2004, it was corrected by mid-2005 and improved over 2005-06. At June 2006, the employee LTIFR was the lowest ever recorded at Sydney Water at 8.2. While this improvement is welcomed it masks the fact that Sydney Water in 2005-06 had two fatalities. The need to get both LTIFR to zero and to stop such tragic events is clear.

The Safety Improvement Committee, which includes both the Managing Director and a Board representative, began in September 2005 and meets bi-monthly. With different themes as the focus for each meeting, its activities are now relayed to all divisional Occupational Health and Safety Committees.

Change
Sydney Water is undergoing substantial change to meet the challenges presented by reform in the water and wastewater industry, and commercial imperatives.

The age profile of staff is another strong driver for action. With the current average at 44.8 years, it is anticipated that significant knowledge and skills may leave the organisation in the near future through voluntary retirement.

These issues are being addressed through improved recruitment, especially youth employment, training for all staff and better management of talent and critical positions.

Employee relations
Union membership remains high at 64 per cent. Sydney Water is committed to consulting with unions and employees on organisational change matters.

Two matters of a noteworthy nature were referred to the Industrial Relations Commission NSW in 2005-06.

The first involved the introduction of shift work in the Civil Maintenance business. The introduction of an afternoon shift was seen as an important response to the deteriorating drought position, and efforts to efficiently address leaking water pipes. After protracted conciliation, the Australian Services Union agreed to its introduction.

The second issue concerned changes to the redeployment policy to allow Sydney Water to force redundancies as a last and unavoidable resort. After a series of appearances before the Commission, the unions ceased their formal proceedings.
Equity and diversity

The objectives of equity and diversity are addressed through both general and specifically targeted programs including:

- re-establishing the Women At Work Program
- implementing a Workplace Bullying Policy and rolling out a compulsory education program on bullying and harassment
- participating in a research project undertaken by researchers at Sydney and Royal Melbourne Institute of Technology Universities aimed at improving organisational effectiveness through gender equity.

Diversity was again celebrated through International Women’s Day, Harmony Day, NAIDOC Week and International Day of People with a Disability.


Employees

Safer working environment for sewer system maintenance

Avoiding injuries

Challenge

Keeping employees and contractors safe on the job by stopping gravity wastewater flowing into sewage pumping station wet wells undergoing maintenance, and when sewage pumping station inlet isolating valves are being repaired or replaced.

To do this plugs are commonly used which are inflatable devices with steel endplates with a tendency to leak sewage and deflate. This presents a considerable safety hazard as they can eject a steel endplate from a pipe at high velocity and allow rapid flooding in the work area.

Solution

To develop an easy to use alternative plug that avoided unnecessary leakage and improved safety. Under the Flow Isolation Project, Sydney Water’s Charles Pochodyla began work in 2002 on a new device.

After much thought, construction, reconstruction, development and testing, the new, robust tapered plug, now known as the Pochodyla Plug, forms a tight seal that doesn’t slip once installed and can be made in a variety of sizes.

By incorporating a valve for releasing retained sewage back into the system while it is still in place, the plug can be easily removed once work has been completed.

The new plugs are currently being used in the Mechanical Electrical Maintenance Renewal Program (MEMRP) involving all of Sydney Water’s 659 sewage pumping stations.

Benefits

- Safer working environment for maintenance teams
- More efficient sewer system maintenance
- Potential for commercialisation of the plug.

“We’ve used this plug in jobs that previously could not be done because of flow isolation problems. Providing a superior seal, and improving safety, it is relatively easy to install and has reduced costs and the coordination involved in planning an isolation.”

Shaun Gardner
Contracts Manager, Water Services

Employees

Sewer system maintenance crews often work in confined spaces, including sewage pumping station wet wells and in sewer mains. Equipment improvements such as the Pochodyla Plug that minimise leakage and improve safety are always welcome.

Photo courtesy Interflow Pty Ltd, Sydney Water Coogee diversion sewer project
Key performance areas

Employee capability

Employee capability measurement system established and senior managers measured

Performance

Sydney Water measures employee capability through a Workforce Capability Index, which represents the average ratings of senior managers by their managers against the essential competencies detailed in their performance and development plans.

This was the first year employee capability was measured.

During 2005-06 Sydney Water focused on improving recruitment processes, identifying behavioural competencies and conducting a thorough training needs analysis.

Employee engagement

Employee engagement measurement model adopted

Performance

Sydney Water’s key challenge will be engaging and retaining employees in a market with increasing workforce mobility and greater competition for talent.

In 2005-06, a model developed by the Corporate Leadership Council* for enhancing and measuring employee engagement was adopted. Using this, the level of the workforce’s engagement can be determined by measuring the presence of key engagement drivers.

* The Corporate Leadership Council is an international network that provides best practices and quantitative research and executive education.

Employee safety

While LTIFR improved there is more work to do in safety, particularly in the area of lead indicators

Performance

The primary lag indicator of employee safety is the Lost Time Injury Frequency Rate (LTIFR), which captures the number of lost time injuries per million hours worked.

As at June 2006 an LTIFR of 8.2 was recorded, the best result ever since the measure was adopted in 1994. However, the target is zero injuries.

Over the past year the LTIFR turned around from the high of 14.8 recorded in 2004-05.

The major field workforce business, Civil Maintenance, achieved an LTIFR of 18.4 at the end of June 2006 with 20 lost time injuries for the year against an LTIFR of 43.2 and 50 lost time injuries for the previous 12 months.

This significant improvement reflects the impact of the safety leadership program Be Safe Mate 2. The training, conducted over the past two years, focused on responsibility and accountability.

