Sydney WATER

SYDNEY WATER ANNUAL REPORT 2005

ENVIRONMENTAL, SOCIAL AND ECONOMIC PERFORMANCE

CONTENTS

COVER

Renewing water mains involves disconnecting old pipes and replacing them with a new, sometimes larger pipe. Pipecracking installs a new main by bursting the old pipe and pulling the new pipe through the hole left by the old pipe, a method that greatly reduces the amount of excavation required.

Water Services construction worker Class 2, Quintino Ferreira, attaches a new 100 mm plastic pipe to the pipecracker in preparation for renewing a water main at Cooks Avenue, Canterbury.

LETTER TO SHAREHOLDER MINISTERS

The Hon Michael Costa MLC
Minister for Finance
Minister for Infrastructure and
Minister for the Hunter

Level 31
Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

The Hon JJ Della Bosca MLC
Special Minister of State
Minister for Commerce
Minister for Industrial Relations
Assistant Treasurer
Minister for Ageing
Minister for Disability Services and
Vice-President of the Executive Council

Level 30
Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

DEAR MINISTERS

REPORT ON PERFORMANCE FOR THE YEAR ENDED 30 JUNE 2005

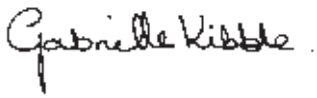
We are pleased to submit the Annual Report of Sydney Water Corporation for the year ended 30 June 2005, for presentation to Parliament.

This year's Annual Report presents an integrated sustainability reporting format, covering the Corporation's environmental, social and economic performance.

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 2004–05, which form part of the Annual Report, have been submitted to and certified by the Auditor-General of New South Wales.

Yours sincerely



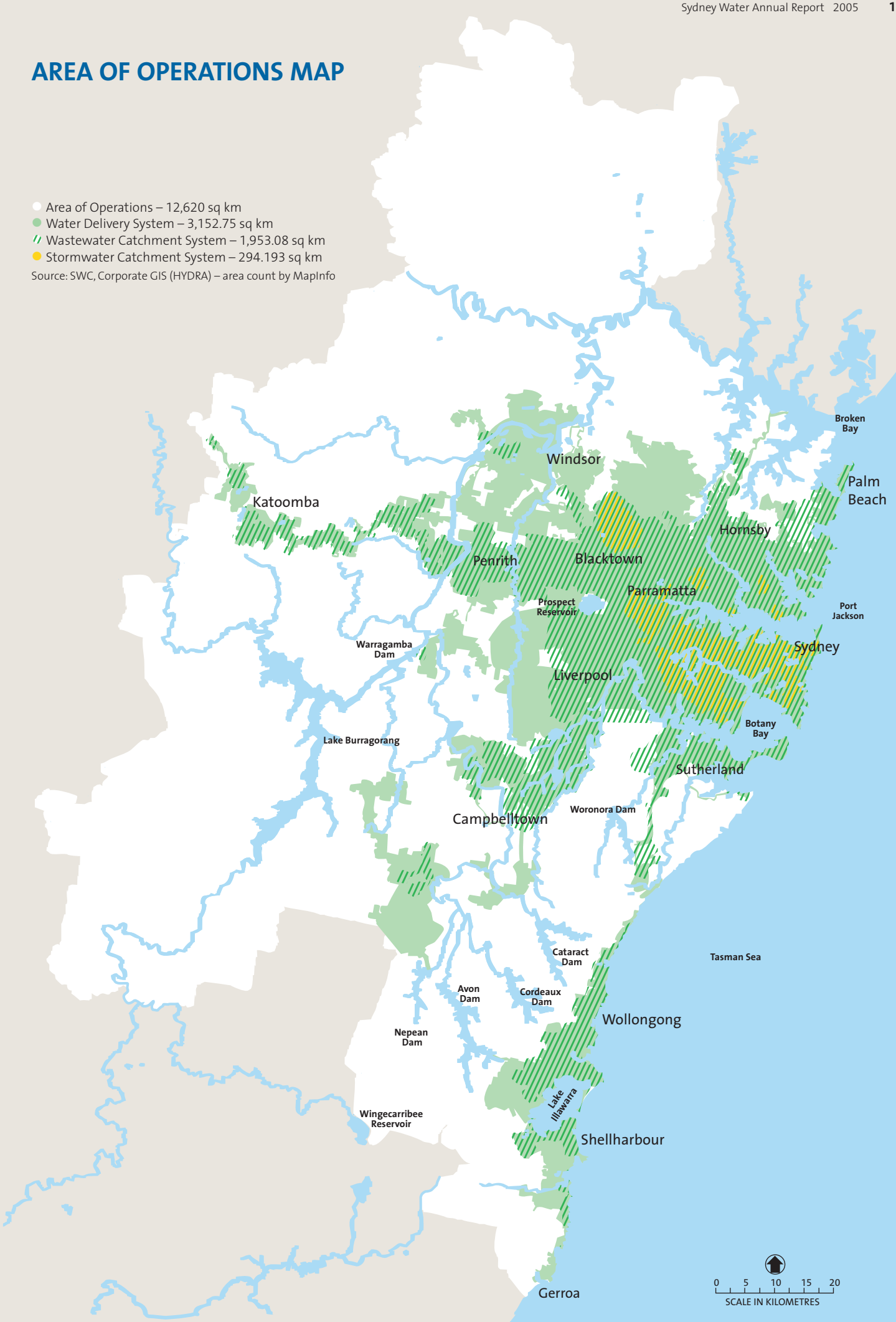
GABRIELLE KIBBLE
CHAIRMAN

DAVID EVANS
MANAGING DIRECTOR

AREA OF OPERATIONS MAP

- Area of Operations – 12,620 sq km
- Water Delivery System – 3,152.75 sq km
- Wastewater Catchment System – 1,953.08 sq km
- Stormwater Catchment System – 294.193 sq km

Source: SWC, Corporate GIS (HYDRA) – area count by MapInfo



WHO WE ARE

Sydney Water Corporation (Sydney Water) is the largest water services provider in Australia. With over 3,300 staff, Sydney Water has assets worth over $12 billion and an annual capital works program of more than $500 million.

A major contributor to the State's economy, Sydney Water is primarily responsible for supplying water, wastewater and some stormwater services to nearly 4.2 million people in Sydney, Illawarra and the Blue Mountains.

REGULATORY ENVIRONMENT

Operating in a highly regulated environment, Sydney Water's total obligations are defined by 62 pieces of legislation including numerous Environment Protection Licences (EPLs), its Operating Licence and a Customer Contract.

Sydney Water is fully owned by the people of New South Wales. An Operating Licence, issued under the Sydney Water Act 1994 and regulated by the Independent Pricing and Regulatory Tribunal (IPART), governs its activities. Sydney Water is also accountable under the State Owned Corporations Act 1989.

The Operating Licence reflects public expectations of performance and provides key regulatory drivers to ensure that Sydney Water maximises the community's investment in line with its objectives to protect public health, protect the environment and be a successful business.

A new licence was gazetted on 1 April 2005 and became effective on 1 July 2005.

Sydney Water's performance under the licence is assessed annually by an operational audit managed by IPART and presented to the Minister for Utilities who is required to table this advice in Parliament.

During 2004–05 Sydney Water also participated in the renewal of its 28 sewage transport system licences, one of which is held by Veolia Water Pty Ltd for the Gerringong-Gerroa system.

METROPOLITAN WATER PLAN

The NSW Government's Metropolitan Water Plan, released last year, outlines a mix of measures to address the immediate effects of drought and to secure Sydney's water supply in the long term.

Sydney Water is one of a number of government agencies to provide advice and input into the plan, and is implementing a number of the plan's key initiatives.

The plan recognises that there is no one solution to guarantee our water supply in the future, but that a multi-pronged approach – with a range of demand and supply measures – will ensure our water supply.

It also recognises that the challenge of a secure water supply necessitates a strategic, whole-of-government approach in partnership with business and the wider community.

Key initiatives of the plan include building new infrastructure to enhance water supplies, water conservation and demand reduction measures, increased recycling initiatives and actions to improve our environment.

In particular, Sydney Water is responsible for continuing and in some cases accelerating existing programs including:

- installing water efficient fittings in households and Department of Housing properties
- rainwater tank rebates
- the Every Drop Counts Business Program
- garden and landscape water efficiency programs
- school education
- the BlueScope Steel recycling scheme
- expansion of the Rouse Hill residential recycled water scheme
- the leakage reduction program.

Further new programs for investigation and development by Sydney Water include:

- a pressure management program
- planning for and building a desalination plant
- a trial of water meters in multi-unit buildings
- progressing recycling plants at North Head and Malabar Sewage Treatment Plants (STPs) and meeting targets to reduce drinking water used at all STPs
- providing recycled water to new homes in the Hoxton Park development area
- further recycling schemes.

Sydney Water is also committed to assisting other government agencies in implementing:

- pricing and tariff restructuring
- appliance labelling and standards
- the Water Savings Fund
- the Building Sustainability Index (BASIX), including its expansion to commercial developments and existing homes.

WHAT WE DO

Water Services

Sydney Water supplies more than 1.4 billion litres of water to more than 1.6 million homes and businesses each day.

Buying bulk water from the Sydney Catchment Authority (SCA), Sydney Water is responsible for treating it and distributing it as drinking water in the Greater Sydney region. About 80 per cent of our supply comes from the Warragamba Dam.

The water is treated in accordance with the Australian Drinking Water Guidelines at 10 water filtration plants (WFPs) with the largest plant at Prospect treating more than 80 per cent of Sydney Water's 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.

Sydney Water then distributes the water to customers via a network of 255 service reservoirs, 151 pumping stations and 20,960 km of water mains which include 291 km of recycled water mains.

Wastewater Services

Sydney Water collects and treats more than 1.2 billion litres of wastewater each day. Of this, Sydney Water recycles around 35 million litres daily.

The sewerage network consists of 23,247 km of sewer pipes and 662 sewage pumping stations (SPSs) in 28 separate sewerage systems.

Collected wastewater flows to 31 STPs where it is treated before being reused or discharged to rivers or the ocean in accordance with strict licence conditions issued by the Department of Environment and Conservation (DEC).

Around 75 per cent of wastewater is processed at the three biggest plants at Malabar, North Head and Bondi. The effect of discharges on water quality and aquatic life is monitored every week to ensure performance standards are met.

Stormwater Services

Local councils manage most drainage, however, Sydney Water provides stormwater drainage facilities to more than 465,000 homes and businesses, about 28 per cent of its total customer base, and maintains the hydraulic capacity of its system.

Sydney Water operates 436 km of mainly large trunk stormwater channels, mostly in the south and south-western suburbs of Sydney, in a way that minimises the pollution of waterways and mitigates flooding risks.

Sydney Water also operates and maintains stormwater pollution control devices, with approximately 1,859 cubic metres of rubbish and 2,060 tonnes of sediment collected by gross pollutant and sediment traps in the past year.

Recycled Water

Sydney Water has a number of water recycling schemes in place that help reduce discharges of treated wastewater to the environment and reduce demand on existing and future water supplies.

Since 1995, the use of recycled water has increased from 6.2 to approximately 12.8 billion litres a year, almost 35 million litres a day, through greater use of recycled water at Sydney Water's own STPs, and the commissioning of various recycled water schemes including the Rouse Hill residential scheme which currently services more than 15,000 homes.

OUR VISION, VALUES AND OBJECTIVES

Sydney Water takes an open, participatory and proactive approach to addressing its social, economic and environmental responsibilities.

VISION

Sydney Water's vision is to be a successful business that protects the environment and public health through the provision of sustainable water services to the communities it serves.

VALUES

Sydney Water's values underpin everything it does. They are to:

- **respect people**
- **deliver quality**
- **care for the environment**
- **be open and honest**
- **be willing to learn, share and change.**

OBJECTIVES

To realise its vision, Sydney Water pursues three equal, principal objectives:

- **protect public health**
- **protect the environment**
- **be a successful business.**

OUR SERVICES AT A GLANCE

WATER SERVICES	2004–05	2003–04
Estimated population supplied by Sydney Water at 30 June[+]	4,227,570	4,189,081[◊]
Properties with a water main available at 30 June[*]	1,684,617	1,661,394
Number of water meters in operation at 30 June	1,252,681	1,243,353
Total quantity of drinking quality water supplied for all purposes	526,367 ML	562,746 ML
Average day's consumption of drinking quality water for all purposes[#]	1,406 ML	1,500 ML
Per person consumption per day based on average population for period for drinking and non-drinking purposes[++]	342 L	369 L
Total estimated amount of drinking water saved through Demand Management Programs since 1999	34,574 ML	29,405 ML
Total length of drinking water mains owned and operated by Sydney Water at 30 June[~]	20,669 km	20,588 km
Drinking water mains laid during year	70 km	115 km
Drinking water mains laid – data lag from previous year	68 km	26 km
Drinking water mains renewed during year	91 km	54 km
Water mains inspected through active leak detection and repair	7,988 km	7,102 km
Amount of drinking water saved through leak detection	16,800 ML/year	15,100 ML/year

RECYCLING	2004–05	2003–04
Estimated residential population receiving non-drinking recycled water at 30 June for non-drinking purposes	45,700	42,800
Residential properties receiving non-drinking recycled water at 30 June	15,245	14,270
Commercial, industrial properties receiving non-drinking recycled water at 30 June	81	77
Total amount of non-drinking recycled water supplied	12,751 ML	14,324 ML
Estimated amount of drinking water saved through recycling during year	4,076 ML	4,037 ML
Total length of recycled water mains owned and operated by Sydney Water at 30 June	291 km	279 km
Recycled water mains laid during year	6 km	11 km

WASTEWATER SERVICES	2004–05	2003–04
Estimated population served by Sydney Water at 30 June[+]	4,101,160	4,060,689[◊]
Properties for which a sewer was available at 30 June[*]	1,634,608	1,610,804
Amount of wastewater collected during year (excluding Sydney Olympic Park Authority, SOPA)	453,969 ML	451,907 ML
Amount of wastewater recycled (reused) during year	2,757 ML	2,701 ML
Total length of sewer mains owned and operated by Sydney Water at 30 June[~]	23,247 km	23,014 km
Sewer mains laid during year	166 km	96 km
Sewer mains laid – data lag from previous year	78 km	64 km
Sewer mains rehabilitated during year	91 km	65 km

STORMWATER SERVICES	2004–05	2003–04
Stormwater channels under Sydney Water control at 30 June	436 km	436 km
Properties with drainage available at 30 June[*]	465,864	456,808

+ Estimated population is based on the most recent information available from the Department of Infrastructure, Planning and Natural Resources (DIPNR) and relates only to properties serviced by Sydney Water

++ Average population for reporting period is calculated from the figures at 30 June 2004 and 30 June 2005, which equals 4,208,326

◊ Updated in line with revised information provided by DIPNR. The revised figures are calculated from the final Estimated Resident Population provided by the Australian Bureau of Statistics

* 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

\# Does not include unfiltered water supplied to BlueScope Steel

~ Total length of water and sewer mains in reporting year 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 during the reporting year

A more detailed summary of Sydney Water's principal statistics for 2004–05 is available in the Annual Report Appendix on the CD attached to the inside back cover of this report.

TURNING VISION INTO ACTION

Sydney Water's vision, objectives and values are delivered via a strategic framework of policies and plans that are coordinated under WaterPlan 21, the Corporate Plan, the Statement of Corporate Intent (SCI) and the Environment Plan.

WaterPlan 21

WaterPlan 21 provides strategic direction for Sydney Water. It is designed to provide sustainable water and wastewater services to meet the needs of the growing populations of Sydney, Illawarra and the Blue Mountains. It establishes clear goals:

- clean, safe drinking water
- sustainable water supplies
- clean beaches, ocean, rivers and harbours
- wise resource use
- smart growth.

Corporate Plan

Sydney Water's 2003–08 Corporate Plan is our medium-term business plan. It identifies corporate initiatives, actions and associated performance measures for a five-year period and is designed to move the organisation forward to achieve its long-term goals.

The plan's key focus areas for 2004–05 were identified as:

- balancing water supply and demand
- wastewater management
- sustainable business
- service provision in a regulated environment
- new customers
- developing workforce capability and culture.

A snapshot of Sydney Water's performance against its Corporate Plan in 2004–05 is presented on page 8.

Statement of Corporate Intent

The Statement of Corporate Intent specifies annual commercial performance targets. Information on Sydney Water's commercial performance begins on page 40.

Environment Plan

The 2000–05 Environment Plan outlines how Sydney Water worked to minimise adverse effects on the environment while performing its environmental and social functions as a major water and wastewater services provider.

A new Environment Plan 2005–10 was released on 30 September 2005, following public consultation. The plan will be reviewed annually to reflect changes in environmental performance, Sydney Water's operating environment, and stakeholder feedback.

Submissions regarding environmental performance reported in this Annual Report will be considered when reviewing the Environment Plan annually.

Copies of all relevant plans and policies are publicly available through Sydney Water's website **www.sydneywater.com.au**

Sydney Water's Sustainability

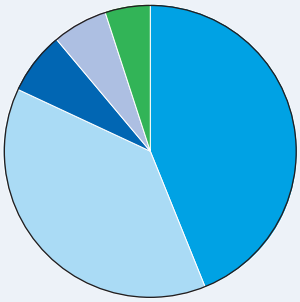
The sustainability of Sydney Water's operations is measured through a suite of key signposts. Our 2004–05 performance against these is summarised in the Sustainability Snapshot on page 12.

Sydney Water recognises its obligation to ensure its staff are aware of the principles of ecologically sustainable development (ESD) and is committed to their implementation.

At 30 June 2005, around 2,500 Sydney Water staff had completed ESD Awareness training. Other achievements in addressing sustainability include the development of a Sustainability Scorecard which incorporates ESD principles into Sydney Water's corporate goals. Progress against this scorecard will be reported from 2005–06.

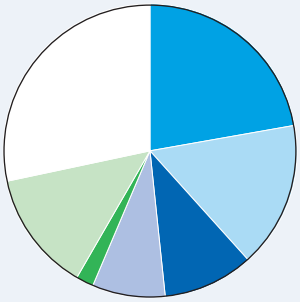
FINANCIAL HIGHLIGHTS

OPERATING REVENUES ($1,429M)



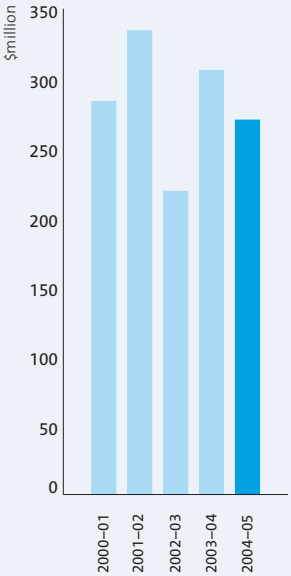
- 44% Service charges
- 38% Usage charges
- 7% Developer contributions
- 6% Social programs subsidy
- 5% Other revenue

OPERATING EXPENSES ($1,159M)

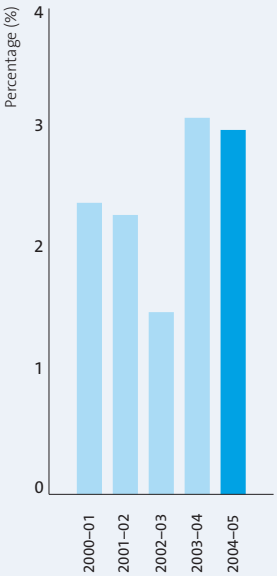


- 22% Employee benefits
- 16% Depreciation and amortisation
- 10% Bulk water purchase
- 8% Tariff expense – WFP agreements
- 2% Asset writedowns
- 13% Borrowing expense
- 29% Other operating expense

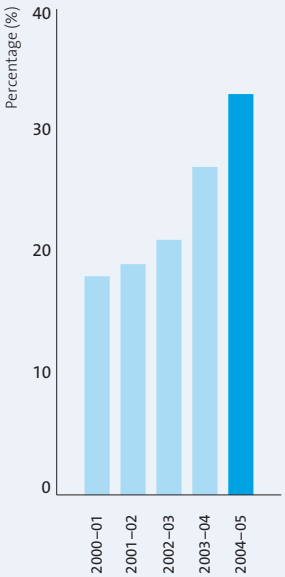
OPERATING PROFIT BEFORE INCOME TAX



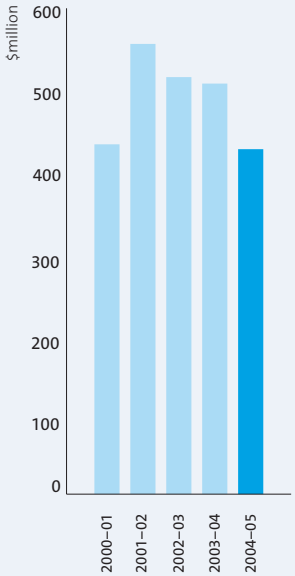
RETURN ON NET OPERATING ASSET



DEBT TO EQUITY 2000–01 TO 2004–05



CAPITAL EXPENDITURE 2000–01 TO 2004–05



FINANCIAL PERFORMANCE (in $M)	2001	2002	2003	2004	2005
Revenue from ordinary activities	1,453.8	1,537.2	1,518.3	1,428.5	1,429.1
Profit from ordinary activities before income tax expense	283.5	334.5	218.7	305.9	270.1
Income tax expense relating to ordinary activities	120.3	151.4	93.1	36.4	55.0
Net profit	163.2	183.1	125.6	269.5	215.1
Dividends paid	103.7	53.4	110.0	115.0	115.0

CHAIRMAN'S MESSAGE

The long-term drought across much of Australia and the uncertainty of climate change have been defining issues for the Australian water industry over the past year.

These, combined with population growth including the creation of new urban sectors and the growing expectations of customers and regulators, present considerable challenges for Sydney Water's future.

The prolonged drought has kept the spotlight on planning for a sustainable water supply. In October 2004, the NSW Government released its Metropolitan Water Plan to secure a reliable water supply for Sydney over the next 25 years. The plan recognises that government agencies, councils, businesses and householders all have a part to play.

Sydney Water has responsibility for implementing a number of the initiatives outlined in the plan, including extending our extensive demand management program and building a desalination plant. I would also like to acknowledge the substantial effort the community has made in reducing their water consumption.

More recently, IPART announced a new pricing structure for our services for the next four years. Importantly, the new prices will fund the investment required to maintain, improve and extend our services, while encouraging the community to save water. The new price path provides a sound basis for providing water services to a growing city.

In December 2004, the NSW Government asked IPART to provide advice on alternative arrangements for the delivery of water-related services in the Greater Sydney region. Sydney Water already outsources around 90 per cent of our more than $500 million capital works program to the private sector. Given the recommendations in the recent draft report, it is anticipated there could be increased opportunities for private sector involvement in the water and wastewater industry.

More than ever before, it is critical for our long-term viability to demonstrate that we are commercially prudent in our business planning. This means delivering reliable and affordable services that meet our public health and environmental responsibilities, are economically efficient and provide an appropriate return to our shareholders.

The Asset Management sub-committee of the Board is responsible for endorsing the annual asset investment program, ensuring systems and processes for asset planning are appropriate, and reviewing the performance and delivery of the investment program.

Sydney Water purchased more than $960 million of products and services this year. While we already have strong governance systems in place, it is essential that we continually focus on achieving efficiencies in procurement. To achieve this, we have developed an enhanced procurement strategy to improve our processes and outcomes.

Sadly, the deaths of two of our staff recently have underlined the fact that there needs to be a continued focus on safety in Sydney Water. Through the recent establishment of a Safety Improvement Committee, with representation from the Board and involvement of management and staff, and the introduction of preventative lead indicator reporting, our goal is to develop a work environment that is focused not only on avoiding safety-related incidents, but also on maintaining safe actions and behaviours at all times.

In September of last year we welcomed John Brown as a new non-executive member of the Board. As Chair of the Audit Committee, John brings significant experience in financial due diligence and risk management to Sydney Water.