Lost Time Injury Frequency Rate (LTIFR) 1995-2006

Year ending 30 June
Employees

Fatalities
Tragically, one staff member and a contractor died in 2005-06.

Ben Abbott, a field-sampling employee, died on 3 August 2005. He was routinely sampling water at Lake Burragorang when the boat he was on overturned.

On 18 November 2005, Alan Reed, an employee of AWT Survey and contracted as part of a survey team at a Sydney Water site at Wentworth Falls, fell through barrier mesh fencing into an excavation trench. Alan was taken to hospital and died on 25 November.

Safety lead indicators
All senior managers now report on positive key performance indicators. These include safety leadership activities, incident investigations, close out of action requests from Health and Safety audits, and contractor site inspections.

Prosecutions and penalties
Although there were no Operational Health and Safety related prosecutions during 2005-06, several penalty notices were received.

These were for a contractor’s breaches of confined space entry regulations in July 2005, and following damage to an underground electrical cable with an excavator in September 2005.

Further, after a site inspection in November 2005, Sydney Water received a penalty notice for not ensuring contractors/sub-contractors work according to their Project Safety Plan in the areas of site management and control deficiencies.

WorkCover (NSW) is investigating the deaths of Ben Abbott and Alan Reed, and of Noel Merchant who was electrocuted in January 2005. They are also investigating the death of Ron Tabak who died while visiting a contractor’s construction site in February 2004.

Sydney Water cooperates with the NSW State Coroner and WorkCover in their investigations, and has taken additional measures to ensure similar incidents never happen again.

Other performance area

Workforce performance

Objectives achieved in preparing to measure performance drivers

Performance
Sydney Water overhauled its performance management system to link performance to corporate objectives, improve staff accountability and provide a consistent basis for measuring performance.

In 2005-06, the Performance Driver Index was adopted as the primary measure of workforce performance. Based on a Corporate Leadership Council model, this indicator identifies various drivers that are present in high performing organisations.

The new system was rolled out to senior managers during the year, with a link between performance and pay for senior management now established.

The intent is to focus on the inputs or activities that improve performance and the initial index will be measured in 2006-07 using an employee survey.

OUTLOOK
Sydney Water plans to build upon the work that has been achieved in the areas of workforce capability, engagement, safety and performance. The focus will be on workforce availability and developing strategies to deal with low staff turnover and an aging workforce.

Focus areas in 2006-07 include:

• integrating behavioural competencies into recruitment, appraisal systems, training needs and career planning
• improving employment brand
• identifying and developing talented people
• managing critical positions
• implementing a new performance appraisal system for award staff
• extending the youth programs.
### Sydney Water workforce* 2006

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### Other

<table>
<thead>
<tr>
<th></th>
<th>2003-04</th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency personnel</td>
<td>136</td>
<td>115</td>
<td>135</td>
</tr>
<tr>
<td>Redundancies</td>
<td>81</td>
<td>152</td>
<td>102</td>
</tr>
<tr>
<td>Appointments</td>
<td>155</td>
<td>151</td>
<td>137</td>
</tr>
<tr>
<td>Average turnover</td>
<td>2.56%</td>
<td>2.59%</td>
<td>2.99%</td>
</tr>
<tr>
<td>Unplanned absences</td>
<td>3.4%</td>
<td>3.4%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

* Workforce numbers are calculated by apportioning the full-time equivalent (FTE) hours worked to the actual headcount employee numbers.

### Representation of EEO groups**

<table>
<thead>
<tr>
<th></th>
<th>2003-04</th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Women</td>
<td>805</td>
<td>23.1</td>
<td>787</td>
</tr>
<tr>
<td>ATSI1</td>
<td>35</td>
<td>1.0</td>
<td>32</td>
</tr>
<tr>
<td>REEM2</td>
<td>720</td>
<td>20.7</td>
<td>688</td>
</tr>
<tr>
<td>Language3</td>
<td>759</td>
<td>21.8</td>
<td>750</td>
</tr>
<tr>
<td>PWD4</td>
<td>224</td>
<td>6.4</td>
<td>200</td>
</tr>
<tr>
<td>PWD-RA5</td>
<td>60</td>
<td>1.7</td>
<td>57</td>
</tr>
<tr>
<td><strong>Total staff</strong></td>
<td>3485</td>
<td>100</td>
<td>3388</td>
</tr>
</tbody>
</table>

** All EEO figures are based on headcount employee numbers and do not include casuals. The number of women indicates their actual representation in the Sydney Water workforce. Figures for all other EEO groups for 2005-06 are based on a survey with a response rate of 75 per cent. All percentages indicate the representation of EEO groups against total staff. In some salary bands this may underestimate the actual representation due to low survey response rates.

### Number of Senior Executive Service (SES) equivalent officers

<table>
<thead>
<tr>
<th></th>
<th>2003-04</th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>17</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Male</td>
<td>82</td>
<td>66</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>99</td>
<td>79</td>
<td>115</td>
</tr>
</tbody>
</table>

### Representation of EEO groups within salary levels**

<table>
<thead>
<tr>
<th>Salary level</th>
<th>Total staff</th>
<th>Survey respondents</th>
<th>Women</th>
<th>ATSI1</th>
<th>REEM2</th>
<th>Language3</th>
<th>PWD4</th>
<th>PWD-RA5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>&lt;$32,606</td>
<td>6</td>
<td>3</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>$32,606-$42,824</td>
<td>159</td>
<td>80</td>
<td>52</td>
<td>25</td>
<td>15.7</td>
<td>9</td>
<td>5.7</td>
<td>27</td>
</tr>
<tr>
<td>$42,825-$47,876</td>
<td>496</td>
<td>290</td>
<td>58</td>
<td>118</td>
<td>23.8</td>
<td>8</td>
<td>1.6</td>
<td>66</td>
</tr>
<tr>
<td>$47,877-$60,583</td>
<td>806</td>
<td>551</td>
<td>69</td>
<td>260</td>
<td>32.3</td>
<td>11</td>
<td>1.4</td>
<td>144</td>
</tr>
<tr>
<td>$60,584-$78,344</td>
<td>1078</td>
<td>885</td>
<td>73</td>
<td>242</td>
<td>22.4</td>
<td>7</td>
<td>0.6</td>
<td>250</td>
</tr>
<tr>
<td>$78,345-$97,932</td>
<td>399</td>
<td>340</td>
<td>88</td>
<td>83</td>
<td>20.8</td>
<td>1</td>
<td>0.3</td>
<td>98</td>
</tr>
<tr>
<td>&gt; $97,932</td>
<td>321</td>
<td>285</td>
<td>89</td>
<td>45</td>
<td>14.0</td>
<td>0</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3265</td>
<td>2434</td>
<td>73</td>
<td>775</td>
<td>23.7</td>
<td>36</td>
<td>1.1</td>
<td>650</td>
</tr>
</tbody>
</table>

### Definitions

1. Aboriginal people and Torres Strait Islanders
2. People from racial, ethnic and ethno-religious minority groups
3. People whose first language spoken as a child was not English
4. People with a disability
5. People with a disability requiring work-related adjustment
Legal change

Access decision by the Australian Competition Tribunal
These were: services for the transportation of sewage provided by means of the North Head, Bondi and Malabar Reticulation Networks from a customer’s boundary trap to points of interconnection; and services for the connection of new sewers to the North Head, Bondi and Malabar Reticulation Networks at points of interconnection.
This declaration obliges Sydney Water to enter into negotiation with any parties seeking access to any of these services on the terms and conditions of access.
If the parties are unable to agree on one or more aspects of access to the declared service, the Australian Competition and Consumer Commission can make a binding determination on access arrangements.

State-based access regime
In November 2005, the NSW Government announced that it would adopt the recommendations made by IPART’s Investigation into Water and Wastewater Service Provision to the Greater Sydney Region, including the development of a state-based access regime.
During May and June 2006, the NSW Government sought public feedback on a draft regime. This proposes to open the services provided by significant wastewater, drinking water and recycled water infrastructure to third parties, initially in the Greater Sydney and Hunter regions.
It is expected that legislation will be brought to Parliament in the Spring Session of 2006.

Environmental Planning and Assessment Amendment (Infrastructure and other Planning Reform) Act 2005
Major amendments to this Act were introduced to improve the efficiency and outcomes associated with the environmental and planning approvals process for major infrastructure projects. Sydney Water was the first public authority to use this streamlined approvals process.

Occupational Health and Safety Act 2000
Amendments to this Act resulted in it being an offence to cause death as a result of reckless conduct by an employer or a director or a person concerned in management. A maximum penalty of $1,650,000 for corporations, or $165,000 and/or five years imprisonment for individuals applies.

Protection of the Environment Operations Amendment Act 2005
Major amendments to this Act included increases in the penalties payable by corporations for wilful breaches to $5 million, the introduction of a pollution of land offence, the narrowing of the defences available to company officers, and expanded enforcement and sentencing options in respect of breaches of the Act.

Sydney Water Regulation 2000
Changes to the Sydney Water Regulation resulted in increased penalties for the theft of water and breaches of water restrictions by corporations from $550 to $2200 and from $220 to $550 respectively.

State Environmental Planning Policy (Sydney Metropolitan Water Supply) (Amendment No 1) 2005
Amendment No 1 to this State Environmental Planning Policy gazetted on 31 October 2005 is aimed at facilitating development for the purposes of desalination plants so as to augment the supply of potable water in the Sydney metropolitan area, and for such infrastructure to be declared as critical for the purposes of Part 3A of the Environment Planning and Assessment Act.

Supreme Court decision
On 4 April 2006, a judgement was handed down in the NSW Supreme Court in favour of a bodysurfer who hit his head on stormwater pipes at Manly Beach in October 2000. The plaintiff, who suffered incomplete quadriplegia as a result of the incident, had sought damages alleging several counts of negligence on the part of Manly Council and Sydney Water. The court apportioned liability equally between the defendants on the basis that each was responsible for the presence of at least one pipe on the beach thereby incurring an obligation to eliminate or reduce risk of injury by the provision of an appropriate sign. The court found that neither party caused such a sign to be erected.

Workplace surveillance
The Workplace Surveillance Act 2005 (NSW) became effective 7 October 2005 and prohibits covert surveillance of employees unless prior notice or authority is given or obtained, and regulates the circumstances where an employer can block emails and internet access.
Board operations and governance

Corporate governance framework
Under its enabling legislation, all decisions relating to the operation of Sydney Water are made by or under the authority of its Board of Directors (the Board).

Section 5A of the Sydney Water Act 1994 provides that the Board may consist of up to 10 members, including the Chairman. The Chairman and Directors are appointed by the Shareholder Ministers. The Managing Director is the only Executive Director on the Board. The Board is accountable to the NSW Government through a portfolio Minister and two Shareholder Ministers.