On behalf of my colleagues on the Board, I would like to thank Managing Director David Evans, management and staff for their continued commitment and focus during such challenging times.

Gabrielle Kibble

GABRIELLE KIBBLE
CHAIRMAN

"I would also like to acknowledge the substantial effort the community has made in reducing their water consumption"

CORPORATE PLAN SNAPSHOT 2005

Key focus area	Action	Measure	Performance	Comment
Balancing Water Supply and Demand	Continue Demand Management Program to meet Operating Licence targets	Operating Licence target of <364 L per person/day by 30 June 2005 (for an average year)	342 L per person/day Approx. 400 L per person/day (after excluding impact of water restrictions)	Sydney Water developed a demand management strategy in 1995 which is now potentially the largest delivered by an Australian utility and believed to be one of the biggest and most diverse urban demand reduction programs internationally. A total of $107 million in operating and capital expenditures has been committed on a wide range of programs specifically targeting demand reduction. Program achievements are outlined on page 14 of this report. A significant reduction of 20 per cent has been achieved since 1991. While this is below the 28 per cent set out in the Operating Licence, this is due primarily to initial predicted savings not matching actual savings, and assumptions of community behavioural change. Sydney Water will continue to focus on its demand management program, including a significantly increased leakage reduction program, and is on track to meet the revised Operating Licence demand management target of 329 L per person/day by 2011.
	Provide funds to encourage private sector investment in recycled water and water efficiency	Funds provided to Department of Energy, Utilities and Sustainability (DEUS)	Achieved	Included in IPART price determination 2005.
	Invest in commercially-viable recycled water schemes	Rouse Hill system (30,000 homes by 2020)	Stage 3 is being serviced	On target.
		Extension of Illawarra Scheme (8 ML/day)	In planning stage	On target to meet anticipated delivery in 2008–09.
		Hoxton Park and adjacent areas	In planning stage	On target to meet anticipated delivery in 2007–08.
		Local recycling from STPs	12,751 ML reused	Made up of 10.9 per cent reuse volume for inland STPs and 1.6 per cent reuse for ocean STPs. On-site usage at STPs represents the major component of recycled water use (77 per cent), followed by off-site usage by golf courses and farm irrigation schemes.
	Continue strong investment in leak detection, repair and maintenance	7,000 km of water mains scanned for hidden leaks	8,000 km scanned	The sustainable leakage reduction achieved since the program began in 1999 is estimated to be 25 per cent, or 45.6 ML/day. We will pursue this reduction further, aiming to reduce leakage by another 25 per cent by 2009 through a suite of programs including: • increased scanning of 18,000 km of mains/year for leaks • implementing pressure reduction programs in key areas • delivering a flow meter installation program to help target leaky areas • continuing with water main renewals • responding faster to stop leakage from the system.
		Renew 54 km of reticulation and 12 km of trunk mains	88 km and 2 km renewed respectively	The reduction in trunk main renewals was due to improved leakage performance of major above-ground pipelines and detailed assessment of pipe conditions. This enabled us to defer replacing the Prospect to Pipehead 1800 mm pipeline.
	Continue to manage the drought through communications, enforcement and other programs	Annual demand <565,000 ML	526,000 ML	Ongoing water restrictions avoided water demand from storages exceeding the target.
Wastewater Management	Improve system performance in dry weather	<25,000 properties affected by sewer overflows	21,462 properties affected	Target achieved.
		<60 chokes/100 km	7 out of 32 sewer catchments complied	While sewer network performance has improved since 2002–03, a number of Sewer Catchment Asset Management Plan (SCAMP) areas did not meet this DEC licence condition despite significant maintenance effort. The ongoing drought has impacted control of aggressive tree root invasion of sewers. Review by Sydney Water and DEC of system licences in 2004–05, proved this indicator not to be a good measure of impact on waterways. It also overlapped with the Operating Licence indicator of properties affected by sewer overflows – most chokes do not impact waterways.

Key focus area	Action	Performance	Comment
			Consequently, amended licence conditions include a new environmental indicator – sewer overflows to waterways – and set specific targets to be achieved by each SCAMP by 2010. Work programs in 2005–06 will focus on catchments where there is a higher number of events impacting waterways and will include: • quick response to overflow events to limit environmental impact • permanent fixes, e.g. sewer lining, for repeat events to prevent recurrence • a preventative program of CCTV inspections and pipe lining where overflow problems are forecast – a practice highly successful in reducing overflows to sensitive waterways.
	Improve wet weather performance in the Blue Mountains	On track	Blue Mountains sewer rehabilitation wet weather overflow abatement program nearing completion.
	Achieve no deterioration in performance in the remainder of the systems	Progressing	Indicators and targets finalised with DEC for new EPLs with effect from 1 July 2005.
	Determine priorities for future improvements in wet weather performance	On track	New DEC licensing framework for 2005–10 reflected in Sydney Water's price submission. Key focus addressing overflow hotspots between 2005–08. A Pollution Reduction Program (PRP) exists to review long-term targets for reductions in wet weather overflow for all systems.
	Upgrade South Creek catchment to accommodate population growth	On track	Commenced planning to identify known Sydney Water and developer-funded investments.
	Deliver Priority Sewerage Program (PSP) to meet government commitments	On track	• Northern Illawarra Towns Sewerage Scheme complete. • Jamberoo Sewerage Scheme construction complete. • The Oaks/Oakdale/Belimbla Park Sewerage Scheme is 91 per cent complete. • Construction of the Mulgoa, Wallacia and Silverdale Sewerage Scheme is 17 per cent complete. • Brooklyn/Dangar Island Sewerage Scheme – Representations Report submitted to DIPNR. Negotiations underway with Gosford City Council over ownership model for shared infrastructure. Construction scheduled to commence in 2006.
Sustainable Business	Ensure pricing submission to IPART results in prices which reflect efficient operating costs and an appropriate return on capital	Submissions completed	IPART efficiency review completed with generally favourable report on Sydney Water. Final IPART determination allows for maintenance of financial sustainability.
	Undertake business reform to gain process efficiencies and improved understanding of assets	On track	Operating costs have been reduced through office consolidation and process improvements. Significant savings in capital expenditure program achieved over past two years through procurement efficiencies – primarily project bundling and alliance contracting.
	Measure		
Service Provision in a Regulated Environment	Focus on core business of provision of water and wastewater services Meet regulatory targets	Full compliance with regulated targets, with two exceptions	Favourable Operating Licence Audit Report received in 2004–05, with two exceptions: • on-time interim response to complaints • water conservation.
New Customers	Provide recycled water to assist customers to achieve 40 per cent reduction in water consumption	On track	Recycled water schemes will be provided to new growth areas – North West Sector, South West Sector, Bay/West and Rhodes, Warriewood and Penrith – over next 10 years.
	Provide wastewater systems that maintain the quality of the natural environment	On track	The environment is managed during construction by project environment management plans, and during operations by the Wastewater Integrated Management System (WIMS), and compliance with DEC system licences.
	Innovate ways to service new developments on the urban fringe	Progressing	Memorandum of Understanding (MOU) entered into with Australand and Landcom to provide water efficient developments at new development sites, eventually housing almost 28,000 people.
	Measure		
Developing Workforce Capability and Culture	Strengthen safety culture LTIFR <10	LTIFR = 14.8	One fatality during 2004–05. Lost Time Injuries Frequency Rate (LTIFR) has risen over past 14 months. A Safety Improvement Committee was established at Board level in 2004–05. Line management accountability has been strengthened and a more rigorous monitoring and reporting framework has been developed.
		Projects on track	Key safety projects are on track including four high-risk mitigation projects – electrical safety, network protocols, flow isolation, and fall protection. The Health and Wellness Program is operating to plan.
	Develop a performance culture	On track	Performance Leadership Programs developed and delivered, along with the Giving and Receiving Feedback Program for senior managers.

MANAGING DIRECTOR'S MESSAGE

Greater Sydney has been experiencing the longest drought on record since the 1930s and is potentially facing the worst drought for 100 years.

Across Australia, droughts have historically been managed and water supplies stabilised simply by restricting consumption. In June 2005, Level 3 water restrictions were introduced in Sydney as dam levels dropped below 40 per cent. Since mandatory restrictions were introduced in October 2003, the community of Greater Sydney has saved more than 139 billion litres of water.

Securing Sydney's Water Supply

The NSW Government's Metropolitan Water Plan, released in October 2004, outlines a mix of measures to address the immediate effects of drought and also long-term supply and demand measures.

The current drought has served to emphasise the need for a sustainable water supply that will enable Sydney's growth to be adequately serviced while protecting natural resources.

This will be achieved through water conservation, leakage reduction, pricing of water to reflect its scarcity, education, encouraging conservation and finding alternative sources of water such as recycled wastewater, stormwater and rainwater tanks, groundwater supplies and desalination.

Under the Metropolitan Water Plan, Sydney Water was tasked with undertaking a thorough investigation of desalination. After five months of work by a team of local and international experts to develop a feasibility study on desalination, the NSW Government announced the industrial area of Kurnell peninsula as its preferred location.

Achieving long-term sustainability also involves smart growth. This requires servicing a growing population in existing and undeveloped areas in ways that are less reliant on stored water supplies and limits additional pollution loads to waterways. In all cases this means considering the unique condition and needs of each development to find the best solution for their water and wastewater services.

New recycling schemes that are either in the planning or construction stages will help provide immediate reductions in the use of drinking water. For example, later this year a major milestone will be achieved when 20 million litres of recycled water a day is delivered from Wollongong STP to BlueScope Steel. This will save 7.3 billion litres of drinking water a year, increasing the volume of wastewater recycled each year across Sydney to more than 20 billion litres.

During the year we continued to roll out our extensive demand management programs which have helped reduce per capita water use by 20 per cent since 1991.

More than 270 businesses are now part of our Every Drop Counts Business Program, helping to save billions of litres of water a year and more than 282,000 households have had water efficient devices installed in their homes. Under the Metropolitan Water Plan, Sydney Water will accelerate this to reach 500,000 households by July 2007.

Reducing demand and maintaining public confidence and support also relies on the proper maintenance of the water supply network to minimise water losses through leakages and main breaks. This is especially true in times of drought when we are asking the community to save water.

Sydney Water has steadily increased its level of investment in maintenance, inspection and leak reduction initiatives, which has resulted in a 25 per cent decrease in leakage from the network since 1999.

Over the next four years we will spend $300 million to reduce leakage by a further 25 per cent. As part of this, we will check 18,000 km of our water mains for hidden leaks each year, replace around 300 km of water mains and improve our response time to water main breaks and leaks.

"Sydney Water has steadily increased its level of investment in maintenance, inspection and leak reduction initiatives"

Protecting the Community's Investment

In September this year, IPART released its final determination on pricing for our services over the next four years.

IPART's determination reduces the fixed water charge and increases the water usage charge. This gives customers greater ability to reduce their water bills if they save water and better reflects the value we must all now place on water.

The new prices mean we can also push ahead with our $2.4 billion program of capital works to provide infrastructure for a growing city. This includes renewing and expanding water mains to service growth, maintaining existing standards and fixing leaks, investing in recycling schemes in new development areas, upgrading STPs and wastewater infrastructure, and improving and upgrading sewer mains and pumping stations.

As outlined by the Chairman, IPART also recently released a draft report on industry structure, which recommends competition based on reasonable commercial conditions. Sydney Water certainly welcomes competition and access to the industry, provided it is in the public's interest.

Improving Service Quality and Efficiency

Customers and regulators expect improving standards of service and efficiency. It is therefore pleasing to report that customer satisfaction with water and wastewater services, as measured through our Annual Residential Customer Survey, remained high with 91 per cent of residential customers satisfied with their tap water, and 83 per cent remaining satisfied with the sewerage system.

While many gains in service standards have been achieved there is still a need for further gains both in service levels and efficiency.

Sydney Water has established a number of major improvement projects. These include achieving efficiencies in the delivery of asset maintenance, office and depot consolidation and property rationalisation.

We are also working on reducing sewer overflows through a refocused Overflow Abatement Program, in line with DEC's licence requirements for long-term wet weather overflow abatement.

Each year, an independent audit of our Operating Licence is carried out. We performed well in the 2003–04 audit with full to high compliance for 86 per cent of requirements. In particular, the audit stated that 'the quality of drinking water supplied to customers is generally of an excellent standard'.

During 2004–05, Sydney Water participated in the end-term review of its licence and the renewal of its 28 sewage transport system licences. Our new Operating Licence, which came into effect on 1 July 2005, reflects the shifting public expectations of Sydney Water's performance.

It lists the required standards for drinking water quality, infrastructure performance, customer rights, system performance and environmental management, as well as targets for demand management, water conservation and wastewater recycling.

Focusing on Safety

The tragic deaths of two of our employees in January and August this year are a stark reminder of how crucial safety is to everyone at Sydney Water.

This loss of life is totally unacceptable and we are taking significant steps to broaden our approach to driving ongoing and tangible improvements to safety. We have conducted a rigorous review of our safety systems, procedures and resources. All managers are now required to provide leadership of the improved safety focus in their daily management responsibilities and to support this we have included safety in performance agreements and position descriptions.

Other steps to drive improvement will be achieved through encouraging more staff involvement in our safety programs, better identification and management of risks, diligent selection of contractors and subcontractors, and being rigorous in our health and safety monitoring, reporting and incident investigation.

Developing and Supporting Our People

Sydney Water's goal is to have a capable and committed workforce that can effectively and efficiently deliver our corporate objectives.

Over the past year, our focus has been on further strengthening our leadership and management capabilities, and succession planning. A strong driver for action is the age profile of our staff which may result in significant knowledge and skill leaving the organisation in the coming years.

A second area of focus is to improve individual and team performance, thereby increasing productivity and customer service. Stronger levels of employee engagement and satisfaction will be critical to achieving improved capability and performance.

During 2004–05, our organisational structure was modified to clarify the accountabilities of senior managers and place functions where there are synergies together in the one division. The new organisational structure is aimed at simplifying and focusing asset management and the regulatory interface, and supporting key business areas.

Sydney Water will continue to undergo change to ensure we keep pace with the increasing expectations of our customers and regulators. However, our aim is to facilitate change efficiently and with minimal disruption to staff and the organisation.

I would like to acknowledge the Chairman and other Board members for their direction and support, and I have also greatly appreciated the dedication and enthusiasm of staff across all areas of Sydney Water during what has been a very challenging year.

DAVID EVANS
MANAGING DIRECTOR

SUSTAINABILITY SNAPSHOT

Sydney Water has measured its environmental, social and economic performance in 2004–05 against a number of key signposts, assigning a progress rating.

▲ = On track
Evidence demonstrating a positive long-term trend in relevant indicators towards the objective.

● = Inconclusive
No clear trend in relevant indicators towards or away from the objective. Mixed results, positive trends for others towards the objective.

■ = Needs more work
Evidence demonstrating a negative long-term trend in relevant indicators away from the objective.

	Signposts	Progress rating	Comment	Further detail
ENVIRONMENTAL	Water Conservation and Recycling	■	Significant savings have been achieved through demand management. Although 2004–05 targets have not been met, Sydney Water is on track to meet the 2010–11 target.	14
	Sewage Treatment System	▲	Plant upgrades and optimisation continue to deliver planned operational outcomes.	18
	Sewage Transport System	■	Achieved Operating Licence target of properties affected by dry weather sewer overflows but ongoing drought has impacted control of aggressive tree root invasion of sewers.	18
	Recycling of Treatment By-products	▲	100 per cent captured biosolids reused and water treatment residuals reused or stored on site for later use.	20
	Stormwater Management	▲	Revised capital program and ongoing operations are delivering positive environmental outcomes.	21
	Trade Waste Management	▲	Education and partnership with industry continue to enable Sydney Water to meet all quality requirements for wastewater and biosolids.	22
	Waste Minimisation	▲	The percentage of waste recycled continues to improve with internal commitment and cooperation with suppliers.	24
	Heritage and Natural Resource Management	▲	Sydney Water maintains a strong commitment to natural resources and cultural heritage.	25
	Energy Management	●	Sydney Water continues to focus on energy management to drive efficiency to offset the effects of population growth and increased standards.	26
	Environmental Management Systems (EMS)	▲	Sydney Water's certified EMS is strengthening the environmental management practices of our staff and partners.	27
SOCIAL	Safe and Reliable Water Services	▲	Drinking water quality compliance and service reliability achieved.	28
	Investing in the Community	▲	Continued to build on relationships with partner organisations and support educational campaigns and programs.	30
	Affordable Services	▲	Continued to protect rights to affordable services.	30
	Improving Customer Service	▲	More than eight in 10 customers satisfied with level of service received. New customer contact system delivers improved level of customer service.	31
	Open and Honest Relationships	●	Customer satisfaction for water and wastewater services increased over previous year, however, overall trust in Sydney Water declined marginally.	32
	Transparency of Operations	▲	An upward trend in information requests reflecting increasing community awareness of privacy issues and freedom of information.	33
	Protecting Health and Safety	■	Increasing focus on Health and Safety following a fatality and a worsening trend in LTIFR.	35
	Capable and Committed Workforce	●	No clear long-term trend in relevant indicators, however, a strategy has been developed and implementation is on track.	36
ECONOMIC	Financial Performance	●	Despite underlying operating costs remaining under control, overall financial performance constrained by the impact of the drought on both revenue and expenditure.	40
	Capital Expenditure and Maintenance	●	Total capital expenditure less than budgeted due to increased efficiencies, project deferrals and scope reductions.	44
	Pricing Reform	▲	Seeking cost reflective prices that encourage efficient use of services.	47
	Social Program Activities	▲	Continued to administer subsidies and rebates to a variety of customers.	48
	Research and Development	▲	Collaborative research outcomes provided demonstrable improvements in relation to environmental performance of assets. Research underway to improve responsiveness to events which impinge on asset lifespan and integrity.	48
	Managing Risk	▲	Risk Management is a key informational input into major processes and a critical element of Sydney Water's overall business strategic management.	51

INDEPENDENT ASSURANCE STATEMENT

URS

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 2005 (the 'report'). The report presents Sydney Water's sustainability performance over the period 1 July 2004 to 30 June 2005. Sydney Water was responsible for the preparation of the report and this statement represents the auditor's independent opinion. URS' responsibility in performing our 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 embeddedness of policies and strategies relating to sustainability.

Assurance Process and Limitations

Our approach to assurance provision is aligned with the AA1000 Assurance Standard, and is also broadly consistent with the requirements of the International Standard for Assurance Engagements 3000 and the Interim Australia/New Zealand General Guidelines on the Verification, Validation and Assurance of Environmental and Sustainability Reports. The assurance engagement was undertaken in September 2005. The process 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 wide selection of external stakeholders selected by the auditor to ascertain their views on, the material sustainability issues faced by Sydney Water, and their opinion on 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, measurement and reporting procedures, background documentation and data collection and reporting procedures;
- a review of the report for any significant anomalies;
- an overview of the embeddedness of Sydney Water's key economic, environmental and social policies;
- a series of interviews with key personnel responsible for collating and writing various parts of the report in order to ensure selected claims were discussed and substantiated;
- the examination of the aggregation and/or derivation of, and underlying evidence for, over 100 selected data points and statements made in the report; and
- a review of selected 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. However, the scope involved separate verification of the ESD and Environment Plan Report 2005, the Annual Drinking Water Quality Report 2005, the Environmental Indicators Compliance Report 2005 and the National Pollutant Inventory Annual Report 2005. The assurance process was carried out under the auspices of URS' quality control procedures.

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.

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 is considered high, but 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 and Recommendations

- Materiality: Issues material to stakeholders have been considered and communicated 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 for operations.
- Recommendations: URS has provided suggestions for reporting improvement in some areas, including a System Diagnostic Audit, staff training, a facilitated review of the reporting indicators and a review of reporting folios. These have been outlined in a more detailed report presented to Sydney Water management.

On behalf of the audit team
7 October 2005
Melbourne, Australia

TERENCE JEYARETNAM
PRINCIPAL, URS

SUMMARY REVIEW OF OPERATIONS
Protecting Our Environment

SYDNEY WATER IS COMMITTED TO PROTECTING THE ENVIRONMENT BY CONDUCTING ITS OPERATIONS IN COMPLIANCE WITH THE PRINCIPLES OF ECOLOGICALLY SUSTAINABLE DEVELOPMENT

WATER CONSERVATION AND RECYCLING

The NSW Government's Metropolitan Water Plan, released in October 2004, identifies a number of actions to balance supply and demand for water in Sydney, address the current drought, population growth and river health over the next 25 years.

Sydney Water is one of many agencies responsible for implementing the plan. We will continue our highly successful Demand Management Program, implement a greater range of water recycling activities, and progress planning for construction of a desalination plant to augment limited natural supply.

Water Use

The residential sector accounts for the greatest water use, representing about 70 per cent of total customer demand during 2004–05. Prior to mandatory water restrictions, the average house typically used around 825 L/day, or 275 L per person/day for an average three-person household.

Demand Management

Demand for water is influenced by many factors. These include population, climate, economic growth, the mix of industry, commerce and housing types, appliance water efficiency and how consumers use water.

Sydney Water's Demand Management Program, potentially one of the largest delivered by an Australian water utility and believed to be one of the most extensive programs internationally, includes a diverse range of programs targeting a variety of water uses across each of the residential, commercial and industrial sectors.

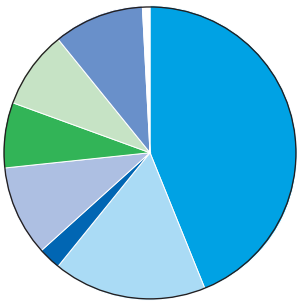
The focus of the program is to work with customers to reduce water use, harvest and reuse alternative sources of water, and recycle wastewater. This is achieved through a combination of education, incentives, regulation, research and program evaluation.

In 2004–05, total demand was 526,367 ML, 36,379 ML less than in 2003–04. Of this reduction, Sydney Water's demand management and recycling programs are estimated to have reduced demand by more than 5,169 ML, with the remaining 31,210 ML achieved through water restrictions. Overall, our demand management programs, including water recycling, are estimated to have increased savings by approximately 34,574 ML/year since 1999.

Over the past decade, daily per person water use has fallen significantly, from 506 L in 1990–91 to 342 L in 2004–05. Removing the impact of water restrictions, daily per person use would have been approximately 403 L in 2004–05, representing a 20 per cent reduction rather than the 28 per cent reduction from 1990–91 baselines as set out in our Operating Licence.

Sydney Water's new Operating Licence requires us to work towards reducing demand for water to 329 L per person/day by 2011, a target we are confident of reaching for a number of reasons.

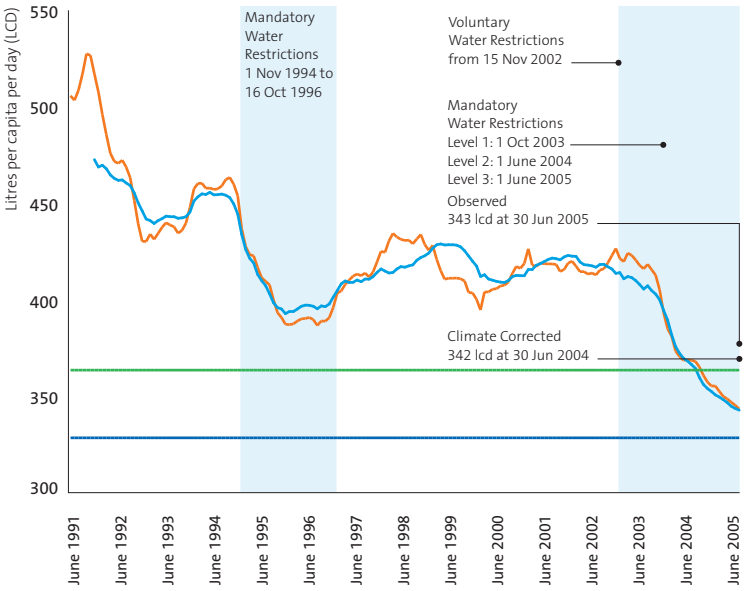
BREAKDOWN OF TOTAL WATER SUPPLIED 2004–05*



- 44% Residential single dwelling
- 17% Residential multi-unit
- 3% Apparent losses
- 10% Real losses
- 7% Government and other
- 9% Commercial
- 10% Industrial
- <1% Billed unmetered consumption

* Figures rounded up

DAILY WATER DEMAND PER PERSON JUNE 1991 TO JUNE 2005*



* 12-month average litres per day

When our demand management strategy was first developed, it involved a range of largely untested programs to achieve the estimated savings required. We have learned a great deal since it began in 1999, and believe savings will continue to be achieved now that community awareness of water conservation has increased, and a whole-of-government approach is being adopted through the Metropolitan Water Plan.