The Chairman has stewardship of the Board and presides over Board meetings while the Managing Director is responsible for management of Sydney Water’s day-to-day operations in accordance with the general policies and specific directions of the Board. In turn, the Managing Director has authority to delegate certain powers and functions to other positions within Sydney Water.

The Managing Director’s accountabilities to the Board are defined and regulated through three key instruments: an Instrument of Conferral of Powers and Authority; an Employment Agreement; and a Performance Agreement. The Board reviews the Managing Director’s performance every six months.

The Board’s operations are conducted in accordance with Sydney Water’s Constitution which is an instrument adopted by resolution of the Shareholder Ministers.

Board composition
It is a statutory requirement that appointments be made so that the Board is composed of Directors with separate expertise in:
- business management
- protection of the environment
- public health.

Directors’ duties and Code of Conduct
Schedule 10 of the State Owned Corporations Act 1989 provides for a minimum standard for Directors’ duties. In addition, the Board has adopted a Code of Conduct, which is republished annually in a Directors’ Handbook.

Board meetings
The Board meets at least monthly, except for January. A schedule of meeting dates is settled annually, in advance. Additional meetings may be called as the Directors think fit. Meetings are conducted in accordance with Sydney Water’s Constitution.

Board committees
Under Sydney Water’s Constitution, Directors may delegate any of their powers to committees, which consist of at least one Director.

The Board has six regular committees:
- Audit Committee
- Asset Management Committee
- Environment Committee
- Property Committee
- Public Health, Research and Development Committee
- Remuneration Committee.

Indemnity and insurance
Under the State Owned Corporations Act 1989 and Sydney Water’s Constitution, Sydney Water may indemnify its Directors only with the approval of the Shareholder Ministers.

All non-executive Directors have been granted such approval and have been given a Deed of Indemnity. Indemnity does not extend to circumstances where the liability arises out of conduct involving lack of good faith.

Sydney Water maintains insurance with respect to Directors and Officers Liability. The policy underpins and augments the Deed of Indemnity. Insurance does not extend to deliberate acts of fraud or dishonesty.
David Evans
BEd (Hons), FAICD
David was Managing Director of Sydney Water from April 2004 to July 2006. He was Managing Director of Hunter Water Corporation from 1993 to 2004 and Chief Executive Officer of the Regional Land Management Corporation.
1. Gabrielle Kibble AO  
**Chairman**  
BA, DipTCP, FRAPI, DSc (HC)

Gabrielle has been a non-executive Director of Sydney Water since November 1997 and Chairman since August 1998. She is also Chairman of Sydney Water’s trading subsidiary, Australian Water Technologies Pty Ltd, and of the Board’s Remuneration Committee. She is a member of the Board’s Property, Public Health, Research and Development, and Audit Committees.

Also the Administrator of Liverpool Council, Gabrielle is a director of the Sydney Olympic Park Authority and Trustee and Deputy Chancellor of the University of Western Sydney, and an Honorary Associate of the Graduate School of Government, University of Sydney.

2. Dr Kerry Schott  
**Managing Director**  
DPhil, MA, BA (Hons)

Kerry was appointed Managing Director of Sydney Water in August 2006, previously having been Deputy Secretary, NSW Treasury, Office of Infrastructure Management. She was a non-executive Director of Sydney Water from 1997 to 2001.

Kerry has spent 15 years as an investment banker, mainly in infrastructure related work including roles as Managing Director, Deutsche Bank, and Executive Vice President, Bankers Trust Australia. She has also worked as an economic policy adviser with the Reserve Bank of Australia, the Commonwealth Government and as an academic at University College London and at Oxford University.

She has been Chairman of the NSW Environment Protection Authority, Chair of the NSW Film and Television Office, a director of the Film Finance Corporation Limited and Australian Airlines Limited. Kerry has also been a member of the Corporations and Securities Panel and a Trade Practices Commissioner.

3. John Brown  
**BCom, FICA, MIAA, MISACA, MIPAA**

Appointed a non-executive Director of Sydney Water in September 2004, John is Chairman of the Board’s Audit Committee.

John is an audit and risk specialist with significant experience in financial due diligence and risk management. He recently retired as a partner of KPMG where he led KPMG’s NSW Government Business Group and was a member of the KPMG National Board and Chairman of its Audit Committee.

John is the Chairman and independent member of the Risk and Audit Committee of the NSW Department of Commerce and a consultant to the Audit and Risk Committee of the Australian Broadcasting Corporation.

4. Brian Gilligan  
**BA, DipEd, MA, FAICD, FAIM, MEIA**

A non-executive Director of Sydney Water since May 2004, Brian is Chairman of the Board’s Environment Committee and a member of the Asset Management Committee.

He is also a member of the World Commission on Protected Areas, a director of the Hunter Valley Research Foundation, Chair of the Audit and Risk Management Committee for the NSW Department of Juvenile Justice, and an independent member of the Audit Committee for Parks Australia.


5. Ralph Kelly  
**BCom, MBA, FSIA, FAICD**

A non-executive Director of Sydney Water since September 2001, Ralph is the Chairman of the Board’s Property Committee and a member of the Audit, Public Health, Research and Development, Remuneration, and Asset Management Committees.

With an extensive career in investment banking over 30 years, with particular experience in corporate finance advice, infrastructure and listed capital raisings, Ralph is now principal of Pennant Advisory and pursues a non-executive director career. Currently he is a director of Australian Petroleum Investments Pty Ltd and Ausflag Limited.

6. Alison Peters  
**LLB, BCom**

A non-executive Director of Sydney Water since September 2001, Alison is a member of the Board’s Environment, Remuneration, and Property Committees.

She is the Deputy Assistant Secretary for Unions NSW and is also a member of the NSW Co-operatives Council, the NSW Seafood Industry Conference, and the NSW Privacy Advisory Committee.

7. John Priest  
**BBus, FCPA, FAICD**

Appointed a non-executive Director of Sydney Water in September 1998, John is Chairman of the Board’s Asset Management Committee and a member of the Audit and Property Committees.

Formerly of Coca-Cola Amatil Limited, John held the positions of Executive Director, Chief Financial Officer and Director of Corporate Development. He is currently Chairman and Chief Executive Officer of Apollo Life Sciences Limited and a Council Member of the Graduate School of Management.

8. Dr Greg Stewart  
**MB BS, MPH, FRACMA, FAFPHM**

Appointed a non-executive Director of Sydney Water in December 2005, Greg is the Director, Population Health, Planning and Performance of the Sydney South West Area Health Service.

His previous experience includes appointments as Deputy Director-General, Population Health and Chief Health Officer, NSW Health, Chief Executive Officer of Wentworth Area Health Service, and Director of the Public Health Unit, Sydney South West Area Health Service.

A member of the NSW Medical Board, Greg also chairs the NSW Regional Committee of the Australasian Faculty of Public Health Medicine.
Asset Management
Responsible for managing infrastructure and the provision of water, wastewater, recycled water and stormwater services to customers, including water, recycled water and wastewater treatment plants and reticulation, meeting ADWG 2004 as required by NSW Health, customer service standards as required by Sydney Water’s Operating Licence, and DEC Environment Protection Licence targets.

Paul Freeman
BE(Mech) (Hons)
General Manager
Paul was appointed General Manager, Asset Management in July 2000 and is responsible for the operation and management of the group’s operational asset portfolio. He joined Sydney Water in 1978 as a trainee mechanical engineer. In a Sydney Water career spanning 28 years, Paul has worked in both engineering and management roles including 11 years in wastewater treatment.

Asset Solutions
Responsible for procurement policy, contract management and delivery of the capital works program.

Ron Quill
BE(Civ)
General Manager
Ron was appointed General Manager, Asset Solutions in April 2000. He has been with Sydney Water for over 30 years. With an engineering background he has had extensive experience in the water industry. Ron has been a project manager, designer, corporate planner and a ministerial policy adviser. His management roles have been broad and various including the management of Sydney’s catchments, dams and bulk water supply and the Manager of the Illawarra and Western regions. He was previously the General Manager of TransWater, which was responsible for the operation of all water and sewage treatment plants as well as the bulk water supply.

Customer and Community Relations
Responsible for developing, planning and implementing strategies for customer services, customer resource management, corporate relations and corporate communications, and undertaking marketing and business strategy and planning.

Angela Tsoukatos*
BSocWk, MM, GAICD
General Manager
After six years as General Manager, Corporate Services, Angela was appointed General Manager, Customer and Community Relations in April 2005. She joined Sydney Water in 1990 and has held many challenging roles in the areas of policy, standards of service, regulatory compliance and executive support. Prior to joining Sydney Water, Angela held positions in the non-government sector and in local government as a caseworker, community worker and policy adviser. Her first role at Sydney Water was as the Ethnic Affairs Adviser.

Finance
Responsible for setting and implementing sound financial and commercial strategies, policies and practices, performing business assurance and business planning and overseeing information technology.

Denise Dawson
BBus, GradDip(Acctg)
Chief Financial Officer
Denise was appointed Chief Financial Officer in January 2004. She joined Sydney Water as General Manager, Customer Service, in September 2001 bringing 20 years’ experience in the electricity industry. Prior to joining Sydney Water, Denise held a number of roles at United Energy Melbourne, the most recent being General Manager, Full Retail Contestability (Electricity and Gas). Her other positions have included General Manager, Finance and Administration at Powerlink Queensland, General Manager, Corporate Services at Legal Aid Brisbane, and finance roles at South East Queensland Electricity Board.

* Customer and Community Relations Division reports to Group General Manager, Business Services during Angela Tsoukatos’ maternity leave from May 2006 to January 2007
### Regulatory Strategy and Reform

**Chris Guest**
BEc (Hons), MA, MAppFin, PhD
General Manager

Chris was appointed General Manager, Regulatory Strategy and Reform in March 2006. Prior to joining Sydney Water in 2005, Chris was Deputy Director-General in The Cabinet Office with responsibility for Natural Resources, Social Policy and Greenhouse Policy. Chris has also held the positions of Deputy Director-General, Department of Land and Water Conservation and Acting Deputy Director-General, Department of Infrastructure, Planning and Natural Resources. He has extensive experience in the NSW Government, having also worked in Treasury and the Office of a Minister.

### Sustainability

**Judi Hansen**
BSc(Biol), MSc(Microbiol), PhD(MarineEcol)
General Manager

Judi was appointed General Manager, Environment and Innovation in July 2001. The division was restructured to Sustainability in September 2003. Joining Sydney Water in 1990 as a marine scientist, Judi subsequently moved into environmental management and strategic planning. Her positions have included Environmental Manager, Clean Waterways Program, Manager, Group Product and Asset Planning, and General Manager, Strategy and Change. Prior to working for Sydney Water, her background was in academic research. Judi has held positions at CSIRO, the Australian Institute for Marine Science and the University of Sydney.