Sydney Water's *Water Conservation & Recycling Implementation Report 2004–05* is available on our website **www.sydneywater.com.au** and provides a detailed review of our demand management programs' initiatives and achievements.

Water Recycling

Water recycling is a key plank in the Government's plan to ensure the community of Greater Sydney has enough water to meet its needs. 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.

Apart from implementing our own recycled water strategy, Sydney Water is working with other government agencies to develop future water recycling programs through the Metropolitan Strategy: Recycled Water to increase the role of recycled water in delivering a sustainable water supply for Sydney.

We have actively pursued recycled water opportunities since the late 1960s, and our goal since 1999 has been to achieve an increase of between 4 and 59 ML/day in the amount of wastewater being recycled by 30 June 2005.

Currently some 34.9 ML of treated wastewater is recycled daily, approximately 2.8 per cent of total treated wastewater. This reflects an increase of around 100 per cent over the past 10 years, up from 17 ML/day, and doesn't include Sydney Olympic Park Authority's (SOPA) Water Reclamation and Management Scheme which adds more than 2 ML daily.

Sydney Water operates a major recycling scheme at Rouse Hill (residential reuse for more than 15,000 homes), with smaller schemes at Dunheved, Richmond, Ashlar, Castle Hill and Kiama Golf Courses, Warwick Farm Race Course, the University of Western Sydney (Hawkesbury Campus), Picton and Gerroa (agricultural reuse).

In December 2004, a system supplying recycled water to Liverpool Golf Course was commissioned and is expected to save 60 ML/year of drinking water.

Overall, the past five years have seen an additional 7.8 ML/day of wastewater being recycled. The use of a further 42 ML/day of recycled water is expected in the next few years, bringing further major drinking water savings through several residential and industrial recycling schemes coming online.

Planned recycling projects at BlueScope Steel, Rouse Hill and Hoxton Park new growth areas, and at the North Head and Malabar STPs are expected to deliver drinking water savings of approximately 26 ML/day by 2010.

The BlueScope Steel project, the largest recycling plant of its kind, is expected to be operational by late 2005, further reducing demand for drinking water by 20 ML/day.

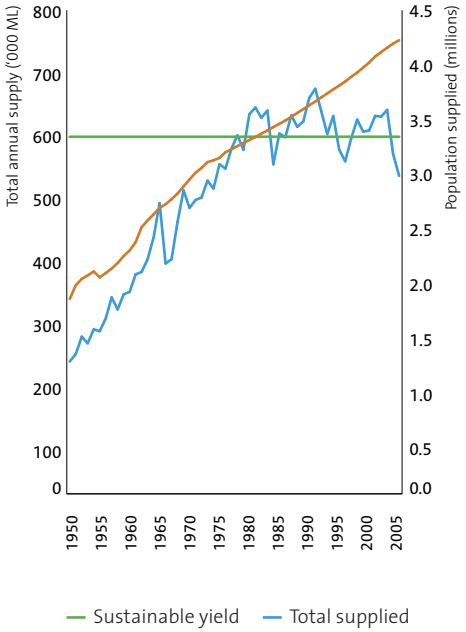
A recycling scheme for North Head STP, under construction during 2004–05, is expected to replace 1.5 ML/day of drinking water use at the STP. A similar project is planned for Malabar STP in conjunction with other water saving initiatives.

During 2004–05, more than 1,300 ML of recycled water was supplied to the Rouse Hill Recycled Water Area. Construction of Stage 3 of the Rouse Hill Recycled Water Scheme has begun, which will see recycling infrastructure available by 2006 for another 10,000 new homes.

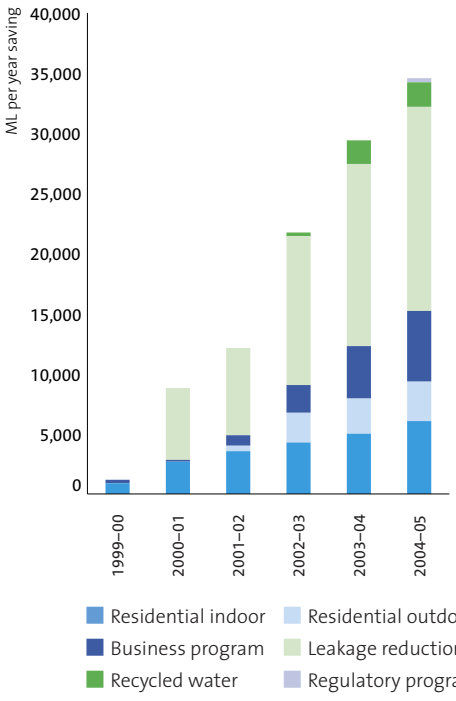
A dual reticulation scheme supplying recycled water to the Hoxton Park development area, serving approximately 14,000 homes, is expected to begin construction in September 2006.

Larger scale recycled water schemes take significant time and cost to implement, and would either involve installing dual pipes to existing homes or pumping it back into the drinking water supply at Warragamba Dam.

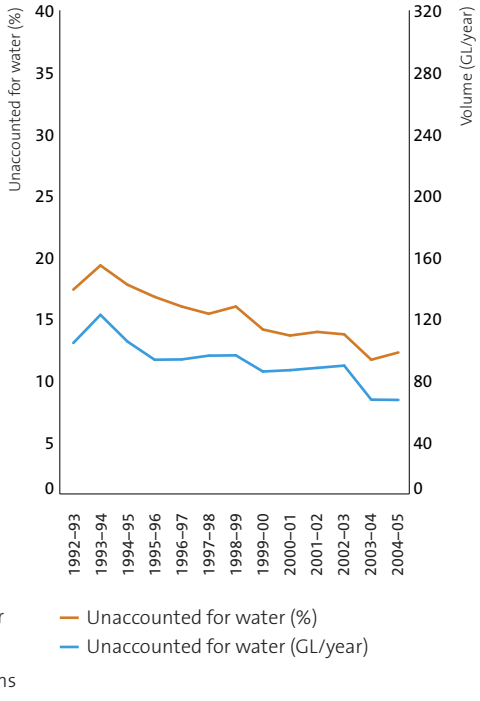
TOTAL SYSTEM RELEASES COMPARED TO POPULATION GROWTH 1950 TO 2005



ACCUMULATED SAVINGS FROM DEMAND MANAGEMENT PROGRAMS 1999–00 TO 2004–05



UNACCOUNTED FOR WATER JUNE 1993 TO JUNE 2005



Protecting Our Environment

Compared to Adelaide and Melbourne, Sydney has fewer opportunities to offer recycled water for non-drinking purposes – it does not have nearby market gardens, grazing land, crops and vineyards.

Most recycled water is used within Sydney Water's own STPs (77 per cent), followed by irrigation (12 per cent) and urban use (11 per cent).

During 2004–05, recycling levels decreased from those in 2003–04 largely due to Sydney Water's STPs and irrigation customers using less water overall, including recycled water, influenced by the current water restrictions and community impetus to save water.

Unaccounted for Water

Unaccounted for water is the difference between the volume of water released from all water storage reservoirs and the metered volume of water delivered to customers, less an estimate of the relatively small volume of unmetered but legitimate water use.

As well as water lost from the water system through leaks in pipes and water theft, unaccounted for water is also contributed to by meters that under-record customers' water use.

In terms of overall volume, unaccounted for water decreased by almost 5 per cent to 62,727 ML in 2004–05, however, as a proportion of total system releases, this was marginally higher (by 0.1 per cent) than in 2003–04.

Real losses or system leakage during the year was 10 per cent, which means Sydney Water remains in the top 30 per cent of major world cities for leakage control performance. However, in volumetric terms, leakage remained constant with the previous year at 145 ML/day. The percentage has only risen due to the fall in overall demand.

Sydney Water's Active Leakage Reduction Program involves five activities to reduce leakage: active leakage detection and pipe repair, speed and quality of leak repairs, pressure management, flow metering and asset management (water main renewals). This program has been instrumental in helping to reduce leakage from the network by around 25 per cent over the past couple of years.

Achievements

- Supplied 526,367 ML of water, well below the sustainable yield of 600,000 ML.
- Reduced demand by 36,379 ML/year compared to 2003–04, and 108,000 ML compared to 2002–03.
- Installed water saving devices in 48,404 households under the subsidised Residential Retrofit Program. Since 2000, 282,329 homes have been serviced, resulting in estimated water savings of 5,897 ML/year.
- Continued the Rainwater Tank Rebate Scheme with 8,424 rebates paid in 2004–05, giving a total of 12,396 rebates paid at 30 June 2005 and saving an estimated 504 ML/year since the scheme's commencement in October 2002. The scheme for households will continue until July 2008.
- Attracted 67 customers to the Every Drop Counts Business Program, bringing the total participants to 273 who account for nearly 25 per cent of water consumption by business. At 30 June 2005, the program was estimated to have led to savings of nearly 16 ML/day, or 5,767 ML/year since it began in 2001.
- Achieved an additional 5 ML/day in leakage reduction through the Active Leakage Reduction Program during 2004–05, bringing savings up to more than 46 ML/day, or nearly 17,000 ML/year since 1999. Sydney Water's entire water supply network has now been checked.
- Recycled water use has replaced drinking water usage by more than 4,000 ML/year.

Challenges

- Progress made by the Demand Management Program has been partially offset by the effect of dry weather and continued strong economic growth. Water restrictions have demonstrated that significant savings can be achieved. The challenge will be to maintain this high level of awareness and conservation effort after the drought.

Next Steps

- Continue to deliver Residential Retrofit and Rainwater Tank Rebate Programs. This includes retrofits in residential and public housing for 75,000 households in 2005–06.
- Continue to deliver the Every Drop Counts Business Program in conjunction with the NSW Government's Water Savings Action Plans and Water Savings Fund.
- Work with the NSW Government to implement the Metropolitan Water Plan's Metropolitan Strategy: Recycled Water.
- Commission the BlueScope Steel and North Head STP recycling projects and continue investigation and construction of Rouse Hill expansion and Hoxton Park dual reticulation schemes, and the Malabar STP recycling scheme.
- Inspect 18,000 km of water mains in 2005–06 for hidden leaks and schedule them for repair.
- Implement a pressure management program in high pressure areas, leading to reduced leakage and customer demand.
- Implement two tier pricing reform as determined by IPART.
- Support implementation of the Commonwealth Government's Water Efficiency Labelling and Standards scheme for appliances and fittings.
- Continue to support the implementation of BASIX and other urban planning regulations.

More detailed information on Sydney Water's environmental performance is presented in the *ESD Indicators and Environment Plan Report 2005* and the *Environmental Indicators Compliance Report 2005* on the CD attached to the inside back cover of this report. Both reports are also available at **www.sydneywater.com.au**

Key milestones

- May 2005 – Commissioning of recycled water plant (Pre-commissioning, dry testing and flow processes testing – 16 weeks).
- August 2005 – Proving period mandated by NSW Health (Daily testing of water quality, up to six weeks).
- Late 2005 – Official flows begin (Initially about 5 million litres a day, gradually increasing to 20 million litres a day).

IMAGE: Illawarra Wastewater Strategy project manager, Phil Longfield, beside the new reverse osmosis units in the recycled water plant at Wollongong STP during pre-commissioning.

CASE STUDY

INDUSTRY RECYCLING IN ACTION

Bringing environmental benefits

With an average demand of around 35 million litres a day, or 12,700 million litres a year, BlueScope Steel's Port Kembla Steelworks is Sydney Water's largest single water using customer.

Over the past 10 years, BlueScope Steel has implemented a range of programs to significantly increase the amount of recycled water used. Water efficiency has improved, halving from 5,000 litres per tonne of steel produced in 1995–96 to 2,500 litres per tonne currently.

From late 2005 Sydney Water will provide BlueScope Steel with 20 million litres a day of recycled wastewater for industrial purposes.

BlueScope Steel's consumption of fresh drinking quality water will drop by up to 55 per cent. As a result, demand for drinking water from the Avon Dam will fall by about 20 per cent or 7.3 billion litres a year.

Providing BlueScope Steel with recycled water from the upgraded Wollongong STP means the plant's ocean outfall discharges will virtually cease at night. As well, total dry weather ocean discharge from the plant will reduce by about 40 per cent.

Essential to providing recycled water to BlueScope Steel has been the $141 million upgrade of the Wollongong STP, which now receives dry weather flows from Bellambi and Port Kembla STPs, and construction of the new $25 million recycled water plant, the largest facility of its type in Australia.

The recycling process uses sophisticated reverse osmosis technology in the final treatment stage to remove residual salts from the wastewater.

A part of the $215 million Illawarra Wastewater Strategy, the BlueScope Steel scheme is an excellent example of where recycled water schemes are practical and achievable – the end-use point is close to the source of the wastewater, it will benefit the environment, and the Wollongong STP can house the extra treatment, storage and pumping infrastructure required.

The contract for work for the plant upgrade was awarded in November 2001 to the Walter-Veolia Joint Venture and construction began in June 2002.

Protecting Our Environment

WASTEWATER MANAGEMENT

Sydney Water has 28 separate sewerage systems, one of which is operated by Veolia Water Pty Ltd. These systems collect over 1.2 billion litres of sewage daily from households and industry and consist of 23,247 km of sewer pipes and 662 SPSs.

Thirty-one STPs then treat the wastewater before it is reused or discharged to rivers or the ocean in accordance with strict licence conditions issued by DEC.

Sewage Transport System Performance

To protect public health by preventing sewage backing up into houses and businesses, approximately 3,000 overflow points act as sewerage system safety valves. The Northside Storage Tunnel, commissioned in 2001, is integral in reducing sewage overflows in wet weather.

Pumping stations, a large number of which are licensed by DEC as No Dry Weather Overflow stations, transport sewage up hills and across flat areas to STPs.

Sewage Treatment Plant Performance

The level of treatment at each of the 31 STPs is designed to meet the environmental requirements specified in the Sewage Treatment System Licences issued by DEC, and to facilitate wastewater reuse where opportunities exist.

Treatment ranges from high rate primary to the highest level, tertiary, which involves the removal of solids, dissolved and suspended organic and inorganic solids, inorganic compounds, and substances such as plant nutrients, nitrogen and phosphorus.

Sydney Water has 10 coastal STPs which treat over 87 per cent of all sewage collected. Malabar STP also takes flows from Liverpool, Glenfield and Fairfield STPs. A further 17 inland STPs treat the remaining sewage. Coastal STPs discharge into the ocean while inland STPs discharge into the Hawkesbury-Nepean River and its tributaries.

Improving Sewerage Services in Unsewered Areas

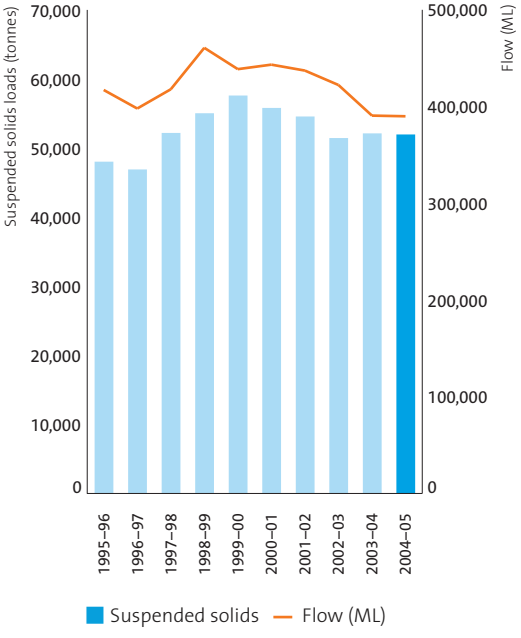
The NSW Government's Priority Sewerage Program (PSP) was introduced in 1997 to address concerns about the impact on water quality from unsewered suburbs, towns and villages. Under the program, Sydney Water is progressively delivering sewerage services to priority areas.

Additional details about the PSP are also reported in Social Program Activities on page 48 of this report.

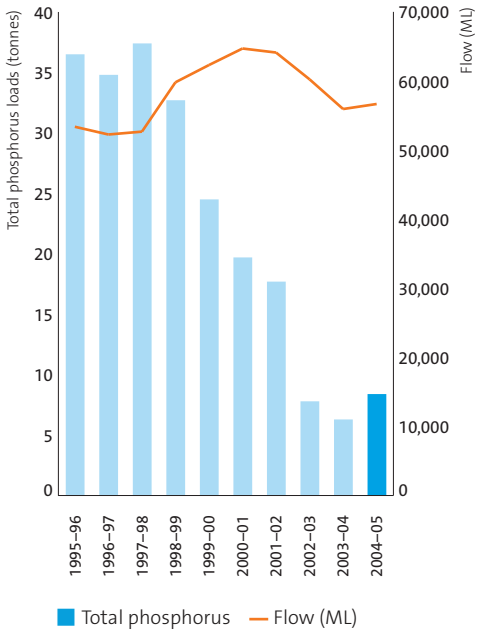
Achievements

- Relined 91 km of sewer mains, cleaned tree roots and silt from 465 km of sewers, and continued inspection and cleaning of DEC-classified Specially Protected and Protected water courses at a cost of $33 million under the SewerFix Pipes Program.
- Installed Integrated Instrumentation, Control, Automation and Telemetry Systems (IICATS) at a cost of $10.8 million at 45 SPSs to reduce frequency and volume of sewage overflows. A total of almost $74 million has now been spent on IICATS upgrades at 424 SPSs.
- The Northside Storage Tunnel operated 16 times, preventing 4.4 billion litres of diluted sewage from entering Sydney Harbour, up from 1.7 billion litres last year and substantially reducing bacteria levels in and minimising pollution of Sydney Harbour.
- Surpassed the Operating Licence conditions that no more than 25,000 private properties be affected by dry weather uncontrolled sewage overflows – only 21,462 properties were affected.
- Under SewerFix, completed detailed hydraulic models (Sewer Catchment Area Management Plans – SCAMPS), for 40 catchments in Sydney Harbour, Illawarra, Georges River, the Blue Mountains and the Hawkesbury-Nepean. Plans are prioritised for poor performing catchments, environmentally sensitive and high growth areas.
- Completed upgrades for South Creek, Berowra, Richmond and Penrith STPs.
- Completed draft Integrated Wastewater Management Strategy covering Penrith, St Marys, Quakers Hill and Riverstone STPs.
- Further reduced the amount of nitrogen discharged into the Hawkesbury-Nepean River, achieving an almost 45 per cent reduction since 1995–96, the result of improved wastewater management at West Hornsby STP.
- Achieved a 36 per cent reduction in the suspended solids load in the Illawarra region by diverting sewage flows from Bellambi and Port Kembla STPs to Wollongong STP, as part of the Illawarra Wastewater Strategy.

SUSPENDED SOLIDS DISCHARGED FROM COASTAL TREATMENT PLANTS 1995–96 TO 2004–05



PHOSPHORUS DISCHARGED FROM INLAND TREATMENT PLANTS 1995–96 TO 2004–05



- Decreased the overall amount of suspended solids loads discharged from ocean STPs to 51,974 tonnes due to upgrades and amplifications.
- Identified anaerobic digestion to cogenerate green power by using digester gas and the production of Grade B stabilised biosolids as the preferred option for the $100 million North Head STP upgrade.
- Commenced construction work on the $95 million Bondi STP Reliability Improvement and Modernisation Program (RIAMP).
- Reached 97 per cent completion rate of Stage 1 of amplification works for the Liverpool STP, integral to the South Western Sydney Sewerage Scheme (SWSSS) which aims to meet population growth, promote recycled water use, improve sewerage system performance and reduce sewer overflows.
- Commissioned the Liverpool STP to Liverpool Golf Club recycled water pipeline which delivers 300,000 L/day of recycled wastewater.
- Completed The Oaks/Oakdale/Belimbla Park, Illawarra Northern Towns, and Jamberoo PSP projects with connection rates exceeding those achieved for previous sewerage schemes.
- Began construction of the $55 million Mulgoa, Wallacia and Silverdale PSP scheme.
- Undertook planning and environmental impact assessment for Brooklyn/Dangar Island, Menangle and Menangle Park, and Mount Ku-ring-gai Industrial Area PSP projects.

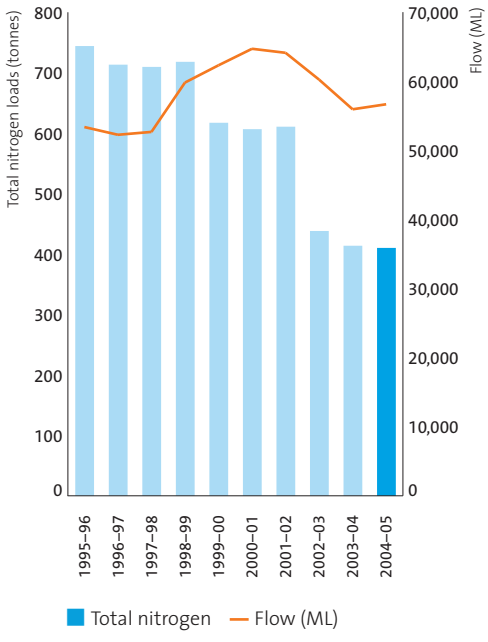
Challenges

- Extended drought conditions have impacted the sewer blockage (choke) rate overall.
- Exceeded some minor sewage treatment system EPL limits for nutrients and other substances related to wastewater quality. Most of these were due to wet weather flows and did not affect environmental water quality.
- Behind schedule on delivering Stage 1 of the Illawarra Wastewater Strategy due to storm damage delaying construction, preventing Sydney Water from meeting one PRP set by DEC.

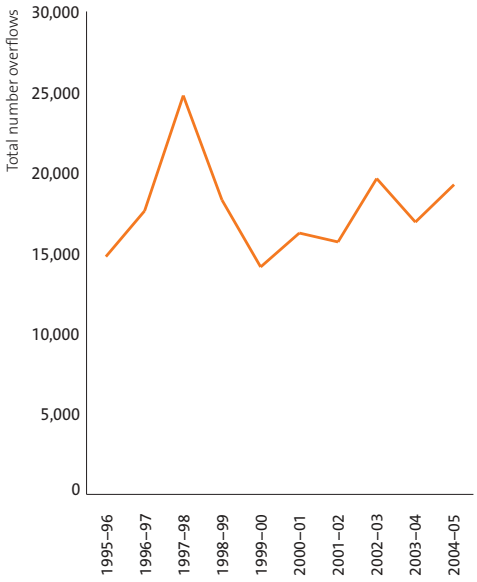
Next Steps

- Implement the optimal choke (sewer blockage) strategy developed to ensure a cost effective approach to choke management that includes an optimised mix of capital and control measures.
- Complete delivery of Stage 1 of the Illawarra Wastewater Strategy by amplifying Wollongong STP to provide filtration, ultraviolet (UV) disinfection and a new 1 km ocean outfall to replace existing near-shore outfall.
- Continue Stage 2 of the Illawarra Wastewater Strategy including the supply of 20 ML/day of recycled wastewater to BlueScope Steel.
- Amplify the Shellharbour STP by December 2006 to cater for increased flows anticipated from this growth area.
- Complete upgrade of West Camden STP including a wastewater reuse scheme to achieve a sustainable balance between reuse and discharge for the Hawkesbury-Nepean River's environmental flow requirements.
- Complete construction of the new Warragamba STP and progress plans for construction of the Stage 2 plant at Rouse Hill STP.
- Commence work on the $100 million project to improve reliability at North Head STP including replacing the existing biosolids facility which is nearing the end of its useful life. Construction is scheduled to commence in late 2005.
- Complete Bondi STP RIAMP, including digester refurbishments, replacing grit and screenings equipment technology and installing new pumping technologies.
- Encourage residents to connect to the new PSP sewerage schemes and work to complete Stage 1 by June 2009.
- Commence PSP projects in Brooklyn/Dangar Island and the Upper Blue Mountains.

NITROGEN DISCHARGED FROM INLAND TREATMENT PLANTS 1995–96 TO 2004–05



TOTAL OVERFLOWS PER ANNUM 1995-96 TO 2004-05



Protecting Our Environment

RECYCLING OF TREATMENT BY-PRODUCTS

Two by-products of Sydney Water's treatment processes are biosolids (from wastewater treatment processes) and water treatment residuals (from water treatment processes).

Biosolids

Biosolids are organic matter removed during the treatment of sewage. They are rich in plant nutrients and embodied energy and are a valuable resource with markets in agriculture, composting and land rehabilitation.

Sydney Water's Biosolids Program meets world's best practice in terms of the percentage of captured biosolids recycled. Aiming to recycle a minimum of 90 per cent of captured biosolids annually, 100 per cent was used beneficially in 2004–05.

Water Treatment Residuals

Water treatment residuals are matter removed during the filtration and treatment of drinking water at Sydney Water's 10 WFPs in the water supply system. Sydney Water has programs to recycle these residuals or store them for later use.

The volume of residuals depends on raw water quality, the quantity of water treated and the weather. The combination of these determines the amount of chemicals needed to treat water to required standards. Wet weather increases run-off in catchment areas and means more sediment and other materials need to be removed.

Achievements

- Beneficially reused 100 per cent of captured biosolids, 47,583 dry tonnes, in 2004–05, largely due to Sydney Water's improved processing facilities at its STPs.
- Revised implementation of our biosolids strategy to focus on supplying Grade B stabilised biosolids in line with customer and regulator acceptance, and least life cycle costs.
- Awarded new contracts for the disposal and beneficial use of grit and screenings that will see around 50 per cent of grit and screenings beneficially reused in 2005–06.
- Produced 2,188 dry tonnes of water treatment residuals, with 65 per cent recycled and the balance stored for later use. For the sixth consecutive year, 100 per cent of water treatment residuals was reused or stored for later use, surpassing the 90 per cent target.
- The reuse of 612 dry tonnes of water treatment residuals by Wollondilly Shire Council from the Macarthur WFP as topsoil at Thirlmere Sports Ground.

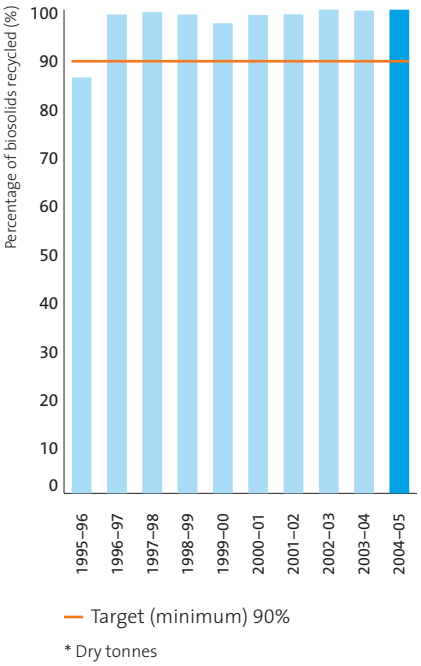
Challenges

- Reduce the percentage of water content in biosolids.
- Find opportunities for disposal/sale of biosolids closer to Sydney.

Next Steps

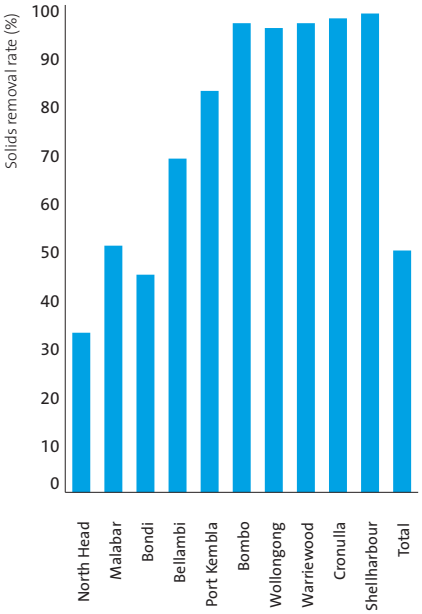
- Continue to manage biosolids to maintain a high level of beneficial use.
- Continue to investigate options for market diversification for biosolids in line with the long-term Biosolids and Residuals Management Strategy.
- Upgrade the biosolids and grit and screenings facilities at Bondi and North Head STPs, and conduct prioritised renewals at Malabar STP.
- Improve the management of grit and screenings.

CAPTURED BIOSOLIDS RECYCLED 1995–96 TO 2004–05*



* Dry tonnes

SOLIDS REMOVAL RATE AT COASTAL TREATMENT PLANTS 2004–05



STORMWATER MANAGEMENT

Sydney Water provides stormwater services to over 465,000 properties through 436 km of trunk stormwater drainage, mostly in the south and south-western suburbs of Sydney.

Local councils are the front line in stormwater management and the new Sydney Metropolitan Catchment Management Authority (SMCMA) has responsibility for planning and coordinating catchment improvements.

Pollutant Removal

Stormwater run-off can carry pollutants such as litter, organic material, sediments, oils and metals collected from roads and property which can affect the quality of the receiving waters as well as impact the surrounding environment.

Pollution control devices are designed to reduce such impacts. Sydney Water operates 31 pollution control devices collecting litter and sediment. There are also five litter booms on Sydney Harbour and two on Botany Bay.

Our Stormwater Environment Improvement Program (SEIP) is now on track to deliver a further 20 pollution control devices in hotspots across Sydney.

Achievements

- Spent $5.3 million in capital works including pollution control devices, refurbishment of stormwater drains and channels, and safety fencing.
- Spent $5.6 million on property maintenance, repairs, cleaning of drains and pollution control devices.
- Collected 1,859 cubic metres of litter and 2,060 tonnes of sediment from pollution control devices. A further 12,770 tonnes of sediment was collected from stormwater channels.
- Collected 84 cubic metres from litter booms in Sydney Harbour and trapped 32 cubic metres of litter at Botany Bay.
- Improved the health of Botany Wetlands with the removal of 137 tonnes of sediment and 202 cubic metres of litter, and just over 0.5 tonne of carp and goldfish.
- Implemented a comprehensive Plan of Operation for the Rouse Hill Development Area covering weed management, bush regeneration and revegetation work, preservation and protection of Aboriginal sites, monitoring of soil and water, and stormwater infrastructure.

Challenges

- SEIP schedule delay through contractor issues and greater options analysis to satisfy community needs and prevent any adverse flood impact. Delivery now expected by March 2006.

Next Steps

- Deliver stormwater environment improvements at 21 SEIP sites, 20 involving pollution control devices and one involving erosion control.
- Develop opportunities to recycle litter and sediment collected from pollution control devices and channels.
- Conduct sustainability review of ground maintenance and channel desilting practices.
- Develop Plans of Management for wetlands at Chullora and Arncliffe.
- Work cooperatively with councils and developers at Rouse Hill to promote water sensitive urban design and opportunities for recreational use of flood prone trunk drainage land.
- Support SMCMA in strategic planning and integrated catchment planning for stormwater in Sydney.

Protecting Our Environment

TRADE WASTE MANAGEMENT

Sydney Water's Trade Waste Program aims to reduce the amount of harmful substances entering sewers by encouraging commercial and industrial customers to use the best available technology and cleaner production.

This helps to ensure the disposal or reuse of treated wastewater and treatment by-products in a way that protects the environment and complies with strict regulatory requirements demanded by both the Sydney Water Act 1994 and DEC's Environment Protection Licences (EPLs).

Trade Waste Policy

A key component of the program is the Trade Waste Policy which applies to all commercial and industrial customers. The policy focuses on reducing the mass of pollutants discharged to sewers. Sector-specific Trade Waste Management Plans describe the application of the policy which combines a range of mechanisms including regulation, financial disincentives and monitoring.

Achievements

- Met all EPL conditions.
- Collaborated with around 17,200 trade waste customers to achieve ongoing improvement in wastewater quality.
- Entered into 1,178 new trade waste agreements or permits. All identified major industrial customers now hold current trade waste agreements.
- Diverted 17,287 tonnes of grease trap waste from the sewerage system through the Wastesafe tracking system for further treatment and disposal. Wastesafe provides comprehensive electronic tracking to manage the collection, transport, treatment and disposal of waste.
- No incidents reported through the online trade waste monitoring program which connects operationally critical customers.
- Delivered education programs to the motor vehicle and food service industries which make up around 74 per cent of all trade waste customers.

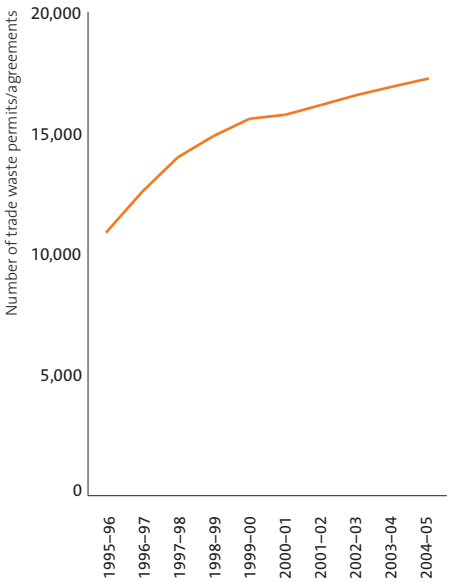
Challenges

- Due to high temperature and high biochemical oxygen demand (BOD) trade waste discharges, the Smithfield catchment was classified as corrosion-impacted in January 2004. This resulted in higher charges for BOD concentrations exceeding the target of 600 mg/L being applied from January 2005.
- At 30 June 2005, 20 per cent of industrial trade waste agreements required effluent improvement programs for trade waste substances, reflecting the level of customer compliance with acceptance standards.

Next Steps

- Improve grease capture from food preparation areas by retrofitting existing grease traps.
- Continue programs to improve customer service and deliver reliable quality products and services.
- Continue to work closely with customers to improve the level of compliance with trade waste agreements and acceptance standards.
- Develop and implement new programs to improve the adoption of cleaner production practices.

COMMERCIAL AND INDUSTRIAL TRADE WASTE AGREEMENTS 1995–96 TO 2004–05



Success stories

- Tooheys – 12 per cent reduction in process use, saving close to 400,000 litres a day.
- Coca-Cola Amatil, Northmead – 60 per cent reduction in process use, saving 300,000 litres a day.
- Hans Continental – saving over 130,000 litres a day through innovative thawing of frozen meat products.
- Investa Property Group – integrating water management into their business systems.
- Westmead Hospital – since joining EDC, have reduced their water consumption by 470,000 litres a day.

IMAGE: Brewing kettles at Tooheys' Lidcombe brewery where water consumption has dropped from 4.9 litres per litre of beer packed to 3.5 litres since 2002, saving close to 400,000 litres a day.

CASE STUDY

EVERY DROP COUNTS IN BUSINESS

Water conservation initiatives save close to 16 ML/day

The Every Drop Counts Business Program (EDC) provides practical water and money saving solutions and acts as a vital catalyst in changing the way businesses think of and manage water, helping secure Sydney's water supply.

At a cost to Sydney Water of $3.7 million in 2004–05, EDC saved Sydney approximately 1,500 ML of drinking quality water. In dollar terms, this saved businesses around $3 million in water-related costs but the wider benefits are far more difficult to quantify.

Sustainable water savings of close to 16 ML/day – equal to supplying around 23,000 homes with water daily – have been achieved since the program began in 2001. This is the result of more than 150 water management diagnostics and 200 water efficiency audits with more than 270 of Sydney's highest water using business customers. Sixty-seven Memoranda of Understanding (MOUs) were signed in 2004–05.

Sydney's sixth largest water using business, Tooheys, uses 3.5 ML/day, enough to fill three Olympic swimming pools. Its site at Lidcombe, Sydney uses more water than all the homes in Lidcombe which has a population of around 13,000.

Since 2002, Tooheys' water consumption has reduced from 4.9 litres per litre of beer packed to 4 litres in 2004. This has been achieved through a combination of strategically targeted capital investment, productivity improvements and vigilance in managing water wastage through a plant-wide employee communications program.

Initiatives adopted by Tooheys include improving pasteuriser control, installing glycol chilling for beer cellars, eliminating water-waste through watch-dog timers on line and tank flushers, auditing all non-production taps and cisterns, and fixing leaks.

Now focusing on people and culture, Tooheys and Sydney Water developed a display to showcase achievements at the Lidcombe site and encourage staff to adopt water saving measures at work and at home.

Simple things like sharing water saving ideas, reusing water at every opportunity and turning taps off during work breaks, not leaving hoses running and reporting leaks to management are now daily practice for Tooheys.

In May 2005, Tooheys began a Sydney Water-sponsored water efficiency audit to identify even more water savings. This involved sub-meters and online monitoring to define exactly where the water flows.

Recent figures show that Tooheys has now achieved an additional 12.5 per cent drop in water consumption from 4 to 3.5 litres per litre of beer packed.

EDC follows a structured process working with all market sectors to streamline water use – large and complex businesses benefit from in-depth and technical analysis of water use and guidance on potential areas for improvement. Small and medium businesses tap into EDC's free resources such as Water Conservation Best Practice Guidelines and fact sheets.

As one of Sydney Water's programs designed to address the long-term sustainability of Sydney's water supply, and an integral part of the NSW Government's Metropolitan Water Plan, EDC will remain a central plank in managing Sydney's water supply.

Protecting Our Environment

WASTE MINIMISATION

Waste minimisation aims to avoid waste generation and maximise the reuse and recycling of waste materials in four categories: construction and demolition waste generated by Sydney Water operations; construction and demolition waste generated by contractors; office waste; and process waste from sewage and water treatment facilities.

Sydney Water's Waste Minimisation Plan is consistent with the NSW Government's Waste Reduction and Purchasing Policy (WRAPP) and includes strategies to address communication, measurement and reporting, target setting, procurement, planning and evaluation, and review.

The plan is founded on the principle of continual improvement. Sydney Water's WRAPP Statement is included in the Appendix to this Annual Report, located on the CD on the inside back cover.

Achievements

- Achieved an overall rate of 79 per cent of waste recycled or reused, the highest ever attained.
- Avoided 4,500 tonnes of spoil waste in the renewal of 20 km of water mains by using the low waste operational technology of pipe bursting.
- Recycled 85 per cent of office paper in head office, 5 per cent above target.
- Recycled 54 per cent of all office waste.
- Incorporated waste minimisation requirements, including the use of materials and recycling, into contractors' works contracts and procurement of some major products and services, including the Mechanical Electrical Maintenance and Renewals Program Contract let in February 2005.
- Donated outdated and unusable computer-related items such as cords, keyboards, VDUs and plugs to non-profit organisations, community groups and universities.
- Developed procedures to minimise construction and demolition waste during office refits.

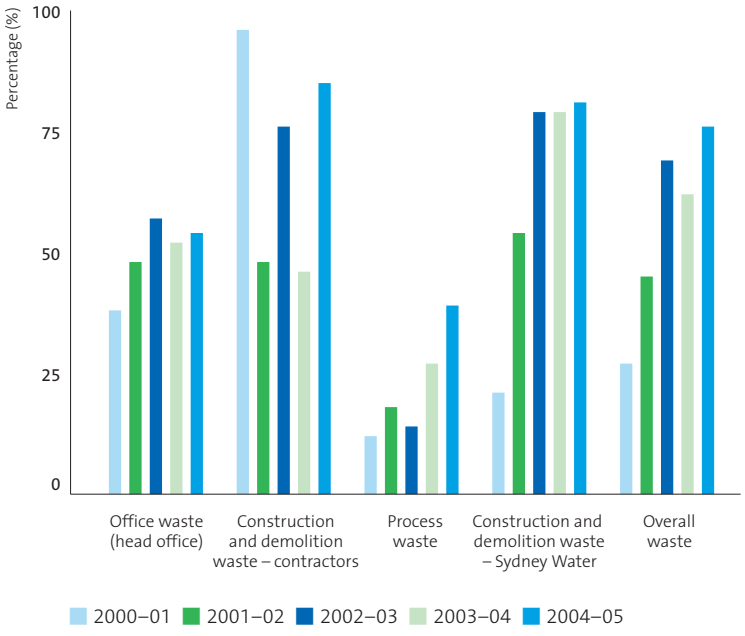
Challenges

- Need to improve operational controls for the collection and reporting of Sydney Water waste minimisation data for major capital works programs.

Next Steps

- Continue applying low waste technologies such as pipe bursting to reduce the amount of waste generated in renewing sewer and water mains.
- Establish more major capital works contracts with risk/reward payments linked to environmental KPI performance.
- Increase minimisation and recycling of office waste by broadening the range of items to be recycled.
- Endeavour to further reduce construction and demolition waste generated by external contractors so that Sydney Water continues to meet obligations under the NSW Government's WRAPP.

WASTE RECYCLED OR REUSED 2000–01 TO 2004–05



HERITAGE AND NATURAL RESOURCE MANAGEMENT

Natural Resource Management

Sydney Water has significant land holdings, many of which contain threatened or endangered species, populations and ecological communities. It is essential that Sydney Water works to minimise the impacts any of its activities may have on these.

As a result, we assess and approve all works and activities in line with the requirements of the Environmental Planning and Assessment Act 1979. Assessment also includes consideration of provisions in the Threatened Species Conservation Act 1995 and the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

Heritage

Sydney Water is the owner of a significant number of heritage assets, many of which still operate within the reticulated water and sewerage systems. To avoid damaging them in the course of operations, Sydney Water carefully monitors their management. Aboriginal heritage is protected through assessing possible impacts during all project phases, and in particular through assessing environmental impacts.

At 30 June 2005, the Sydney Water Heritage and Conservation Register contained 220 items, including 59 of State heritage significance, and 161 of local heritage significance.

A table detailing items listed on the register in 2004–05 is available in the Annual Report Appendix which is on the CD attached to the inside back cover of this report.

Contaminated Lands Management

Contaminated lands owned by Sydney Water fall into two categories. In a significant number of cases, Sydney Water acquired sites contaminated by previous owners. In other cases, potential contaminants were generated as a result of former business activities, some dating back many decades.

Practices that contaminate land are inappropriate, and Sydney Water works to ensure they no longer occur. A Contaminated Land Management Plan, guided by the Contaminated Land Management Act 1997, uses a risk-ranking strategy to identify and report on the likelihood of contamination.

All Sydney Water properties proposed for purchase or sale are assessed to prevent land with a contamination risk being sold or bought for an unsuitable use.

Achievements

- Identified threatened species or communities in nine major projects, but no Species Impact Statements were required due to effective planning and design processes that avoided impacts.
- Forty-two per cent of Sydney Water-owned individual lots are now listed on the Natural Resources Inventory (NRI) database which also contains comprehensive data on all 95 high priority sites.
- Developed Conservation Management Plans (CMPs) for an additional 12 State heritage items. Fifty-four per cent of items (32) now have CMPs.
- Identified and tagged moveable heritage items located at 26 State heritage sites.
- No sites were identified as posing a significant risk of harm to human health or the environment.
- Completed environmental investigations of water pipelines and STPs under the Contaminated Land Risk Ranking Project and made assessments for soil and groundwater contamination for some sites where potential groundwater impacts were detected.
- Reviewed Sydney Water's Lead Paint Management Guidelines.

Challenges

- Two Sydney Water sites remain classified as a significant risk of harm: Astrolabe Park, an old landfill, and Alexandra Canal, a major stormwater canal. Sydney Water is overseeing the preparation of remediation plans for the first site and has installed fishing health risk warning signs at Alexandra Canal.

Next Steps

- Improve water quality at Alexandra Canal with $4.2 million budgeted for sediment control and contaminant removal initiatives including use of latest technology sediment traps.
- Link the NRI database with Sydney Water's geographic information systems (GIS) to improve environmental assessment.
- Ensure CMPs or Strategies cover all Sydney Water's 59 State significant heritage assets by end 2005–06.
- Incorporate new DEC Aboriginal heritage consultation guidelines in Sydney Water's Aboriginal Heritage guidelines and procedures, and include in heritage training in 2005–06.
- Ongoing review of Contaminated Land Risk Rankings, and commence groundwater assessment program to monitor STP sites identified in 2004–05.
- Assess hazardous materials and update asbestos registers for STPs and WFPs.
- Implement new guidelines for maintenance of lead-painted pipes and other steel structures.

Protecting Our Environment

ENERGY MANAGEMENT

Sydney Water is one of the largest consumers of electricity in the NSW Government sector. The largest users are STPs and water pumping stations.

Our energy use includes electricity, motor vehicle fuel and natural gas, with electricity use accounting for 87 per cent of the total energy requirement in 2004–05.

Sydney Water works to reduce greenhouse gas emissions through energy efficiency initiatives and the purchase of a minimum of 2.5 per cent of our electricity needs as Green Power. Additionally, 3.6 per cent of total electricity consumed is generated from our own renewable energy generation facilities at the Malabar and Cronulla STPs.

By endeavouring to use energy in the most efficient way, Sydney Water can achieve its environmental and commercial objectives without jeopardising its public health objectives.

Achievements

- Reduced total energy use by 1.2 per cent.
- Reduced total energy use per customer by 2.1 per cent from 0.369 gigajoules (GJ) to 0.362 GJ per customer.
- Reduced vehicle fuel consumption by 6.8 per cent from 5.28 ML in 2003–04 to 4.92 ML in 2004–05, decreasing the greenhouse impact of vehicle fuel by 5.9 per cent.
- Developed a Green Fleet procurement strategy.
- Increased electricity production at the Cronulla cogeneration plant by 183 per cent over 2003–04.
- Reduced electricity consumed by Sydney Water's buildings by 39 per cent overall since 1995–96.
- Completed a study across 11 sites to identify energy management opportunities in the areas of pumping efficiency and optimisation, aeration blower efficiency, power factor correction and measures to maximise the use of cheaper off-peak electricity.
- Achieved greenhouse savings of 170,500 tonnes of CO_2 in 2004–05 through the Residential Retrofit Program which installed 55,000 showerheads during more than 48,000 retrofits. The program has generated a total saving of 1,038,500 tonnes of CO_2 since 1999 by helping to save water indoors and, therefore, saving energy for water heating.

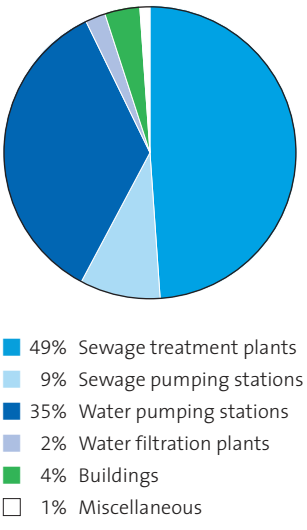
Challenges

- Due to an increase in the calculation of carbon intensity of electricity by the Australian Greenhouse Office, greenhouse gas emissions were 3.6 per cent higher despite an overall decrease in energy consumption.
- The energy efficiency of water services declined slightly with 261 kW hours of electricity consumed per ML of water supplied, up from 252 kW hours/ML in 2003–04.
- A decrease in the amount of electricity needs generated from renewable sources, down to 6.2 per cent from a high of 6.8 per cent in 2003–04.
- Reduced energy consumption was primarily due to reduced water demand as a result of water restrictions.