### Water Services

**Michael Keelan**
BE(Civ), MBA
General Manager

Michael was appointed General Manager, Water Services in July 2001. He joined Sydney Water in January 1975 as a civil engineering cadet and has worked in planning, hydraulics modelling, construction, and operations and maintenance. Since 1990 Michael has held senior management positions including Water Manager, Greater Western Region, Purchase and Delivery Breakthrough Manager, Manager, System Services and Business Development and Communications Manager, Distribution. Michael was General Manager, Network Services, Australian Water Technologies from April 2000 to June 2001.

### Business Services

**Michael Wandmaker**
BE(Mech&Comp) Group General Manager

Michael joined Sydney Water as Group General Manager, Business Services in April 2005. In his previous role as General Manager, Tyco Services, Electrical Mechanical Australia, Michael was responsible for an engineering design and construct business and a maintenance services business with more than 2200 staff across Australia. Prior to this he worked extensively for Siemens and Fluor Daniel. Michael’s other experience includes 20 years with the Royal Australian Navy Together with several engineering qualifications, he is also a qualified Fitter and Machinist.

### Responsible for effective and efficient operation of water and wastewater treatment, water quality monitoring services, environmental monitoring and management of Water Services, Human Resources, Occupational Health and Safety, and property assets.

### Responsible for reviewing and developing long-term plans for integrated water management, including water supply and demand balance and services to new growth, implementing sound environmental management practices and delivering the research and development program.

### Responsible for providing safe and efficient civil, mechanical and electrical maintenance and construction services using in-house and contracted resources.
To the Board and Stakeholders of Sydney Water Corporation:
Sydney Water Corporation (Sydney Water) commissioned URS Australia Pty Ltd (URS) to provide independent assurance of the non-financial content of this Sydney Water Annual Report 2006 (the 'report'). The report presents Sydney Water's sustainability performance over the period 1 July 2005 to 30 June 2006. Sydney Water was responsible for the preparation of the report and this statement represents the auditor's independent opinion. URS' responsibility in performing its assurance activities is to the management of Sydney Water alone and in accordance with the terms of reference agreed with them. Any reliance any third party may place on the Report is entirely at their own risk.

Assurance Objective
The objective of the assurance process is to provide stakeholders of Sydney Water with an independent opinion on the materiality, completeness and accuracy of the information presented in the report, and whether Sydney Water has responded to stakeholder concerns and adequately communicated those responses within the report. This is confirmed through an audit of the claims made, underlying systems, processes and competencies that support the report, as well as the extent to which policies and strategies relating to sustainability are embedded.

Assurance Process and Limitations
Our approach to assurance is based on the AA1000 Assurance Standard. This process was undertaken in September 2006 and involved:

- interviewing management and key internal stakeholders to ascertain their views on and responses to the material sustainability issues faced by Sydney Water, and the communication of these issues
- interviewing a selection of external stakeholders selected by the auditor to ascertain their views on the material sustainability issues faced by Sydney Water, and the communication of these issues by Sydney Water. A total of 11 interviews were conducted
- a review of Sydney Water’s key sustainability strategies, policies, objectives, management systems, background documentation and procedures for measurement, data collection and reporting
- a review of the report for any significant anomalies
- an overview of the extent to which Sydney Water’s key economic, environmental and social policies are embedded in the organisation
- the examination of the aggregation and/or derivation of, and underlying evidence for over 80 selected data points and statements made in the report, and interviews with key personnel responsible for collating and writing various parts of the report; and
- a review of external media sources relating to Sydney Water’s sustainability performance.

Our scope of work did not involve verification of financial data, other than that relating to environmental, social or broader economic performance.

Our Independence
URS was not responsible for preparation of any part of this report. URS has not undertaken any commissions for Sydney Water in the reporting period concerning reporting or data collection. Independence was ensured by selecting an assurance team that had no other involvement with Sydney Water during the reporting period that could impair the team’s independence or objectivity. The audit team comprised individuals with expertise in the water sector and in environmental and social performance measurement. The audit team has collectively undertaken over 60 assurance engagements in Australia over the past 10 years and is also led by a Lead Certified Sustainability Assurance Practitioner (Lead CSAP) accredited by the Independent Register of Certified Auditors (IRCA UK).

Sydney Water participated in a sustainability report benchmarking project initiated by URS, but due to the independent nature of this project there are deemed to be no conflicts of interest.
Our Opinion
Based on the scope of the assurance process, the following represents URS’ opinion:
• The findings of the assurance engagement provide confidence in the reporting processes established. The level of data accuracy was found to be within acceptable limits. Some additional improvements to data management, including the reduction of manual aggregation and transcription processes are recommended to reduce potential for minor anomalies. Data trails selected were easily identifiable and traceable, and the personnel responsible were able to reliably demonstrate the origin(s) and interpretation of data
• The statements made in the report appropriately reflect environmental, social and economic performance achieved during the period.

Overall, the auditor is satisfied that the report is an appropriate representation of Sydney Water’s environmental, social and economic performance during the reporting period.

Conclusions
• Materiality: Issues material to stakeholders have been considered and communicated appropriately within the report. Material environmental, social and broader economic aspects of Sydney Water’s sustainability performance are also appropriately addressed
• Completeness: The report was found to be complete in addressing key environmental, social and economic performance as well as all operations of Sydney Water, using the Global Reporting Initiative’s Sustainability Reporting Guidelines 2002 as a guide
• Responsiveness: Sydney Water has established robust stakeholder engagement mechanisms, and has recently undertaken stakeholder research to identify significant economic, environmental and social issues in its operations.