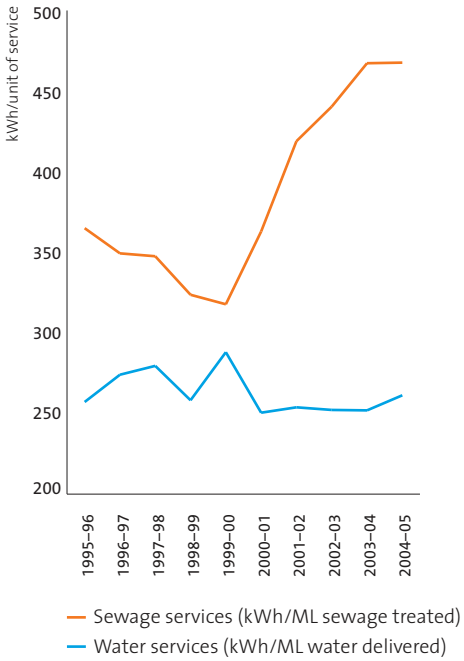
Next Steps

- Continue to work with the Sydney Water Energy Partners to implement strategies and carry out activities detailed in the Energy Management Plan including:
  - Implement energy efficiency programs across Sydney Water's 10 largest energy-consuming assets, which account for over 50 per cent of total energy consumption.
  - Finalise strategies to deliver all feasible methane cogeneration and hydroelectric projects, including the design and construction of a 1.7 MW cogeneration plant at North Head STP.
  - Monitor energy use and impacts through a new online energy management information system, Enterprize EM.
  - Select the most efficient vehicle, alter the mix of the motor vehicle fleet, replace larger vehicles with medium to small cars and procure at least 15 hybrid petro-electric cars, representing 1 per cent of the total fleet.
  - Implement a communications strategy to raise internal awareness of energy management.

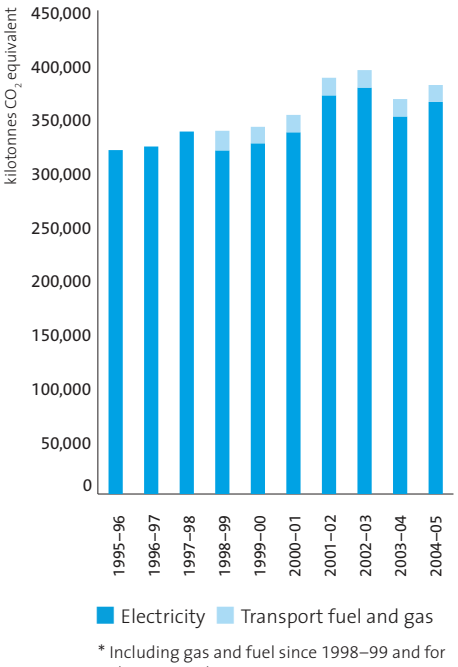
ELECTRICITY USE BY ASSETS 2004-05



ELECTRICITY CONSUMED PER ML OF WATER DELIVERED AND SEWAGE TREATED 1995–96 TO 2004–05



TOTAL ENERGY RELATED GREENHOUSE GAS EMISSIONS 1995–96 TO 2004–05*



* Including gas and fuel since 1998–99 and for electricity only 1994–95 to 1997–98

ENVIRONMENTAL MANAGEMENT SYSTEMS

Sydney Water's EMS provides a practical management system framework to ensure environmental impacts and risks arising from its activities are identified, controlled and monitored.

It assists us to meet our regulatory requirements, manage environmental risk, demonstrate due diligence and achieve environmental objectives and targets.

Environmental Due Diligence and Regulatory Compliance

Sydney Water is responsible for managing the environmental impacts of all its activities. Both staff and contractors must adhere to all of Sydney Water's environmental requirements and controls to ensure their work meets environmental and due diligence standards.

Environment Impact Assessment (EIA) is a key component of Sydney Water's approach to environmental management and is applied to all major and minor works, capital and maintenance.

Environmental Education and Awareness

Sydney Water has an obligation to ensure all staff are aware of appropriate environmental standards. This is achieved by implementing awareness training on heritage and environmental management systems procedures including environmental auditing, and environmental induction programs for new Water Services and graduate employees.

At 30 June 2005, around 2,500 Sydney Water staff had completed ESD Awareness training.

Achievements

- Further developed the EMS, including updating Sydney Water's Environmental Policy, resulting in its certification with ISO 14001:2004 in May 2005.
- Developed a new 2005–10 Environment Plan effective from 30 September 2005.
- Upgraded procedures and guidelines for contractors preparing Environmental Management Plans (EMPs) to ensure consistency and best practice.
- Appointed Environmental Management Representatives to major capital works including the PSP, Illawarra Wastewater Strategy, several STP upgrade and amplification projects, and the SWSSS.
- Undertook 12 compliance audits for major capital works projects, and 19 site inspections and 70 environmental audits on a range of minor capital and operational projects.
- Developed a Sustainability Scorecard to incorporate ESD principles into Sydney Water's corporate planning objectives.
- Implemented awareness training programs on heritage, EMS and environmental auditing, and environmental induction programs for new Water Services and graduate employees.

Challenges

- The 167 inspection audits of major capital works undertaken by contractors working with EMPs identified 85 instances where opportunities for improvement and non-conformance existed.
- Two Tier 3 Penalty Infringement Notices were incurred under the Protection of the Environment Operations (POEO) Act during 2004–05 for the amounts of $400 and $1,500, the first for smoke emitted from a vehicle and the second for an undetected sewage overflow into Orphan School Creek, Fairfield due to a failure of an SPS.

Next Steps

- Maintain certification of Sydney Water's EMS to ISO 14001 standard, including third party surveillance auditing.
- Develop processes to better address EIA in project strategy phase.
- Continue to implement an annual environmental audit program.
- Report on the outcomes of the 2005–10 Operating Licence requirements and Sydney Water's corporate planning objectives via the newly-developed Sustainability Scorecard.
- Develop new environmental education program including competency-based training, and expand hands-on and Aboriginal aspects of heritage training.

SUMMARY REVIEW OF OPERATIONS
Embracing Our Social Responsibilities

SYDNEY WATER TAKES PRIDE IN SERVING AND SUPPORTING THE COMMUNITY AND PROTECTING PUBLIC HEALTH. SYDNEY WATER VALUES ITS STAFF AND SEEKS TO SAFEGUARD AND ENHANCE THEIR WELLBEING

SAFE AND RELIABLE WATER SERVICES

Sydney Water's most important social responsibility is to protect public health by supplying safe drinking water. Sydney Water's Operating Licence requires it to comply with the health-related guideline values in the Australian Drinking Water Guidelines.

To confirm that these guidelines are met, Sydney Water develops and implements an Annual Drinking Water Quality Monitoring Plan which is approved by NSW Health. Independent auditing of Sydney Water's water quality performance in 2004–05 is also undertaken.

The results of extensive water quality monitoring are reported to NSW Health in monthly, quarterly and annual reports. Sydney Water also communicates the results to customers via its website and a mail out with quarterly bills.

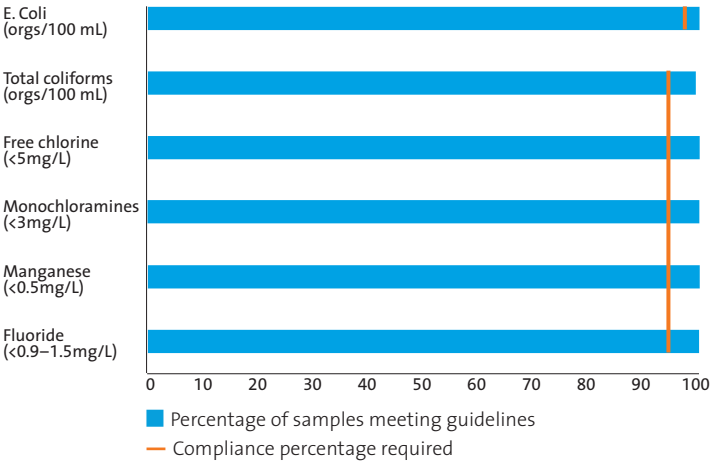
Additionally, recycled water which meets relevant guidelines specified by NSW Health, DEC, DIPNR and the Department of Primary Industries is delivered to residential, commercial and industrial customers for non-drinking purposes.

The increased use of recycled water at the household level for non-drinking purposes requires the need for careful scrutiny and strict requirements to avoid the risk of cross connections between recycled water and drinking water systems. Sydney Water has policies and procedures in place to minimise the risk of cross connections.

Achievements

- Maintained a very high standard of drinking water quality in 2004–05 with almost 100 per cent of samples meeting Australian Drinking Water Guidelines specified by NSW Health.
- No drinking water quality incidents were considered by NSW Health to have harmed public health.
- Achieved Full Compliance for all Operating Licence requirements relating to water quality clauses 6.2, 6.3, 6.4 and 6.5 as assessed by the Operational Audit in September 2004.
- Achieved a 3 per cent increase in customer satisfaction with drinking water quality, up from 88 per cent last year to 91 per cent as surveyed in Sydney Water's 2005 Annual Residential Customer Survey.
- Recorded a 22 per cent decrease in the number of water quality-related customer complaints on the previous year.
- Completed risk assessments for all systems, from catchment to tap.
- Improved water quality monitoring and reporting processes, and optimised treatment processes at all WFPs.
- Developed standard operating procedures and maintenance of reliable and effective disinfectant residuals throughout pipe networks to improve distribution system management.
- Met Operating Licence standards for continuity of water services. Properties affected by unplanned shut-offs of water for more than five hours totalled19,214 compared to the standard of 35,000, while properties affected by planned and warned shut-offs of water for more than five hours totalled 8,527 compared to the standard of 32,000, and almost half the number affected in 2003–04.
- Met the Operating Licence standard for continuous water pressure. The number of properties that experienced one or more instances of low water pressure (less than 15 metres head) was 2,860 compared to the standard of 15,000.

WATER QUALITY PERFORMANCE 2004–05



Challenges

- Ongoing drought conditions can impact the quality of raw water while longer storage times can make the maintenance of disinfection residuals throughout the networks more complex to manage in some areas.
- While complying with our Operating Licence, there was an increase in the number of properties affected by unplanned interruptions – a smaller number of events affected a larger number of customers. On average, one event affected almost 33 properties during 2004–05.
- Eliminating any possibility of cross connections between recycled water and drinking water occurring at residential recycling schemes.

Next Steps

- Continue to work with NSW Health and the SCA to maintain and enhance the safety and aesthetic quality of the water we supply.
- Focus on the effective and efficient operation of our WFPs and distribution networks.
- Focus on managing risks to water quality using a quality system approach.
- Finalise a new five-year Drinking Quality Water Management Plan 2005–10 setting out our strategies and focus for water quality over the next five years.
- Implement the Recycled Water Action Plan addressing risk assessment procedures and techniques relating to existing and future residential recycled water schemes.

More information on drinking water quality is presented in Sydney Water's *Annual Drinking Water Quality Report 2005*, which is located on the CD attached to the inside back cover of this report. It is also available at **www.sydneywater.com.au**

DESALINATION – SECURING SYDNEY'S WATER SUPPLY

Sydney Water is one of a number of government agencies providing advice and input into the NSW Government's Metropolitan Water Plan which recognises that there is no one solution to guarantee our water supply in the future.

Offering a multi-pronged approach with both demand and supply measures, the plan outlines a mix of activities that address the immediate effects of drought and work to secure Sydney's water supply in the long term.

These include building new infrastructure to enhance water supplies, water conservation and demand reduction measures, and increased recycling initiatives.

Sydney Water is implementing a range of the plan's key initiatives including the environmental assessment, procurement and planning approval processes to ensure that Sydney can build a desalination plant.

Tasked with undertaking a thorough investigation of desalination, Sydney Water spent five months in 2004–05 working with a team of local and international experts on a study to assess the feasibility of constructing a desalination plant in Sydney.

Our work confirmed that seawater desalination is a feasible water supply option for Sydney, and that reverse osmosis is the preferred desalination technology.

Sydney Water has the ability to integrate desalinated water directly into Sydney's existing drinking water network and efficiently distribute this high quality drinking water to households. Measures to mitigate greenhouse gas impacts will bring desalination in line with the greenhouse gas impact of the next best alternative water supply solution.

Achievements

- Completed desalination feasibility study.
- Identified seawater reverse osmosis as preferred desalination technology for Sydney.
- Identified preferred sites for a desalination plant in Sydney.

Challenges

- Ensuring that appropriate environmental, technological, economic and social assessments are completed to ensure that a desalination plant can be built in time to ensure stabilisation of Sydney's water supply.

Next Steps

- Manage significant investment in desalination and water recycling to ensure Sydney's future water supply.

Embracing Our Social Responsibilities

INVESTING IN THE COMMUNITY

Sydney Water contributes to and supports the communities in which it operates through a variety of community investment initiatives.

The Community Investment Program aims to strengthen relationships with the community and key stakeholders, provide opportunities for staff involvement and support Sydney Water's educational campaigns and programs.

The program covers corporate and community partnerships, in-kind support and philanthropic commitments. Support ranges from short-term commitments to long-term partnerships, such as the 15-year partnership with Taronga Zoo.

Over the past year, key partnerships were formed with Wesley Mission and Archicentre – the building advisory service of the Royal Australian Institute of Architects – on their renovation and building demonstration projects, Homes for Hope and Mosman Green.

With both projects, Sydney Water showcased design-integrated water conservation techniques within each property's water management systems. After a set public display period, all proceeds from the sale of Wesley Mission's Homes for Hope houses will go towards youth services in Western Sydney.

Achievements

- Provided support to over 60 organisations covering a broad range of community activities and geographical locations.
- Provided support for local communities in areas where Sydney Water carried out key capital works or repairs. These included the Sutherland Shire Australia Day celebrations, the Illawarra Academy of Sport, and the Manly Life Saving Club Carnival.
- Matched dollar-for-dollar the $4,200 raised by employees for Australia's Biggest Morning Tea to provide a total donation to the Cancer Council of $8,400.
- Matched a total of $41,835 staff contributions to charities of their choice through the Give As You Earn payroll deduction scheme.
- Extended support to philanthropic causes including the Red Cross tsunami appeal and the Children's Hospital Westmead.

Next Steps

- Proactively seek and establish partnerships, consistent with the Corporate Plan, that more accurately reflect the geographic focus of Sydney Water's operations.

AFFORDABLE SERVICES

Sydney Water has a social responsibility to ensure that customers with special needs have fair and affordable access to essential services – clean drinking water, sewerage services and stormwater services. In 2004–05, Sydney Water continued to meet this core social responsibility through a range of strategies.

Customer Contract

Confirming Sydney Water's commitment to providing high quality products and services that effectively meet customers' needs, the Customer Contract sets out minimum standards of service that can be expected and outlines customers' rights and responsibilities.

Customer Assistance

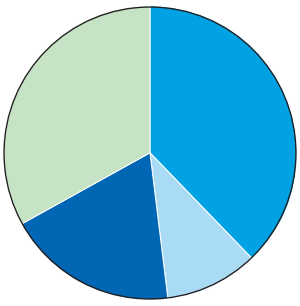
Sydney Water operates a Payment Assistance Scheme (PAS) which provides hardship relief vouchers to help special needs customers pay their Sydney Water accounts. Customers in difficult circumstances may receive these vouchers from accredited welfare agencies after an independent assessment.

In 2004–05, 12,326 vouchers were issued with a total value of $308,141.

Continuity of Access

In 2004–05, Sydney Water continued to promote both the Customer Contract and the Code of Practice on Debt and Disconnection to customers, advising them of various payment assistance and hardship relief options available to them to minimise service restrictions and disconnections.

SPREAD OF COMMUNITY INVESTMENT 2004–05



- 38% Corporate Partnerships
- 10% Community Partnerships
- 19% Philanthropic Commitments
- 33% In-kind Support and Servicing

INVESTING IN THE COMMUNITY

Funds granted to non-government community organisations 2004–05

Corporate Partnerships	$378,833.20
Community Partnerships	$102,631.82
Philanthropic Commitments	$187,387.05
In-kind Support and Servicing	$329,563.72
TOTAL	**$998,415.79**

In line with the Contract and the Code, Sydney Water may restrict or disconnect supply of water should a customer fail to pay their account and/or fail to make alternative arrangements for payment and/or assistance.

Achievements

- Increased the number of accredited agencies with specialised skills in indigenous and non-English speaking background communities to manage community access to PAS.
- Continued the Sewer Connection Assistance for Disadvantaged Customers Policy in the Blue Mountains, and its extension in 2004–05 to include customers in The Oaks/Oakdale/Belimbla Park, Northern Illawarra Towns and Jamberoo areas, and those in the Brooklyn/Dangar Island area.
- Research conducted by the Public Interest Advocacy Centre (PIAC) confirmed that Sydney Water's income management and special assistance practices are largely effective in delivering financial relief to low income households and protecting their access to services.
- Continued the free-of-charge Residential Retrofit service to pensioner concession cardholders, Veterans' Affairs Gold cardholders and Commonwealth Health Care cardholders.
- Offered all other customers the $150 retail value retrofit service at a discounted rate of $22.

Next Steps

- Implement rebates for large, low-income households as part of safety net support following IPART's latest price determination effective from 1 October 2005.
- Extend the PAS so that private tenants who are responsible for the water usage bill can receive the same assistance as homeowners.
- Establish consumer referral process where financial counsellors can advocate account management plans and tailored arrangements for individual circumstances, especially in acute hardship cases.
- Review pensioner concession applications for low income customers not able to produce legal documentation confirming their circumstances.
- Contribute to a No Interest Loans Schemes (NILS) for large families to access affordable finance to pay for water efficient washing machines and basic plumbing services.
- Introduce new water saving measures targeting needs of low income households.
- Extend the free retrofit program.

IMPROVING CUSTOMER SERVICE

Convenient Service Options

Sydney Water offers customers a variety of service channels through which their needs can be met. These include a centralised Customer Contact Centre, an extensive website which offers online bill payment and enquiry options, and other electronic services specifically tailored to groups such as developers, plumbers, builders and the legal community, and three Customer Service Centres providing over-the-counter service.

During the year, the Customer Contact Centre handled over a million customer contacts, less than a quarter of which, at 222,753, reported difficulties and faults with water or sewerage services. The remainder were enquiries about bills and accounts, change of address, and general information such as water restrictions.

From November 2004, general enquiry contacts began to be logged into a new Customer Contact Management System, providing Sydney Water with the ability to track the history and progress of each customer enquiry.

The *Ask Sydney Water* feature on the website introduced last year managed over 193,000 customer enquiries with standard responses to frequently asked questions. Another 20,000 customers emailed questions or their comments to Sydney Water.

Visits to the Sydney Water website climbed to 5,161,252 in 2004–05, up 32 per cent on 2003–04. The website was substantially updated to include a wider array of technical information and further work on this will continue through 2005–06.

With most customers electing to pay bills and transact their Sydney Water business through more convenient service channels including over 500 Australia Post Offices and more than 500 newsagencies, the number of Customer Service Centres was reduced to one each in Sydney, Katoomba and Wollongong.

Plumbers and builders primarily used the network of Quick Check agents operating at over 20 plumbing trade stores throughout Sydney, while most solicitors and conveyancers used the online Property Link service to obtain conveyancing certificates and diagrams electronically.

Achievements

- Eighty-two per cent of customers indicated they were quite satisfied or very satisfied with their Sydney Water experience (2005 Annual Residential Customer Survey).
- Rated 8.7 out of 10 by customers indicating they were very satisfied with their telephone contact experience when reporting faults (2004 Emergency Contact Survey).
- Introduced a new Customer Contact Management System for customer contact information ensuring timely follow-up of enquiries and complaints, and providing useful data to improve customer service.
- Revamped the website in response to and based on customer feedback to improve the electronic delivery of information.

Challenges

- Handling the large number of enquiries about water restrictions. As well as information on our website, a recorded voice announcement assisted many customers who called for details. Of these, more than 39,200 elected to speak to a customer service representative.
- Ensuring meter-reading contractors perform to agreed standards and provide up-to-date and accurate readings for customers at all times.

Next Steps

- Develop a Customer Strategy to ensure that our products and services continue to meet our customers' and the community's changing needs and expectations.
- Improve contingency plans for key customer service activities.
- Institute improved contract performance monitoring procedures including increased contractor reporting requirements, and upgrade internal contract management training.

Embracing Our Social Responsibilities

OPEN AND HONEST RELATIONSHIPS

Sydney Water engages with its customers and the wider community to understand their views and preferences. We consider these in our decision-making processes.

Customer Response

To enhance customer service, Sydney Water continued to implement a system to quickly and efficiently resolve customer enquiries and complaints. If a customer is not satisfied with the solution proposed by Sydney Water for their complaint, they may contact the Energy and Water Ombudsman of NSW (EWON). EWON provides an independent and alternative means to review customer complaints.

In 2004–05, Sydney Water received 49,820 customer complaints including telephone calls reporting service difficulties and faults, equal to 116 complaints per 10,000 customers. This reflects a 17 per cent decrease over the past two years.

Of all complaints received in 2004–05, 32,466 related to Sydney Water's assets, products and services, a decrease of 5 per cent over 2003–04.

EWON-referred complaints totalled 640 – 27 per cent less than in 2003–04.

Customer and Community Research

Three annual or biennial customer surveys are the cornerstone of Sydney Water's customer research program – the Residential Customer Survey, the Commercial/Industrial Customer Survey and the Emergency Contact Customer Survey. One-off surveys targeting specific topics or audiences, or concept testing and evaluating advertising and communication programs, supplement these.

Sydney Water also surveys communities affected by its many infrastructure projects each year. These surveys both evaluate the effectiveness of the project and provide findings that are used in the planning and delivery of future projects.

At 30 June 2005, Sydney Water was actively engaged in 84 projects involving the community, increasing the amount of customer research undertaken during and at the conclusion of projects.

Stakeholders

Sydney Water's stakeholders include those who may be affected by or those who can influence the organisation's activities. They include regulators, NSW and Federal Government, politicians, peak lobby groups, special interest groups, the community, industry bodies, professional organisations, suppliers and staff.

Sydney Water holds stakeholder forums with key regulators such as DEC, NSW Health and IPART.

Our Customer Council makes an important contribution in helping Sydney Water understand customer needs and expectations. In addition, there are a number of consultative forums that address specific issues. These include the Outdoor Water Conservation Reference Group and the Industrial and Commercial Customer Forum.

The community is also consulted on specific capital works projects, to ensure their needs and expectations are understood and incorporated into the decision-making process.

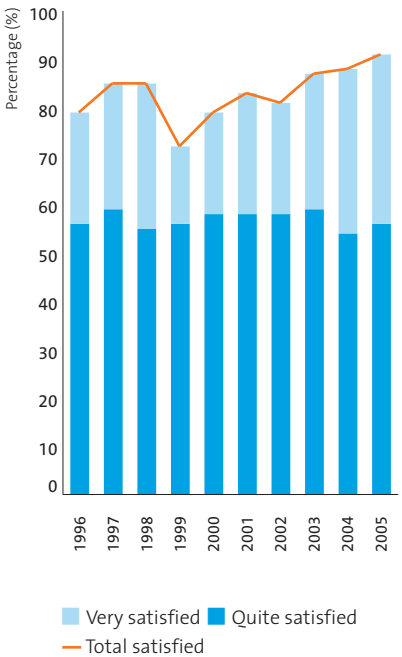
Sydney Water has reviewed its Stakeholder Strategy to ensure that it continues to meet the needs of the organisation and stakeholders.

Publications

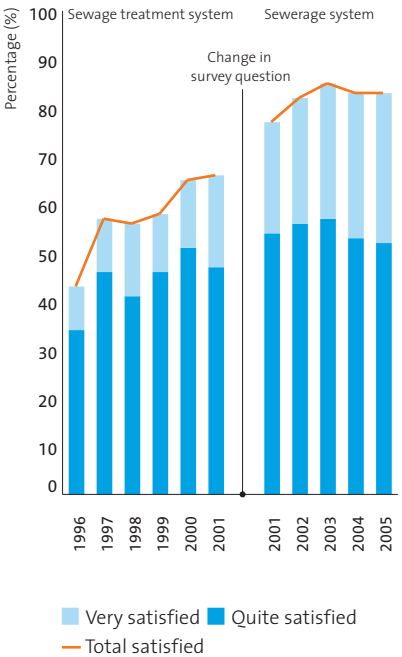
In 2004–05, Sydney Water produced its *Annual Report*, *Ecologically Sustainable Development Indicators and Environment Plan Report* (ESDI/EP), *Environmental Indicators Compliance Report* (EICR), *Annual Drinking Water Quality Report* (ADWQ) and *Quarterly Drinking Water Quality Reports* (DWQ).

Sydney Water produces a wide range of publications for a variety of target audiences. Information for residential to commercial and industrial customers, school educational kits, plans and strategies, policies, legislation and governance items which impact its operations, fact sheets and other comprehensive information about Sydney Water's operations are all available at **www.sydneywater.com.au**

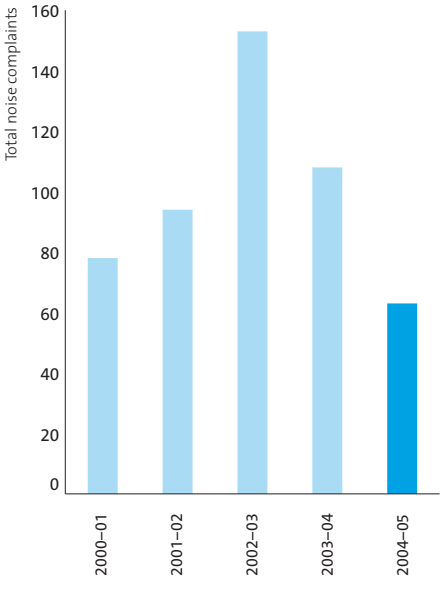
CUSTOMER SATISFACTION WITH TAP WATER QUALITY 1996 TO 2005



CUSTOMER SATISFACTION WITH SEWERAGE SYSTEM 1996 TO 2005



NOISE COMPLAINTS 2000-01 TO 2004-05



Access is also available through Sydney Water's Library located at its Head Office, 115–123 Bathurst Street, Sydney between 8.30am and 4.30pm, Monday to Friday.

Freedom of Information (FOI)

Sydney Water received 48 new applications under the Freedom of Information Act 1989, in 2004–05, 19 per cent less than the 59 received in 2003–04.

No Ministerial Certificates were issued over this period. Sydney Water received four applications for internal review. In three cases, the original determination was upheld, while in one case the original determination was varied.

During this period, the Ombudsman did not conduct any formal reviews of FOI determinations made by Sydney Water. There have been no appeals to the Administrative Decisions Tribunal in the past 14 years.

Privacy

Sydney Water voluntarily complies with the NSW Privacy and Personal Information Protection (PPIP) Act 1998 and dealt with 15 external and 30 internal privacy information requests during 2004–05, all within the allowable 60-day period.

As well, as part of the Act's five-year review cycle, Sydney Water made recommendations to the Office of the Privacy Commissioner regarding the position of State Owned Corporations under the PPIP Act.

Since incorporating Sydney Water Privacy contact information on the website and in publications, public awareness of privacy issues has increased, reflected by a rise in the number of requests for information. This trend is anticipated to continue as the community's awareness of privacy rights and issues grows.

Achievements

- Increased customer level of trust from 7.1 to 7.3 that Sydney Water provides safe drinking water (2005 Annual Residential Customer Survey).
- Increased customer level of trust from 7 to 7.1 that Sydney Water does business in a way that protects people's health (2005 Annual Residential Customer Survey).
- Maintained a high level of customer satisfaction with water and sewerage services with 91 per cent satisfied with their tap water, and 83 per cent satisfied with the sewerage system (2005 Annual Residential Customer Survey).
- Increased levels of customer awareness of water conservation initiatives – 93 per cent of customers aware of Go Slow on the H_2O, up from 89 per cent; 78 per cent aware of the rainwater tank rebate, up from 65 per cent; and 26 per cent aware of the Sydney Water Waterwise Shop, up from 10 per cent (2005 Annual Residential Customer Survey).
- Achieved high level of community awareness of water restrictions with more than 75 per cent aware of them (Permanent Water Savings Measures Evaluation, May 2005).
- Action to conserve water taken by 72 per cent of commercial and industrial customers for who water plays a critical or secondary role in their business.
- Increase in customer research during and at the conclusion of major capital works projects, providing effective evaluation of community response and level of satisfaction.
- Achieved a 42 per cent reduction in noise complaints related to Sydney Water activities.
- Increased awareness among staff of customers' privacy rights.

Challenges

- The overall trust rating for Sydney Water was 6.7 out of 10, a decrease on last year's figure of 6.8 (2005 Annual Residential Customer Survey).
- Community ratings on the water quality of ocean beaches fell to 6.7 from 7.1, and of Sydney Harbour to 6.4 from 6.7 (2005 Annual Residential Customer Survey).
- Commercial and industrial customers rated Sydney Water's response promptness to customer needs, complaints and queries, and providing adequate notice of changes to the properties or qualities of water less highly.
- Meeting the challenge of privacy case law which is constantly providing determinations on the matter of legal privacy.

Next Steps

- Extend the use of formal community performance indicators to contracts, including incentivised contracts, to improve overall community engagement.
- Track community sentiment on water conservation to identify issues and develop strategies to maintain and encourage motivation to save water.
- Increase the awareness among commercial and industrial customers of Sydney Water's program to assist businesses save water.
- Continue to raise customer awareness of their privacy rights and Sydney Water's related responsibilities.

FREEDOM OF INFORMATION 2004–05*

Requests	Personal	Other	TOTAL
– New (including transferred)	1	47	48
– Brought forward (incomplete)	–	18	18
Total to process	**1**	**65**	**66**
– Complete	1	59	60
– Withdrawn	–	10	10
Total processed	**1**	**49**	**50**
– Carried forward (incomplete)	–	6	6

* A more detailed summary of Sydney Water's FOI statistics for 2004–05 is available in the Annual Report Appendix, which is located on the CD attached to the inside back cover of this report

CASE STUDY

BSM 2 LEADS THE WAY TO SAFETY

Developing safety leadership among 550 Civil Maintenance staff across nine depots, Be Safe Mate (BSM) 2's premise is that behavioural change is best achieved when led by example.

"A person is more successful at changing their behaviour when they see their leader has changed their's," says Program Manager, Liz Miles.

Developed by critiquing the original program, BSM 2 is about motivating and influencing others in the workplace through the display of safe behaviours. By contrast, BSM version 1 involved observing behaviours, correcting unsafe behaviours and recording observations.

BSM 2 recognises that anyone can be a Safety Leader once key leadership skills and characteristics have been learned and developed. These include leading by example, being visible, persistent and consistent, respected and courageous, as well as having strong communication skills and being able to stand up for what is right.

Around one third of Civil Maintenance's workforce are now designated Safety Leaders. The program involves workshops, one-on-one coaching for some, and encouragement via a motivational speaker.

Three BSM 2 graduates, Mick Palumbo from North West Depot, and Gavin Field and Charlie Tosatto from The Hills Depot, all benefited from one-on-one coaching in different ways.

"When you're developing new skills sometimes you get stuck and need to work through a situation to get a solution," Gavin said.

"Coaching helped me achieve change in a major safety issue involving malfunctioning equipment. Before BSM 2, I doubt I would have been able to get the same result."

Charlie Tosatto, Occupational Health & Safety representative at The Hills Depot, says that BSM 2 has helped open up his colleagues' eyes on safety.

"The workshops help us realise that, one day, the 'it'll be right' attitude may not be alright," he said. "Changing attitudes isn't easy and the workshops show us that the way we work impacts more people than we imagine.

"A great thing about BSM 2 is that I can now bring safety to the attention of not only my workmates but also management, something I would have found difficult before. It's a challenge I'm enjoying."

Mick Palumbo, from the North West Depot, is impressed with how BSM 2 is helping change the culture within Civil Maintenance, and is happy to be part of a program that is ensuring people get home in one piece at the end of the day.

"To some, it used to be a question of getting the job done, no matter what," said Mick, who joined Sydney Water two and a half years ago.

"Now, it's obvious that safety first is the rule of thumb. Workshops reinforce the right thing to do and coaching helps us take that into the field to be followed," he said.

"I used to be the guy who always set up the witches hats and men at work signs. When I stopped, my team mates started doing it automatically – leading by example works."

IMAGE: BSM 2 graduates Mick Palumbo (foreground) and Gavin Field and Charlie Tosatto (L – R background), and colleague Doug Philliponi (far right) prepare for work by setting up safety signs at Prospect.

Embracing Our Social Responsibilities

PROTECTING HEALTH AND SAFETY

Sydney Water's goal is to provide a safe and efficient workplace with zero injuries to employees, contractors and visitors, and the safety of people working at Sydney Water sites will not be compromised to achieve business objectives.

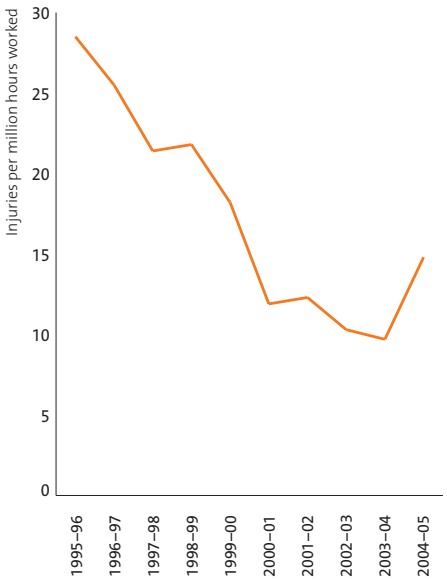
During the year, Sydney Water continued to address its key safety risks through cross-divisional project teams. These teams are led by Health and Safety professionals and include technical experts and operational managers. In 2004–05, Sydney Water focused on the risks of:

- electrical safety for non-electrical workers
- fall prevention
- asset isolation
- network safety protocols (communicating diverse activities)
- manual handling.

The level and suitability of current risk controls in each of these key risk areas were assessed and, where relevant, additional controls implemented. Managing these risks will be a key focus in 2005–06.

A Safety Improvement Committee with Board, Executive and employee representation was established during the year to help raise the visibility of health and safety, provide increased assurance that health and safety risks are being effectively managed, and to make recommendations to management for improvements where necessary. Improved reporting and monitoring procedures will support the Committee.

LOST TIME INJURIES FREQUENCY RATE 1995–96 TO 2004–05



Sydney Water actively works with staff to ensure their health and safety in wastewater activities through new controls, training and trade waste awareness.

Managing Sydney Water's contractors remains a focal point. More emphasis has been placed on the management of minor works' contractors, providers of property and some plant maintenance, and a revised Contractor Safety Management System was implemented.

Sydney Water will continue to work with its major contractors to improve safety at all worksites and is implementing a comprehensive Risk Assessment in Design procedure.

A major behavioural safety program, Be Safe Mate 2, is ongoing in Sydney Water's Civil Maintenance business. This long-term program aims to develop safety leadership skills at both workforce and management levels through workshops and one-on-one coaching.

Fatalities

Sadly, Noel Merchant, a Sydney Water Civil Maintenance employee, was electrocuted on 22 January 2005 while repairing a water service line at residential premises at Emu Plains in Sydney.

All main-to-meter maintenance was immediately suspended and safety procedures reviewed. Work recommenced under the strict requirement that a qualified electrician attend sites where there was a broken water service line or one that may need to be cut during repairs.

Electrical and plumbing experts provided Sydney Water with advice following which a revised procedure and new equipment was developed and implemented.

Sydney Water continues to cooperate with the NSW State Coroner and WorkCover (NSW) in their investigations.

Prosecutions

There were no OH&S-related prosecutions during 2004–05, however WorkCover is investigating the deaths of Noel Merchant, and contractor Ron Tabak who died while visiting a Sydney Water contractor's construction site in February 2004 last financial year.

Workplace Injuries

Sydney Water's LTIFR increased from 9.5 to 14.8 over the past 12 months. Achieving a significant drop in this rate, particularly in the Water Services Division's Civil Maintenance business unit, is being treated as a priority.

Much of the increase can be attributed to higher levels of manual handling injuries in an ageing workforce faced with a greater maintenance burden due to extended drought conditions.

Achievements

- Reduced the workplace LTIFR of major contractors from 9.4 to 5.2.
- Introduced a revised Contractor Safety Management System which meets NSW Government Guidelines requirements.
- Implemented a risk assessment method in design procedure for capital projects.
- Reviewed key safety risks and set up project teams to address the top five risks.
- Documented and communicated suitable controls and procedures for all key safety risks.

Challenges

- Address the increase in the LTIFR within Civil Maintenance.
- Reduce the incidence of manual handling injuries.
- Use effective lead indicators for safety performance.
- Develop a culture of accountability for safety among managers and employees.

Next Steps

- Drive proactive leadership from the top and throughout the organisation.
- Improve line management accountability for safety through performance agreements.
- Improve line managers' knowledge of OH&S legislation and Sydney Water's procedures.
- Implement recommendations proposed by key risk Project Teams.
- Review other key risks to ensure adequacy of risk management processes.
- Develop and implement lead indicators that drive safety performance, e.g. leadership activities undertaken, audit actions implemented, incident investigations carried out, contractor site inspections conducted.

Embracing Our Social Responsibilities

CAPABLE AND COMMITTED WORKFORCE

Sydney Water's goal is to have a capable and committed workforce that can effectively and efficiently deliver defined corporate objectives. This means having highly competent teams and individuals who are motivated, innovative, empowered and accountable, while also being able to enjoy their work in a safe and equitable environment.

To this end, Sydney Water has various programs and policies in place that aim to achieve improved employee capability and engagement, equity and diversity, and health and safety.

Employee Relations and Engagement

Sydney Water has various programs and policies aimed at building and maintaining healthy employee relations and strong employee engagement.

These include management and employee development programs, the *Rewarding Our Values* Reward and Recognition Program, merit-based selection, and flexible work options. A Transitions Program is also run to provide support to employees affected by organisational change.

In addition to these regular activities, Sydney Water undertook several other initiatives during 2004–05.

Significant effort has been devoted towards achieving a performance-oriented culture through the development of a more consistent and outcomes-driven performance management system, and improving performance leadership capability among managers. Work will continue in the coming year to ensure these initiatives are embedded throughout the organisation.

In a climate of ongoing change, Sydney Water has been focusing on refining its key human resources policies and processes to ensure change is facilitated effectively, employee development is advanced, and that employees are treated fairly. This will remain a key focus in 2005–06.

Following review, the recruitment and selection process was centralised and an online system introduced to enable the electronic viewing of and application for job opportunities.

An Employee Self Service System was also introduced for staff to view and update their personal information and apply for leave electronically.

Industrial Relations

Sydney Water ensures employees and applicants are not discriminated against or victimised on the basis of membership of industrial associations. In 2004-05, 61 per cent of Sydney Water employees were members of an industrial association or trade union.

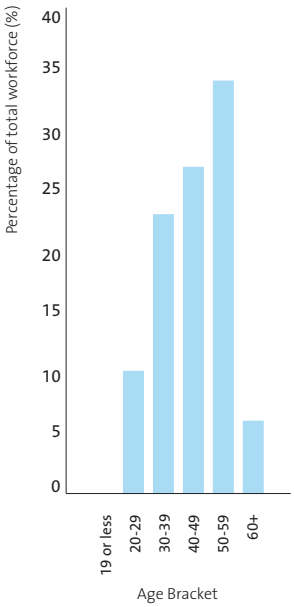
A new Award was settled in November 2004.

As well as simplifying many of the award conditions, other key features of the Sydney Water Award 2004 included strengthening the consultation process and introducing an additional leisure day for employees working a 38-hour week.

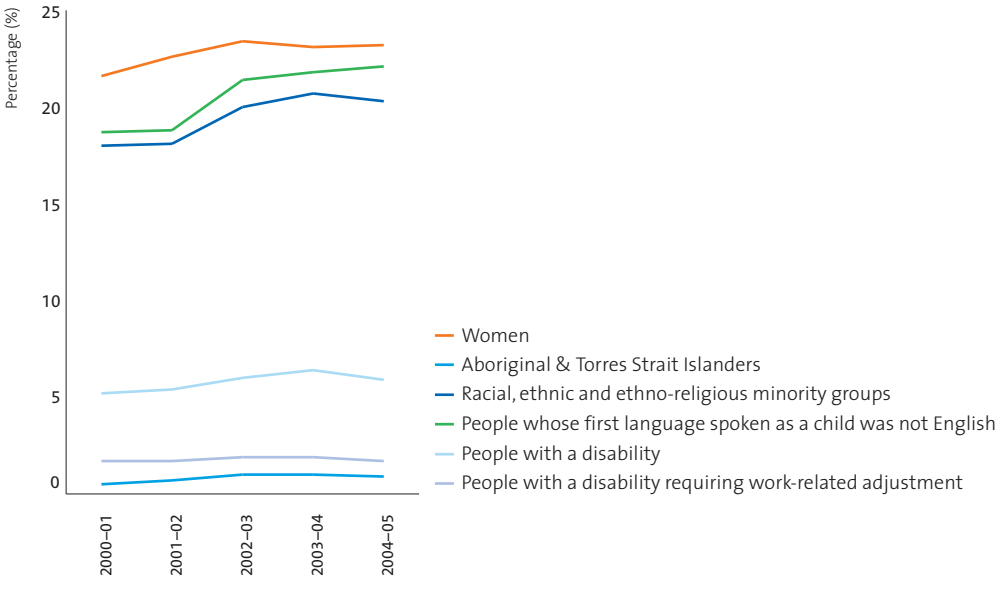
Considerable attention has been given to the efficiency and effectiveness of Sydney Water's maintenance workforce. This has involved a close examination of work methods and processes, and involving both staff and unions to improve work practices. This program will continue in 2005–06.

Effective internal communication is critical to employee engagement and satisfaction. Substantial effort has been given to improving and simplifying Sydney Water's internal communications channels. A key initiative was the development of *eNews*, a weekly electronic staff newsletter that consolidates key information.

WORKFORCE AGE PROFILE 2004–05



EEO GROUPS AS PERCENTAGE OF TOTAL WORKFORCE 2000–01 TO 2004–05



Equity and Diversity

Sydney Water produced its Equity and Diversity Strategy for 2005–07, reinforcing its continued commitment to:

- building a diverse and skilled workforce
- encouraging a workplace culture that displays fair practices and behaviours
- improving employment access to and participation by Equal Employment Opportunity (EEO) groups.

During the year, improvements were noted in the workforce representation and across higher salary bands of women and people whose first language is not English. The share of Aboriginal and Torres Strait Islander people, and racial, ethnic and ethno-religious minorities in the workforce declined slightly.

Workforce Capability

Sydney Water will provide ongoing development and skills enhancement for its employees through a range of programs and workshops.

A Leadership Development Program builds a cohesive leadership team by identifying leadership principles and behaviours, creating a shared vision and a consistent approach to leading Sydney Water.

Giving and Receiving Feedback workshops are delivered to provide managers with skills to foster honest and open relationships with staff, and to support the Performance and Development Planning process.

A Scholarship Program provides financial assistance to eligible employees to undertake approved courses of study to develop competencies to help us meet our business objectives.

A Learning Management System exists to enable Sydney Water to better report and plan for training needs, and to ensure that staff training records are current, especially in the areas of recurring training needs.

Achievements

- Developed a more consistent and outcomes-driven performance management system.
- Introduced an online system for viewing internal job opportunities, and an Employee Self Service System.
- Built a new and improved depot in Unanderra for 80 Illawarra-based employees.
- Settled a new Award in November 2004.
- Implemented a Disability Work Experience Placement Program.
- Established an Aboriginal and Torres Strait Islander employee support network that incorporates targeted training and community involvement.
- Attendance by more than 120 current and future leaders at Leadership Development Programs.
- Attendance by managers at Giving and Receiving Feedback workshops.
- Awarded post-graduate funding assistance to 24 employees.
- Maintained our status as a Registered Training Organisation (RTO) under S22C of the Vocational Education and Training Accreditation Act 1990.
- Continued to comply with the Australian Quality Training Framework introduced in 2002.

Challenges

- Restructuring in a fair and equitable manner, and monitoring and maintaining staff engagement.
- In line with many workforces in the public sector, a large portion of Sydney Water's workforce is due to retire over the next 10 years. Sydney Water must both maintain and improve the capability of its current staff, and strengthen its organisational capability over the medium to long term.

Next Steps

- Further improve recruitment and selection processes.
- Embed the new Performance and Development Planning processes for managers.
- Initiate annual measurement and assessment of employee engagement.
- Implement the new Sydney Water Equity and Diversity Strategy 2005–07, and Action Plan.
- Undertake training needs analysis to establish development needs and priorities.
- Review and redevelop Youth Programs, with special focus on graduates and apprenticeships.
- Enhance training programs for supervisory and frontline managers.
- Extend Giving and Receiving Feedback workshops to staff.
- Implement and operate a centralised training model.
- Maintain compliance as an RTO and enhance capacity to develop a wide range of competency-based programs for staff across all areas aligning with national training qualifications.

Embracing Our Social Responsibilities

WORKFORCE STATISTICAL INFORMATION

SYDNEY WATER WORKFORCE* 2005

Full-time Equivalent (FTE)	2002–03	2003–04	2004–05
FTE – permanent	3,343	3,289	3,132
FTE – temporary	90	45	62
FTE – part-time	83	101	111
Total	**3,516**	**3,435**	**3,305**
Other			
Agency personnel	335	136	115
Redundancies	103	81	152
Appointments	275	155	151
Average turnover	2.65%	2.56%	2.59%
Unplanned absences	2.73%	3.37%	3.41%

NUMBER OF SENIOR EXECUTIVE SERVICE (SES) EQUIVALENT OFFICERS

	2002–03	2003–04	2004–05
Female	19	17	13
Male	93	82	66
Total	**112**	**99**	**79**

REPRESENTATION OF EEO GROUPS**

	2002–03		2003–04		2004–05	
	No.	%	No.	%	No.	%
Women	832	23.4	805	23.1	787	23.2
ATSI[1]	36	1.0	35	1.0	32	0.9
REEM[2]	712	20.0	720	20.7	688	20.3
Language[3]	763	21.4	759	21.8	750	22.1
PWD[4]	214	6.0	224	6.4	200	5.9
PWD-RA[5]	69	1.9	60	1.7	57	1.7
Total staff	**3,559**		**3,485**		**3,388**	

REPRESENTATION OF EEO GROUPS WITHIN SALARY LEVELS**

Salary levels	Total staff	Survey respondents	Women		ATSI[1]		REEM[2]		Language[3]		PWD[4]		PWD-RA[5]	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<$31,352	11	1	2	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0
$31,352 – $41,177	120	47	16	13.3	2	1.7	19	15.8	24	20.0	10	8.3	4	3.3
$41,178 – $46,035	405	211	45	11.1	8	2.0	63	15.6	93	23.0	30	7.4	8	2.0
$46,036 – $58,253	961	623	353	36.7	15	1.6	156	16.2	169	17.6	67	7.0	23	2.4
$58,254 – $75,331	1,045	823	221	21.1	6	0.6	244	23.3	246	23.5	53	5.1	15	1.4
$75,332 – $94,165	518	437	102	19.7	1	0.2	137	26.4	147	28.4	20	3.9	3	0.6
>$94,165	328	279	48	14.6	0	0.0	69	21.0	70	21.3	20	6.1	4	1.2
	3,388	**2,421**	**787**	**23.2**	**32**	**0.9**	**688**	**20.3**	**750**	**22.1**	**200**	**5.9**	**57**	**1.7**

* Workforce numbers are calculated by apportioning the FTE hours worked to the actual headcount employee numbers

** All EEO figures are based on an actual headcount of employees, excluding casuals. The number of women indicates their actual representation within Sydney Water. Figures for all other EEO groups are based on a voluntary survey with a response rate of 72 per cent. All percentages indicate the representation of EEO groups against total staff. In some salary bands this may understate the actual representation due to low survey response rates

Definitions

1 Aboriginal 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.

IMAGE: Graduate Program recruits Jo Lumby, Ed Maher and Nic Hyde bring a range of valuable skills and knowledge, not to mention enthusiasm, to Sydney Water, pictured together at West Dapto where Nic is working in Asset Planning for new release areas.