Recommendations
URS has provided suggestions for reporting improvement in a few areas, including a System Diagnostic Audit, staff training, a facilitated review of the report and a review of reporting folios. Assurance was affected by report timelines being shifted, but was managed with the assistance of Sydney Water personnel. Timing needs to be better managed in future years, perhaps by introducing a six monthly systems review coupled with the assurance process. These have been outlined in a more detailed report presented to Sydney Water management.

On behalf of the audit team
6 October 2006
Melbourne, Australia

Terence Jeyaretnam, Principal, URS
Principal, URS & Lead CSAP (IRCA UK)
Glossary and shortened forms

**ADWG:** Australian Drinking Water Guidelines.

**BASIX:** Building Sustainability Index.

**Beachwatch:** A branch of the NSW Department of Environment and Conservation responsible for monitoring and reporting of ocean beach water quality.

**Beneficial reuse:** The recovery of used materials for subsequent uses that deliver a net environmental benefit.

**Biosolids:** Solids from wastewater treatment that are processed into products suitable for beneficial use in horticulture, agriculture or forestry.

**BOO:** Build, Own, Operate.

**Catchment:** The area drained by a stream, lake or other body of water; areas that feed into dams; areas served by a wastewater or stormwater system.

**Climate corrected demand:** Customer demand for water that is adjusted to account for weather conditions significantly above or below average for that period, and which influence customer water use.

**CMP:** Conservation Management Plan; a plan to manage a State heritage asset.

**Conservation:** Use, management and protection of resources so they are not degraded, depleted or wasted, and are available on a sustainable basis for present and future generations.

**Contaminated land:** Land in which there is above-normal concentration of a substance that presents a risk of harm to human health or the environment.

**DCALB:** Diverse cultural and linguistic backgrounds.

**DEC:** Department of Environment and Conservation.

**Demand management:** Strategies to reduce water consumption by residential, commercial and industrial sectors.

**Desalination:** The process that removes salt from saline water to produce freshwater.

**DEUS:** Department of Energy, Utilities and Sustainability.

**DNR:** Department of Natural Resources.

**Dual reticulation:** A water supply system that provides two types of water services to each property. It requires two separate pipe systems in the roads and properties: a drinking water system suitable for indoor use and requiring high quality water, and a recycled water system for water that can be used outdoors and to flush toilets, etc.

**EAPS:** Ethnic Affairs Priorities Statement; a statement describing activities and plans concerning customers and stakeholders from diverse cultural and linguistic backgrounds (DCALB).

**Ecologically sustainable development (ESD):** Development that improves the quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

**EDC:** Every Drop Counts; the name of water efficiency programs run for business and the community.

**EEO:** Equal employment opportunity.

**Effluent:** A liquid waste product discharged to the environment; usually used to mean wastewater discharged from sewage (wastewater) treatment plants after having undergone all designed treatment processes.

**EMS:** Environmental Management System; the framework for the management of environmental issues.

**Environmental impact:** Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation’s activities, products and services.

**EPLs:** Environment Protection Licences issued by the Department of Environment and Conservation.

**EWON:** Energy and Water Ombudsman NSW; a body that provides an independent way of resolving customer complaints about member water providers and electricity and gas providers in NSW.

**Faecal coliforms:** Bacteria that inhabit the intestines of humans and other vertebrates and are present in faeces.

**Filtration:** A process for removing particles from a solution by passing it through a porous structure or medium, such as a screen, membrane, sand or gravel.

**FOI:** Freedom of Information.

**FTE:** Full-time equivalent.

**GL:** Gigalitre; measure of liquid volume equal to a billion litres.

**Greenhouse gas emissions:** Gases such as carbon dioxide, methane, nitrous oxide and other forms of air pollutants that result from the burning of fossil fuels such as coal, natural gas or oil, which contribute to the warming of the Earth’s atmosphere.

**Grit and screenings:** Hard and heavier solid matter removed during the initial wastewater treatment process, generally inorganic.

**Harbourwatch:** A branch of the NSW Department of Environment and Conservation responsible for monitoring and reporting on water quality in the harbour, bay and estuarine swimming areas of Sydney and Illawarra.

**Heavy metals:** Elements with a specific gravity greater than five.

**ICATS:** Integrated Instrument, Control and Telemetry System; a system that monitors and controls Sydney Water’s water and wastewater systems by transferring information from remote sites using computer and communications technology.

**IPART:** Independent Pricing and Regulatory Tribunal; the independent body that oversees regulation in the water, gas, electricity and public transport industries in NSW.

**Irrigation:** Controlled application of water for agricultural purposes through manmade systems to supply water requirements not satisfied by rainfall.

**L:** Litre; a measure of liquid volume.
Leakage: The difference between total drinking water drawn and the total used, including metered customer usage, estimated legitimate unmetered usage (e.g. fire fighting), water exported to other systems (e.g. recycled water systems), water illegally taken and customer meter under-readings.

LTIFR: Lost Time Injury Frequency Rate; a lag measure used to depict an organisation’s safety record by reporting the number of injuries/illnesses where one or more full days were lost due to a work related incident, per million hours worked.

Metropolitan Water Plan: An adaptive plan which sets out how the NSW Government will provide a secure supply of water to meet the needs of Sydney now and in the future.

ML: Megalitre; measurement of liquid volume equal to one million litres.

MoU: Memorandum of Understanding.

Nutrients: Compounds required for growth by plants and other organisms; major plant nutrients are phosphorus and nitrogen.

Operating Licence: Issued by the NSW Governor under the Sydney Water Act 1994 to enable and require Sydney Water to lawfully provide services within its area of operations.

Organic: Of animal or vegetable origin.