CASE STUDY

GREENFIELDS DEVELOPMENT

Graduate Program plans for the future

Graduates Nic Hyde, 27, Jo Lumby, 24, and Ed Maher, 24, joined the Graduate Program in 2002, 2003 and 2004 respectively. Nic now works in Asset Planning in the Illawarra, while Jo and Ed are both in Sydney – Jo with the school and community education program, Streamwatch, and Ed with the Every Drop Counts Business Program.

Between them they've worked in Civil Maintenance, Environmental Planning & Management, Water Conservation & Recycling, Wastewater Planning, Communications and Community Relations, gaining a well-rounded understanding of Sydney Water's operations and building diverse skills.

Importantly, they bring vital knowledge in environmental science and management, and marketing and human resources through their tertiary studies, helping us advance our workforce assets.

More than 90 hand picked graduates from various disciplines have joined Sydney Water in the past three years.

Running over a three-year period and launched in 1988, this multi-disciplinary program rotates graduates in at least three positions for up to 12 months, and includes work in operational areas such as Customer Contact Centres and STPs, giving them hands-on experience.

Graduates also undertake training courses in presentation and communications skills and project management. Nic, Jo and Ed agree that the people skills they've gained have been paramount to their success and enjoyment.

"Being able to communicate at all levels is a great advantage," Jo said.

"My work in community relations dealing with customers, councils and production employees during major projects, and now with Streamwatch where I'm working with schools and students, has shown me just how flexible you need to be to operate in a variety of contexts."

'Thinking outside the square' is also a key attribute delivered through the Graduate Program.

Nic says, "I was seconded to the Water Services Association of Australia (WSAA) for a year which was fantastic as I was able to see the whole Australian water industry from a macro perspective.

"This exposed me to the myriad of ways water bodies operate in different areas – a definite advantage. It has also given me the impetus to take on further studies in hydrography."

The Every Drop Counts Business Program delivers impressive water savings of up to 15 million litres a day.

Ed's experience working side-by-side with businesses of all sizes in the education, property and hospitality sectors to develop water conservation and recycling programs sees him undertaking diverse tasks from analysing technical data to negotiating contracts and preparing ministerial correspondence.

"There's never a dull moment in our work and my interaction with the real world to deliver practical and achievable water saving measures is entirely satisfying.

"I've now got a commercial dimension to my environmental science background which means I'm much more skilled than if I had remained in a purely scientific area. And, I've even taken up a TAFE business studies course to round myself out even further," said Ed.

SUMMARY REVIEW OF OPERATIONS

Ensuring Our Business is a Success

SYDNEY WATER SEEKS TO BALANCE AN ECONOMIC RETURN TO ITS SHAREHOLDERS WITH AFFORDABLE WATER SERVICES AND THE DELIVERY OF A SIGNIFICANT CAPITAL WORKS PROGRAM

FINANCIAL PERFORMANCE

As a State Owned Corporation, Sydney Water has custody of the community's $12 billion investment in water infrastructure. Sydney Water is obliged to run the business as efficiently as possible, keep costs low and at the same time ensure that the community's investment earns a commercial return.

In 2004–05, Sydney Water's financial performance continued to be affected by the ongoing drought and the introduction of Level 3 water restrictions. Although revenues were materially impacted, Sydney Water continued to meet its customer and regulatory requirements while not materially increasing operating expenditure.

Statement of Corporate Intent

Wholly owned by the NSW Government on the community's behalf, Sydney Water's shareholders are now the NSW Minister for Finance and the Assistant Treasurer who hold the shares non-beneficially.

An annual SCI specifies the commercial performance targets agreed between Sydney Water and its shareholders. Sydney Water's revenue, operational and capital budgets form the basis of these targets.

Key Results

For the 12-month period, consolidated pre-tax operating profit was $270 million. Profit after tax was $215 million, considerably above the 2004–05 SCI target of $171 million.

Commensurate with profitability, return on net operating assets was marginally above target at 3 per cent.

As a result, Sydney Water's Directors have recommended an after-tax dividend to shareholders of $120 million.

While the profit target for 2004–05 was exceeded, Sydney Water's underlying profitability and cash position were not improved as profit was mainly due to lower superannuation costs through better-than-anticipated investment performance by fund managers.

In addition, the increase was partially offset by lower water sales revenue due to continuing mandatory water restrictions.

Underlying operating costs per property rose by approximately 2.7 per cent in 2004–05, attributable to additional drought management costs such as increased advertising and education, the enforcement of water restrictions, and greater expenses incurred in leak reduction activities.

Consultants' costs were $1.3 million over the 12-month period. Full details on consultants' expenditure are available in the Annual Report Appendix on the CD attached to the inside back cover of this report.

Property Disposal

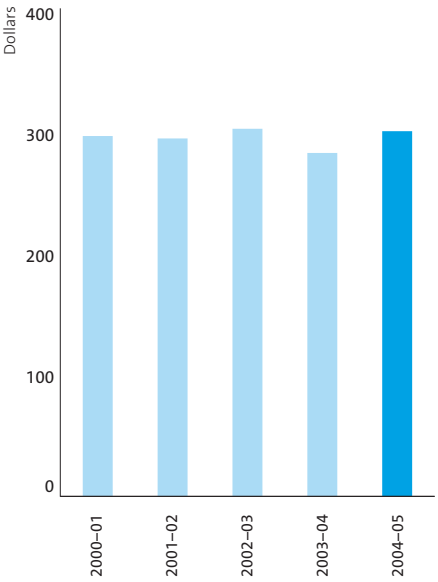
During 2004–05, Sydney Water disposed of 13 properties surplus to its needs at a total value of $7.98 million net of GST.

Properties valued at greater than $5 million were sold by tender or auction, and proceeds from all sales were placed in general revenue.

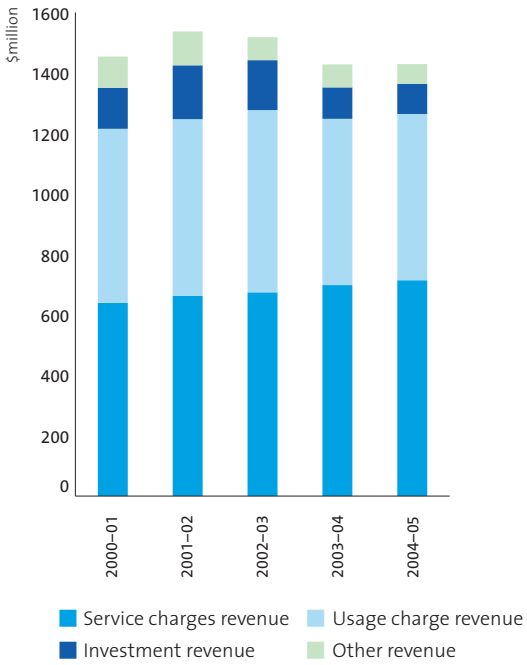
Sydney Water is not aware of any family connection or business association between any party who acquired the properties and any member of Sydney Water who approved the sale.

Application for access to documents concerning details of the properties disposed of may be made in accordance with the Freedom of Information Act 1989.

CONTROLLABLE OPERATING COSTS PER PROPERTY 2000–01 TO 2004–05



REVENUE SOURCES 2000–01 TO 2004–05



Managing Investments and Cash Flows

Sydney Water seeks to maximise investment returns while maintaining appropriate controls over risks. Consistent with NSW Treasury guidelines, Sydney Water benchmarked its investment performance against the NSW Treasury Corporation (TCorp) hourglass cash facility.

At 30 June 2005, Sydney Water's investment portfolio, managed by its own Treasury, was approximately $8 million. In 2004–05, Sydney Water's investment performance exceeded the hourglass benchmark by 0.72 per cent.

To assist in cash flow management, Sydney Water increased the use of the short-term Come and Go borrowing facility with TCorp. This strategy reduced the volume of funds invested for cash flow management needs and the volume of additional fixed borrowings in 2004–05.

Managing Debt

Sydney Water's financial liabilities are managed to minimise risk against volatility in financial markets, protect the value of Sydney Water's equity and minimise the cost of these liabilities.

At 30 June 2005, Sydney Water's financial liabilities were valued at market at approximately $2.73 billion. Built up over time mostly to fund capital investments, the debt portfolio is managed by Sydney Water's Treasury Unit with most transactions processed through TCorp.

During 2004–05, $173 million in new loans was raised with an initial average interest rate of 5.57 per cent.

With financial markets generally strong in 2004–05, fixed rate debt could be locked in at relatively low rates. As a result, the percentage of fixed rate debt increased to 91 per cent by 30 June 2005 with the remaining 9 per cent at short-term floating rates.

Debt portfolio performance for 2004–05 was marginally below the internal benchmark at 0.1 per cent, with the debt benchmark portfolio constructed and maintained in accordance with NSW Treasury guidelines.

Achievements

- Maintained operating costs.
- Achieved SCI targets.

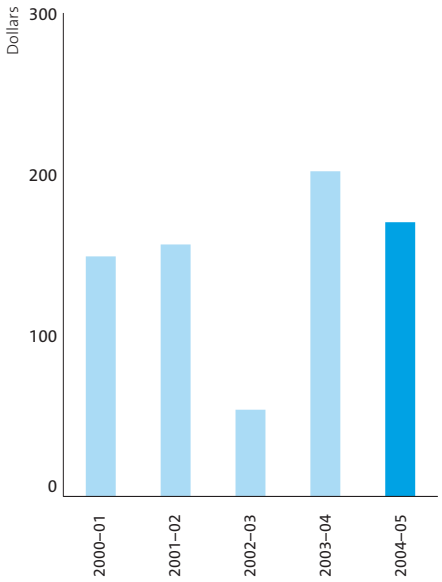
Challenges

- Managing financial resources in an environment of ongoing restricted water sales.
- Delivering cost efficiencies while continuing to meet increasing customer expectations and regulatory requirements.

Next Steps

- Continue commercial and business reforms.
- Manage significant investment in desalination and water recycling to ensure Sydney's future water supply.

OPERATING PROFIT BEFORE TAX AND CAPITAL CONTRIBUTIONS 2000–01 TO 2004–05



Ensuring Our Business is a Success

AVERAGE RETURN ON INVESTMENT 2004–05

	Corporation	Hourglass
Cash	6.31%	5.59%

PERFORMANCE AGAINST SCI 2004–05

	SCI 2004–05	Result 2004–05
Operating profit (after tax)	$171m	$215m
Earnings before interest and tax (before capital contributions)	$304m	$321m
Return on net operating assets	2.9%	3.0%
Funds flow interest cover	2.9	2.9
New borrowings	$160m	$173m
Debt to equity ratio	33%	33%
Dividend payable	$120m	$120m

DEBT PORTFOLIO MIX 2004–05

	SWC actively managed	Benchmark
Market valuation	$2,734m	$2,724m
Nominal cost of funds	6.16%	7.75%
Generalised cost of funds	7.73%	7.63%

BUDGET OUTLOOK 2005–06

	$M
Service and usage revenue	$1,381
Capital contributions	$176
Other income	$48
Total income	$1,605
Operating expenses	$941
Depreciation	$196
Financing charges	$165
Total expenses	$1,302
Profit before tax	$304
Income tax expense	$96
Profit after tax	$ 208
Capital investment	$620

CASE STUDY

WATER MAIN RENEWALS PROGRAM

Improving customer service

Sydney's water main network covers almost 21,000 km with mains ranging in size from 100 mm to over 3,000 mm in diameter, and includes around 3 million joints.

Water main renewal projects replace water mains that no longer provide an adequate service. Their replacement reduces the risk of main breaks, helping to deliver an uninterrupted service to customers and limiting community disruption.

Renewing water mains involves disconnecting old water main pipes and replacing them with a new pipe, which will sometimes be larger to cater for population growth.

Commonly, one of two methods is used:

- Open trench, which involves laying a new pipe in a trench adjacent to the existing water main. In this method, the old main is disconnected and generally left in the ground to minimise the need for further excavation work.
- Pipecracking/sliplining, which involves using specialised equipment either to fit an internal liner into the existing main, or to install a new main in the same location by bursting the old pipe and pulling the new pipe through the hole left by the old pipe. This method greatly reduces the amount of excavation required.

In 2004–05, 91 km of water mains with a history of poor performance were replaced – significantly more than the 66 km originally planned – and achieved within budget.

In May 2005, Sydney Water awarded a $250 million contract targeting the renewal of 300 km of water mains over the next four years.

As one of the major initiatives in its water main renewals work, Sydney Water awarded the contract to NetWorks Alliance, joining Sydney Water with Bovis Lend Lease, CLM Excavations and Collex in an innovative collaboration that will further improve all aspects of the water main renewals program.

Commencing on 1 July 2005, this large, single alliance contract allows greater program flexibility, improved environmental and safety management and will generate cost savings in design, pipe laying, road restoration, spoil disposal and contract administration.

As the largest consolidated water main renewals program ever undertaken in Australia, the alliance will initially replace water pipes at 700 sites over the next 18 months, continuing to target those mains with a history of breaks and leaks to reduce customer disruption and the visible waste of water.

Water supply services to over 30,000 homes and thousands of other customers including schools, hospitals, utilities and businesses will be improved. The program covers 40 local government areas and started in Bankstown, 20 km south-west of the Sydney CBD in July 2005.

IMAGE: Water Services construction worker Class 2, Quintino Ferreira, attaches a new 100 mm plastic pipe to the pipecracker in preparation for renewing a water main at Cooks Avenue, Canterbury.

Ensuring Our Business is a Success

CAPITAL EXPENDITURE AND MAINTENANCE

Sydney Water invests around half a billion dollars each year in new infrastructure. This is designed to meet both customer and regulatory expectations for maintaining and improving service levels.

Capital Expenditure

Total capital expenditure in 2004–05 was $426 million. This included:

- $205 million for asset and service reliability, and the renewal and rehabilitation of existing assets
- $86 million on projects to satisfy regulatory standards
- $56 million on infrastructure to service population growth
- $43 million to extend sewerage services under the PSP
- $16 million in business improvement projects
- $20 million capitalised from borrowing costs.

Maintenance

Sydney Water is responsible for maintaining the reliability and performance of its assets.

In 2004–05, Sydney Water continued investment in a focused program of preventative maintenance and renewals across all of its assets.

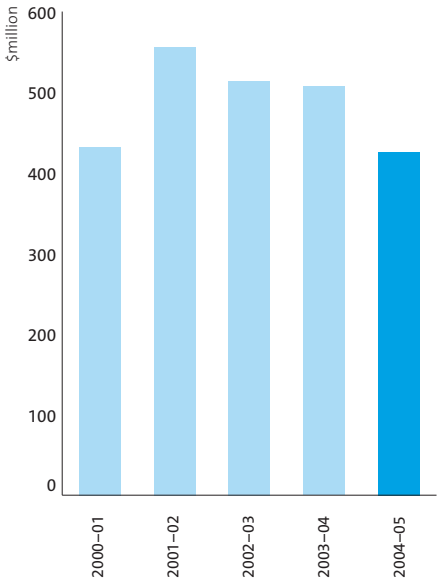
Achievements

- Completed the SPS Upgrade Program at a cost of $230 million. Involving the targeted upgrade of 272 SPSs, this program will eliminate or minimise dry weather sewage overflows and bring health and environmental benefits.
- Completed work on providing reticulated sewerage services valued at $95 million to three priority areas under the PSP. Northern Illawarra Towns, Jamberoo and Oaks/Oakdale/Belimbla Park were all sewered providing substantial benefits to public health and the environment.
- Completed the $15.5 million upgrade of Richmond STP. By increasing treatment capacity by 30 per cent, this project caters for growth. In addition, recycling process units were replaced to ensure recycled water meets uncontrolled reuse guidelines.
- Completed the major component of the $215 million Illawarra Wastewater Strategy with the commissioning of dry weather flows through the amplified and upgraded Wollongong STP.
- Commissioned major components of the Bondi STP RIAMP. This project aims to progressively renew and modernise the plant to improve operability and reduce risk of process failure that would adversely impact beach water quality.
- Progressed construction of the 9 km sewage transfer carrier from Glenbrook STP to Penrith STP to commissioning phase. With the recent amplification of Penrith STP, these projects combine to allow for growth and the decommissioning of Glenbrook STP as required by the regulator.
- Commenced construction on a $67 million reticulated sewerage system to be provided to 1,700 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.
- Commenced construction on the $49 million amplification and upgrade of West Camden STP. By doubling plant capacity, this project provides for growth and recycled water for agricultural reuse in the local area.
- Commenced construction on the $32 million amplification of Shellharbour STP. Providing for growth and minimising the impacts of urban development on marine ecosystems of the southern Illawarra, this project also brings the secondary benefits of improving local beach water quality and enhancing public amenity by reducing odour.
- Achieved the above-target renewal milestones of 91 km of water mains and 91 km of sewer mains. Water main renewals reduce water loss, damage to property and potential community disruption. Sewer main renewals reduce leakage to the environment and property surcharge.
- Awarded an alliance contract for the delivery of up to $300 million of water and sewer main renewals over the next four years.

Capital Expenditure Forecast

Forecast capital expenditure for 2005–06 is $592 million. This expenditure includes an additional $89 million for the desalination project and is allowed for under the Government Programs category.

CAPITAL EXPENDITURE 2000–01 TO 2004–05



CAPITAL WORKS PROGRAM 2005–06

Category	$M
Asset renewal and rehabilitation	181
Asset service and reliability	90
Growth	94
Improved standards – mandatory	53
Business efficiency	19
Government programs	135
Borrowing costs	20
Total	**592**

MAJOR CAPITAL WORKS PROJECTS COMPLETED 2004–05

Project	$M	Project benefits
SPS Upgrade Program	230.3	Public health and environment protected through targeted program which upgraded 272 SPSs to eliminate or minimise dry weather overflows.
Northern Illawarra Towns PSP Scheme	45.1	Water quality in the Hacking River system and at local beaches improved and septic system-related public health risks reduced through reticulated sewerage provided to over 850 properties in the Coalcliff, Otford, Stanwell Tops and Stanwell Park villages.
Oaks/Oakdale/Belimbla Park PSP Scheme	32.2	Septic system-related public health risks reduced and wastewater run-off into Sydney's drinking water catchment eliminated through reticulated sewerage provided to over 1,140 properties in The Oaks, Oakdale and Belimbla Park villages.
Jamberoo PSP Scheme	18.0	Water quality in the Minnamurra River improved and septic system-related public health risks reduced through reticulated sewerage provided to over 350 lots in Jamberoo.
Richmond STP Stage 2 Upgrade	15.5	Future growth in and around Richmond catered for, water quality in the Hawkesbury-Nepean River preserved, and recycled water use by customers to meet national reuse guidelines ensured.

MAJOR CAPITAL WORKS IN PROGRESS

Project	2004–05 expenditure $M	Forecast expenditure (at 30/06/05) $M	Forecast completion date (at 30/06/05)
Penrith STP Amplification Stage 8 and Glenbrook STP Transfer	33.2	33.6	July 2005
Liverpool STP Upgrade – Stage 4a (formerly Georges River Program Stage 1)	114.6	116.0	Sept 2005
Illawarra Wastewater Strategy	212.4	215.0	Dec 2005
SEIP	10.6	18.4	Dec 2005
Blue Mountains SewerFix Stages 1 and 2	24.0	30.1	Stage 1 Dec 2005 Stage 2 Deferred
Malabar System Risk Reduction Program Stages 1, 2 and 3	94.4	168.0	Mid 2006
IICATS Wastewater (Automation and Telemetry)	73.5	88.0	Mid 2006
Shellharbour STP Amplification	14.2	32.2	Mid 2006
Rouse Hill Infrastructure Stage 3	41.3	4.3 (SWC) 185.0 (Private)	Aug 06
Bondi STP RIAMP	63.2	95.0	Sept 2006
Mulgoa, Wallacia and Silverdale PSP Scheme	15.9	66.7	Oct 2006
Ash Rd Sewage Carrier Section 2	0.1	15.0	Dec 2006
West Camden STP Amplification and Upgrade	10.1	48.8	Early 2007
Brooklyn/Dangar Island PSP Scheme	4.9	54.5	Early 2008
Rouse Hill STP and Recycled Water Plant Amplification	0.3	64.0	Jun 2008
Blue Mountains PSP Scheme Stage 2	14.9	128.0	Jun 2008
Ryde Water Pumping Station Renewal Works	12.9	29.0	Late 2008
SWSSS	19.1	125.0	Early 2009
North Head STP Performance and Reliability	8.0	106.0	Mid 2009

CASE STUDY

SERVICING GROWTH IN SOUTH-WESTERN SYDNEY

Better wastewater management delivers recycling opportunities

Population in Sydney's south-west is anticipated to grow by up to 40 per cent from 239,000 to 327,000 in the coming 20 years. Wastewater associated with this population increase is expected to jump by 35 per cent from 68 million litres a day to 92 million litres a day.

Key growth areas are in the Liverpool CBD and the Hoxton Park release area, including the suburbs of Prestons, Yarrunga, Horningsea Park, Carnes Hill, West Hoxton, Edmondson Park, Ingleburn, Hinchinbrook, Green Valley, Cecil Hills, Abbotsbury and Bonnyrigg Heights.

Sections of the Southern Suburbs sewerage system, already servicing more than 2 million people in southern and south-western Sydney, have limited capacity to accept these increased wastewater flows.

Accommodating this growth is a driver for the South Western Sydney Sewerage Scheme (SWSSS), one of a number of projects in Sydney's south-west.

Complementing the $116 million Georges River Program Stage 1 to be completed in late 2005, SWSSS aims to improve overall sewerage system performance and provide future potential opportunities for recycled water use.

Greater wastewater capacity is being made available through a combination of reducing demand for drinking water through retrofitting and recycling, and providing additional wastewater infrastructure.

SWSSS has three projects due by the end of 2008, at a cost of $125 million. Collectively, these will help service population growth, improve capacity in the Southern Suburbs sewerage system and continue to protect public health and the environment.

A key project under the SWSSS is the proposed 24 km Liverpool – Ashfield pipeline which maximises the use of existing infrastructure and Sydney Water land to minimise environmental and social impacts.

The pipeline provides a potential future source of wastewater for reuse, complementing other water recycling initiatives in the south-west where 160 million litres of drinking water a year is already being saved.

These include recycled water from Liverpool STP for the Liverpool Golf Course and the AJC's Warwick Farm Race Course, as well as the proposed Hoxton Park recycled water scheme which will service parts of the Hoxton Park release area, and some existing industrial, commercial and irrigation customers.

This 160 million litres, together with the additional 1.8 billion litres of wastewater recycled at Liverpool and Glenfield STPs each year, means that Sydney's south-west is currently saving around 2 billion litres of drinking water annually.

The Hoxton Park recycled water scheme could save up to a further 2.5 billion litres of drinking water a year. The associated decrease in drinking water demand together with the supply of recycled water to irrigators will help reduce the volume of wastewater flows being discharged through the Malabar ocean outfall.

Ensuring Our Business is a Success

PRICING REFORM

Pricing

Because Sydney Water is a government-owned service provider, IPART regulates our pricing.