Ozone: A form of oxygen with three rather than the normal two oxygen atoms; a strong oxidising agent.

Pathogens: Potentially disease-causing microorganisms including bacteria, viruses, parasitic protozoa (Giardia and Cryptosporidium) and helminths (intestinal worms).

PAS: Payment Assistance Scheme; a scheme that offers financial assistance to customers in difficult financial circumstances.


Pollutants: Contaminants in water that, when in sufficient quantity, may cause environmental degradation.

Potable: Fit or suitable for drinking.

PSP: Priority Sewerage Program; a program that extends sewerage services to unsewered areas in Sydney Water’s area of operations.

Rainwater tank: On site storages to collect rainwater for beneficial use.

Receiving water: A stream, river, pond, lake or ocean that receives stormwater or wastewater/effluent discharges.

Recycled water: Highly treated wastewater that can be used in industrial processes, for irrigation in agriculture, urban parks and landscapes, and in the home for flushing toilets, car washing and waterering gardens; not for drinking or personal use.

Regulators: Organisations that set standards and guidelines.

Renewable energy: Electricity sourced from non-fossil fuel sources.

RIAMP: Reliability Improvement and Modernisation Program.

Sewage: The used water or wastewater that goes down the drains of homes, offices, shops, factories and other premises and is discharged into the wastewater (sewerage) system.

Sewage overflow: Any liquid that escapes from the sewerage system, including partially treated sewage discharged from a sewage (wastewater) treatment plant.

Sewerage (wastewater) system: The network of pipes, pumping stations and treatment plants used to collect, transport, treat and discharge sewage (wastewater).

Stakeholder: A stakeholder is any group or individual who can affect or is affected by an organisation’s activities.

State-based access regime: A regime that would open up the services provided by significant wastewater, drinking water and recycled water infrastructure to third parties, initially in the Greater Sydney and Hunter regions.

Statement of Corporate Intent (SCI): A statement specifying annual financial performance targets and key business directions agreed to with the Shareholder Ministers, based on Sydney Water’s revenue, operational and capital budgets.

Stormwater: Rainwater that runs off urban surfaces such as roofs, pavements, car parks, roads, gardens and vegetated open space; it is conveyed into local and trunk drainage systems to prevent flooding, and discharged to waterways including creeks, rivers, the harbour and ocean; treated stormwater can be harvested and reused for purposes such as park and golf course irrigation.

Stormwater drainage system: System of pipes, canals and other channels used to carry stormwater to receiving waters.

Stormwater Environment Improvement Program (SEIP): A program of improving stormwater quality in stormwater operating areas; part of Sydney Water’s contribution to the NSW Government’s Clean Waterways Program and Stormwater Management Plans.

Stormwater quality: Stormwater collected from roofs is of relatively high quality and can be harvested through rainwater tanks or redirected to gardens; stormwater flowing into Sydney Water’s trunk drainage system via local council drainage systems has usually travelled across roads and properties and can contain a range of pollutants such as litter, sediment, organic material, nitrogen, phosphorus, chemicals and metals.

Stormwater Quality Improvement Devices (SQIDs): Devices that help reduce the volume of litter, sediment and organic material in stormwater before it enters waterways, e.g. litter boom, sediment basins and gross pollutant traps.

Suspended solids: Particles in water that can be removed by sedimentation or filtration.

Sustainable water supply: Achieving a long-term balance between the ability of the system to capture and store supplies of water and the demand of current and future users, including the environment.

Sydney Catchment Authority: The NSW Government agency responsible for managing and protecting Sydney’s catchments and supplying bulk water to Sydney Water and a number of local councils.

Third party access: Opening up the services provided by significant wastewater, drinking water and recycled water infrastructure to third parties.
Trade waste: Any wastewater resulting from industrial or commercial activities; industrial or commercial wastewater that contains significant quantities of potential contaminants.

Trade waste agreements: Agreements between Sydney Water and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the wastewater system.

UV: Ultraviolet; a high-energy light used for disinfection.

Water efficiency: Preventing and reducing wasteful, uneconomical, impractical or unreasonable use of water resources.

Water cycle: The continuous cycle of water movement through the environment, including the oceans, atmosphere, surface water systems and groundwater.

Water supply network: System of water sources including dams, bores, treatment plants, pumping stations and distribution pipes used to supply drinking water on demand to customers.

Wetlands: A low-lying area inundated or permanently covered by shallow water, natural or manmade; capable of removing dissolved nutrients and metals from stormwater.
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Report details

Annual report comments, copies
If you have any comments on this annual report, or would like additional copies, you can write to Sydney Water at:

Email: annualreport@sydneywater.com.au
Mail: Sydney Water Annual Report 2006
PO Box A53
Sydney South NSW 1232

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The external production costs for the Sydney Water Annual Report 2006 are approximately $60,000. External production costs in 2006 include:

• photography
• proofreading
• design, production and printing 1750 copies
• design, production and burning of the CD containing the Appendix and Financial Statements.

CD contents
Annual Report PDF
Financial Statements PDF
Appendix PDF, containing:
• GRI Content Index
• Performance area indicator data and commentary
• Other statutory information:  
  – Attendance at Board and Committee meetings  
  – Executive performance and remuneration  
  – Overseas travel  
  – Expenditure on consultants  
  – IPART pricing table  
  – Research and development  
  – Social program funding  
  – Funds granted to non-government community organisations  
  – Freedom of information statistics 2005-06  
  – Ethnic Affairs Priorities Statement 2005-06  
  – WRAPP Statement 2005-06  
  – Heritage and conservation register 2005-06
• Special objectives

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