Sydney Water's water, sewerage, stormwater, trade waste and ancillary service prices were last determined in May 2003. During 2004–05, IPART undertook a review of prices to apply from 1 October 2005 for the next four years.

IPART Submissions

Sydney Water contributed to the IPART review with its November 2004 and March 2005 submissions. These explored the issue of water sustainability, estimated our future capital and operating expenditure requirements, calculated the billing implications of various water tariff options proposed by IPART, and recommended enhanced initiatives to mitigate pricing impacts on large households in financial hardship.

Stakeholder Consultation

As an input to this, Sydney Water consulted with key stakeholders such as the PIAC, the Council of Social Service of NSW, and the Combined Pensioners and Superannuants Association.

Draft Determination

In June 2005, IPART presented a draft determination for our 2005–09 prices, which included placing greater emphasis on water usage-based pricing through price increases and tariff structure changes. A step tariff for water usage was proposed, complemented by a reduced fixed water service charge. The draft determination also supported and extended Sydney Water's suggested safety net initiatives for households in financial difficulty.

The final determination on prices was released by IPART in September 2005.

Pricing up to October 2005

Up until October 2005, Sydney Water's pricing structure has comprised a fixed service charge and a variable usage charge. The usage charge directly relates to the level of water consumption and, as such, has provided a signal to help influence customer decisions about water use.

Almost 81 per cent of total water revenue was usage-based in 2004–05, in line with the previous year.

Sewerage services provided to commercial and industrial customers have also attracted a usage charge. This has comprised a volumetric charge for the amount of wastewater discharged together with trade waste charges for discharge of pollutants.

Almost 11 per cent of sewerage revenue was usage-based, slightly lower than the 11.3 per cent in 2003–04.

Achievements

- All new developments in Sydney Water's area of operations were required to pay a developer charge.
- Trade waste revenue fell by $1 million in 2004–05, suggesting a likely increase in compliance with trade waste agreements and, consequently, an improvement in wastewater quality within the sewerage system.

Challenges

- Usage-based revenue declined slightly, down to 80.7 per cent for water and 10.9 per cent for sewerage, the result of lower water demand and sewerage discharges due to drought conditions and heightened consumer awareness of water conservation.

Next Steps

- Implement the IPART determination in order to undertake capital works programs to further improve the provision of water, wastewater and stormwater services.
- Implement the programs to help customers in financial hardship pay their bills and reduce their water consumption.

Georges River Program Stage 1, 2002–05

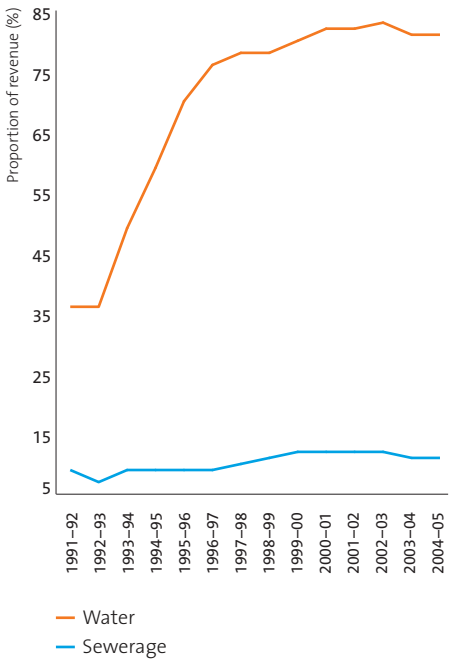
- Increase capacity of Liverpool STP.
- Increase capacity of Glenfield STP.
- Minor works at Fairfield storm STP.
- 10 km sewage pipeline from Hoxton Park to Liverpool STP.

SWSSS, 2005–08

- Primary treatment amplification at Liverpool STP.
- 24 km Liverpool – Ashfield pipeline.
- Transfer sewage flows from Holsworthy STP to Liverpool STP.

IMAGE: Liverpool Golf Course Superintendent, Jason Garbutt, surveying the recycled water storage pond at the course just off the 10th fairway. A water level monitoring device communicates with the amplified Liverpool STP to indicate when new inflows of recycled water are required.

USAGE-BASED REVENUE 1991–92 TO 2004–05



Ensuring Our Business is a Success

SOCIAL PROGRAM ACTIVITIES

Each year Sydney Water carries out a number of non-commercial social program activities recommended by IPART and at the direction of the NSW Government for which it receives full reimbursement from the State Budget.

In 2004–05, Sydney Water was reimbursed a total of $79.1 million for the following activities:

- $69.5 million for pensioner rebates
- $8.7 million for property exemptions
- $0.9 million for the Blue Mountains Septic Pump-out Subsidy.

Pensioner Rebates

Sydney Water provides a rebate on its water, sewerage and stormwater service charges to pensioner concession cardholders. Determined by Government, the rebate is based on equity and affordability and is designed to ensure that all residential customers have adequate access to water, sewerage and drainage services.

Exempt Properties

Certain properties are exempt from the payment of certain Sydney Water charges. Land owned and used by organisations that provide non-profit community services and amenities are generally treated as exempt properties.

Blue Mountains Septic Pump-out

In 2004–05, as in previous years, Sydney Water subsidised the Blue Mountains Septic Pump-out service. Demand for this service is expected to fall over coming years as properties gain connection to the new reticulated sewerage service provided by Sydney Water.

Priority Sewerage Program

Under the PSP, Sydney Water extends sewerage services to currently unsewered areas in accordance with agreed government priorities and funding arrangements. Due to the timing of project completions, no reimbursement was made in 2004–05 in respect of the PSP.

Achievements

- Provided around 210,000 pensioner households with a rebate on water, sewerage and some drainage service charges. The typical rebate was in excess of $300 a year.
- Granted exemptions to service charges to around 11,000 properties owned or used by non-profit community services and local government.
- Subsidised the Blue Mountains Septic Pump-out service, benefiting approximately 670 properties.
- Completed construction of a reticulated sewerage service at Jamberoo to enable approximately 350 properties to connect.

Next Steps

- Ensure support for households in financial difficulty including pensioners and large, low-income households as part of the new IPART price path, commencing 1 October 2005.
- Introduce reticulated sewerage services into high priority unsewered areas including Mulgoa, Wallacia, Silverdale and Brooklyn/Dangar Island.

RESEARCH AND DEVELOPMENT

Sydney Water's research and development (R&D) program spans a range of projects, from improving water and wastewater treatment processes to community-based urban water cycle and demand management initiatives.

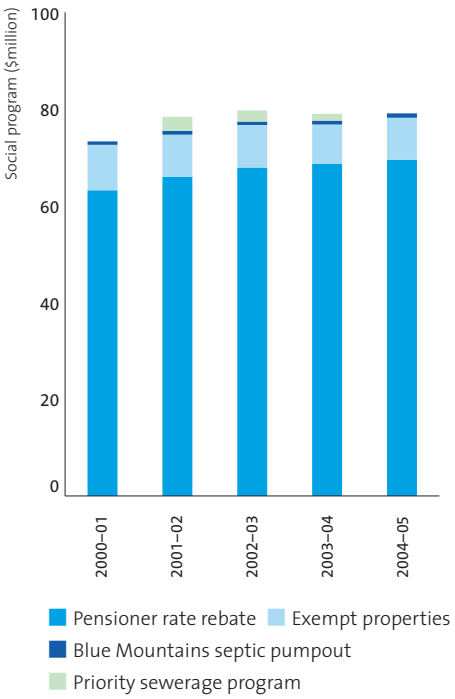
By contributing to and collaborating with national and international research organisations, Sydney Water helps assess and develop international best practice and emerging trends in the provision of drinking water and wastewater services, the environment and public health.

R&D projects are conducted by in-house staff who collaborate with universities and other organisations. Sydney Water is a member of several cooperative research groups including:

- Cooperative Research Centre for Water Quality and Treatment (Australia)
- American Water Works Association Research Foundation (US)
- Water Environment Research Foundation (US)
- Water Services Association of Australia (WSAA).

Sydney Water maintains an R&D portfolio that aims to achieve investment across a spectrum of projects, from strategic research regarding new services and technologies through to research aimed at improving operations of existing infrastructure and processes.

FIVE-YEAR HISTORY OF SOCIAL PROGRAM FUNDING 2000–01 TO 2004–05



COLLABORATIVE PROJECTS – AUSTRALIAN RESEARCH COUNCIL LINKAGE GRANT SCHEME

Research collaborator	Project scope
Murdoch University	Optimisation of cell culture for Cryptosporidium
University of Technology, Sydney	The impact of endocrine disrupting compounds in receiving waters on aquatic biota
University of Queensland	Enhancing biological denitrification by addition of external carbon sources
University of Queensland	Understanding the biotransformation processes in a sewer system

COLLABORATIVE RESEARCH ARRANGEMENTS

Research collaborator	Area of focus	Expenditure 2004–05
American Water Works Association Research Foundation	Drinking water quality and public health	$30,000
Water Environment Research Foundation	Water quality research and innovative technologies for improving the water environment	$103,000
WSAA	Water quality, public health and sustainable water supplies	$350,000
Cooperative Research Centre for Water Quality and Treatment	Water quality and public health	$150,000
University of Western Sydney Water Futures Alliances	Project by project basis	$ 53,000

COMPLETED MAJOR RESEARCH AND DEVELOPMENT PROJECTS 2004–05 (COST >$99,000)

Description	Actual expenditure to 30 June 2004	Expenditure 2004–05	Final cost
Demonstrating opportunities for water sensitive Western Sydney	$144,552	$16,558	$161,110
Physical and chemical effects on distribution system biofilms and incorporated pathogens	$91,955	$9,816	$101,771
Real time polymerase chain reaction for viruses and protozoa	$212,639	$1,000	$213,639
North Richmond Delivery System – chlorine aesthetic guidelines	$141,104	$14,649	$155,753
Small to medium scale water cycle management methodology	$224,558	$69,011	$293,569
Condition assessment of critical water mains using Mainscan™	$210,729	Nil	$210,729

CONTINUING MAJOR RESEARCH AND DEVELOPMENT PROJECTS 2004–05

Description	Actual expenditure to 30 June 2004	Expenditure 2004–05	Final cost*
Recycled water quality requirements for industrial and commercial applications	$43,004	$6,724	$107,600
Residential landscape assessment	$16,073	$121,815	$250,000
Identification of substances interfering with the recovery of Cryptosporidium in raw waters	$1,719	$1,000	$134,000
Production of granulated biosolids and impacts of their application on turf	$118,769	$39,200	$326,092
Nitrification in chloraminated systems	Nil	$43,982	$170,000

* Estimated costs based on expected expenditure

OPERATIONAL IMPROVEMENT PROJECTS

Description	Actual expenditure to 30 June 2004	Expenditure 2004–05	Final cost
Characterisation and minimisation of disinfection by-products in the Prospect Water System**	$185,000	$5,608	$250,000
Removal of manganese – pilot plant study**	$318,200	$44,100	$410,000
NOM characterisation and removal for disinfection by-products minimisation**	$52,493	$15,200	$81,000
UV to monitor disinfection of by-products**	$65,400	$44,000	$150,000

** Build Own Operate (BOO) operational R&D funded under BOO contract arrangement

Ensuring Our Business is a Success

Achievements

- Developed methodologies that assess the effectiveness of substituting rainwater and recycled water for drinking water where possible for household non-drinking water consumption purposes at both the small (household) and large (neighbourhood) ends. This allowed for the prediction of water and wastewater demands in south-western Sydney and will be used in finalising future servicing strategies for new release areas.
- Successful trialling, in collaboration with Earth Tech Engineering, of Mainscan™, a device that combines eddy current technology and specific soil tests to assess the condition of critical water mains. Further studies are underway to improve sensitivity.
- Successfully trialled Biocrete in conjunction with sewer refurbishment company, Flexitech. Biocrete is an acid-resistant, non-toxic pipe lining product with similar physical properties to concrete but with improved handling, OH&S and protective capabilities compared with conventional materials used in sewer rehabilitation. Biocrete is now being used in the Southern and Western Suburbs Ocean Outfall Sewer refurbishment program with estimated avoided costs of between $10 million and $15 million.
- Undertook collaborative research with Murdoch University resulting in a cell-free culture method for growing Cryptosporidium. This new media, along with ongoing research into rapid identification methods, will deliver faster, more reliable tests for Cryptosporidium. A worldwide patent has been filed.
- Developed techniques for large reservoir modelling to assist in improving drinking water quality by determining the best performing, least cost option for maintaining the most appropriate level of chloramines in the Thornleigh Reservoir – saving around $500,000. The techniques will be used on other Sydney Water reservoirs.
- Developed a measure for the level of nitrification occurring in the drinking water distribution system, as well as the identification of inhibitors that will prevent nitrification. Nitrification causes the loss of essential disinfection residuals in drinking water and can present operational management and public health issues. Due to similar work undertaken by the Western Australian Water Corporation, Sydney Water is now collaborating with them in additional studies to quantify operational cost savings and expected water quality improvements.

Challenges

- Ensure that Sydney Water's R&D investments are targeted to meet emerging challenges providing sustainable water services in a growing city.
- Ensure a return on investment in R&D by focusing on the implementation of research outcomes in the business.

Next Steps

- Continue to invest in strategic R&D that meets emerging challenges providing sustainable water services and considers integrated water cycle management, new technologies, recycling, water conservation and social research.
- Continue to invest in operational R&D and process optimisation that improves the efficiency and cost effectiveness of water and wastewater treatment and distribution.
- Continue to invest in collaborative research in external research alliances and ensure delivery of research outcomes from these arrangements.
- Continue to monitor emerging trends in drinking water quality and public health and invest in R&D to close knowledge gaps and continually improve the capability of Sydney Water's water science laboratories.

MANAGING RISK

Sydney Water faces a broad range of external, commercial, operational, project specific and other risks that can potentially impact on its performance and services provided to the community.

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

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

A process exists to update and report on the key enterprise risks and key mitigation strategies to the Audit Committee of the Board every six months. The key enterprise risks and areas of high residual risks are used as input for setting the Board's agenda. Quarterly reporting is also provided on any changes in the risk profile and variations to the implementation of the mitigation strategies identified.

Insurance

Sydney Water maintains a comprehensive insurance program as part of its Risk Management Strategy.

The main policies cover Sydney Water's assets, including those under construction, and their respective legal liabilities with various insurers in the commercial insurance market and the New South Wales Treasury Managed Fund.

During the year, Sydney Water decided to enter the Fund to insure various exposures of the Corporation and also appointed an insurance broker to provide ongoing insurance broking services.

Legal Change

Operating Licence Renewal

Sydney Water's new Operating Licence was gazetted on 1 April 2005, passed through Parliament on 23 June 2005, effective from 1 July 2005.

Many of the provisions of the previous licence have been continued, however, there are a number of significant additions including:

- a leakage target of 105 ML/day by 30 June 2009
- reporting obligations for bulk meter installation, pressure reduction and inspection programs
- targets and reporting requirements for response times to water main breaks and leaks, including new specifications for stemming water loss
- inclusion of environmental performance, customer service and service quality and system performance indicators
- a requirement to maintain a certified EMS
- reduction of 80 per cent (from 2003–04 usage rates) of drinking water use for treatment processes at Malabar, North Head and Bondi STPs by 30 June 2009
- 85 per cent recycled target water use for treatment processes at all other STPs
- a requirement to conduct a trial to determine the costs, benefits and impediments to individual metering in multi-unit buildings.

National Competition Council

In February 2005, the National Competition Council declared Sydney Water's sewerage infrastructure under the Access Regime provided for under the Trade Practices Act 1974. The matter is on appeal to the Australian Competition Tribunal and will be heard in September 2005.

Water Industry Structure Review

In December 2004, the Premier sought a review by IPART of water and wastewater delivery arrangements. A final report on the review by IPART is expected in October 2005.

Proposed Amendments to the Protection of the Environment Operations (POEO) Act

A draft Bill for amendments to the Act has been issued. Salient aspects for Sydney Water of the suggested amendments are:

- abolition of the current classification system for waters, with a substitution of a requirement that the environmental values of the water affected by the activity or work be considered, along with practical measures available to restore or maintain those environmental values
- a very large increase in maximum penalties for corporations
- a statutory power to require a licensee to participate in tradeable emissions or green off-set schemes
- an expansion of the criteria relevant to deciding whether an applicant for a licence is 'a fit and proper person'
- a broadening of the operation of the provision whereby offences of a corporation are deemed to be offences by each director or person concerned in the management of the corporation
- a strengthening of powers to investigate and gather evidence.

Environmental Planning and Assessment Amendment (Infrastructure and other Planning Reform) Act 2005

Assented to on 16 June 2005 and commenced in August 2005, this Act amends the Environmental Planning and Assessment Act 1979 to allow streamlined approval for declared 'critical infrastructure'.

CORPORATE GOVERNANCE

Corporate Governance Framework

Sydney Water's corporate governance is built upon a statutory framework prescribed by the Sydney Water Act 1994 and the State Owned Corporations Act 1989.

All decisions relating to the operation of Sydney Water are made by or under the authority of the Board of Directors. The Board is accountable to the NSW Government through a Portfolio Minister and two Shareholder Ministers.

Under the corporate governance framework, the Chairman and Directors are appointed by the Shareholder Ministers. The Governor appoints the Managing Director following an initial recommendation by the Board.

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

The Managing Director is accountable to the Board through an Instrument of Conferral of Powers and Authority granted by the Board, an Employment Agreement, and a Performance Agreement. Performance of the Managing Director is reviewed every six months. The Managing Director is the sole Executive Director on the Board.

Board Composition and Membership

The Board may consist of up to 10 members with the Chairman and Directors appointed by the Shareholder Ministers for a set term, which must not exceed five years.

Advertising for nominations to the Board is a requirement under Section 5A of the Sydney Water Act 1994. Advertising ensures that Board composition and candidacy is sourced widely.

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.

During the year ended 30 June 2005, the Board operated, at various times, with a minimum number of eight and a maximum number of nine appointed Directors.

Changes to Sydney Water's Board of Directors in 2004–05 were:

- Brian Gilligan was reappointed as a Director from 7 September 2004
- Ralph Kelly was reappointed as a Director from 7 September 2004
- Alison Peters was reappointed as a Director from 7 September 2004
- John Brown was appointed as a Director from 7 September 2004.

Directors' Duties

Schedule 10 of the State Owned Corporations Act 1989 provides for a minimum standard for Directors' duties. Under the Act and Sydney Water's Constitution, the Directors are required to:

- act honestly in the exercise of their power as a Director
- exercise reasonable care and diligence
- avoid conflicts of interests
- disclose actual or potential conflicts of interests and remove themselves from decision-making on such matters
- not make improper use of their position as a Director or information obtained by virtue of their position as a Director.

Directors' Code of Conduct

The Board has adopted a Code of Conduct that is an adaptation of principles developed by the Australian Institute of Company Directors (AICD). Although not an exhaustive statement of Directors' obligations, the Code is intended to provide Directors with guidance in carrying out their duties and responsibilities.

The Code of Conduct requires Directors:

1. To act honestly, in good faith and in the best interests of Sydney Water Corporation as a whole.
2. To use care and diligence in fulfilling the functions of office and exercising the powers attached to that office.
3. To use the powers of office for a proper purpose, in the best interests of Sydney Water Corporation as a whole.
4. To recognise responsibility and accountability to the State of New South Wales, the Shareholder Ministers and other stakeholders of Sydney Water Corporation.
5. Not to make improper use of information acquired as a Director.
6. Not to take improper advantage of the position of Director.
7. Not to allow personal interests, or the interests of any associated person, to conflict with the interests of Sydney Water Corporation.
8. To be independent in judgement and actions and to take reasonable steps to be satisfied as to the soundness of decisions taken by the Board of Directors.
9. To ensure that confidential information received in the course of directorial duties remain the property of Sydney Water Corporation and not to disclose it, or allow it to be disclosed unless that disclosure has been authorised by Sydney Water Corporation or the person from whom the information was provided, or as required by law.
10. Not to engage in conduct likely to bring discredit upon Sydney Water Corporation.
11. To comply, in good faith, with the spirit, as well as the letter of this Code.

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 Directors think fit.

A quorum of a Board meeting is established when four Directors are present either in person or by proxy. A Director may be present 'in person' at a Board meeting by telephone or video conference.

Matters arising at Board meetings are decided by discussion, consensus and formal resolution.

Board Committees

In December 2004, the Board reviewed and restructured its 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.

Each Committee has a Board-approved Charter which sets out its purpose, objectives and functions. The purpose of each Committee is:

Audit Committee – to assess the Corporation's risk and control environment, to oversee the Corporation's financial reporting, and to evaluate the audit processes.

Asset Management Committee – to overview Sydney Water's approach to the management of capital and operating investment programs, and asset management.

Environment Committee – to overview Sydney Water's approach to environmental management, including its strategic direction, environmental risk management, and corporate environmental performance and reporting.

Property Committee – to oversee the development of and ensure the implementation of the Corporation's strategic property disposal plan, and the workplace accommodation strategy.

Public Health, Research and Development Committee – to overview Sydney Water's approach to Public Health, and Research and Development.

Remuneration Committee – to periodically review remuneration levels and internal relativities of senior managers.

As the Board is the principal decision-maker in Sydney Water, it is not considered necessary to authorise Committees to make decisions. Accordingly, Committees are consultative, advisory and/or problem solving in nature.

Each Committee is chaired by a Director and supported by a convenor, who is either the Corporate Secretary or is a member of the Managing Director's Executive. Other Directors may also be nominated for Committee membership.

To keep the Board fully informed, an opportunity is provided to each Committee Chairman to brief the Board when the Committee Minutes are tabled at Board meetings.

Special Purpose Committees may also be convened on an ad hoc basis. For example, a Committee may be convened in relation to a particular major project or other initiative.

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. The Deed entitles Directors to be indemnified for liability for costs and expenses in defending criminal or civil proceedings provided that:

- the liabilities relate to their position as a Sydney Water Director
- the proceedings are not brought against the Director by Sydney Water or any of its subsidiaries
- judgement is given in favour of the Director, or the Director is acquitted, or the proceedings against the Director are withdrawn before judgement, or relief is otherwise granted to the Director.

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.

Attendance at Board and Committee meetings 2004–05

Director	Board of Directors meetings	Audit Committee	Asset Management Committee	Environment Committee	Property Committee	Public Health, Research and Development Committee	Remuneration Committee
	No. Held (Attended)	No. Held (Attended)	No. Held (Attended)	No. Held (Attended)	No. Held (Attended)	No. Held (Attended)	No. Held (Attended)
G Kibble	12 (11) (C)	6 (6)	–	–	2 (2)	5 (3)	2 (2) (C)
D Evans	12 (12)	6 (6)	2 (2)	5 (4)	2 (2)	5 (4)	2 (2)
P Baume	12 (11)	–	–	–	–	5 (5) (C)	1 (1)
J Brown#	9 (9)	4 (4) (C)	2 (2)	–	–	–	–
B Gilligan	12 (11)	–	2 (1)	5 (5) (C)	–	–	–
R Kelly	12 (12)	6 (6)	2 (2)	–	1 (1)	5 (5)	2 (2)
G McCully	12 (11)	–	–	5 (5)	2 (2) (C)	–	–
J Priest^	12 (12)	6 (5) (C)	2 (2) (C)	–	2 (2)	–	–
A Peters	12 (11)	3 (1)	–	5 (4)	2 (2)	–	1 (0)

(C) Chairman of the Board and/or Committee

Mr John Brown was appointed a Director in September 2004 and was appointed Chair of the Audit Committee in December 2004

^ Mr John Priest was Chair of the Audit Committee up to December 2004

BOARD MEMBERS

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 Chairman of the Board's Remuneration Committee and a member of the Public Health, Research and Development, and Audit Committees.

Also the Administrator of Liverpool City Council in Sydney, Gabrielle is a Director of the Sydney Olympic Park Authority, and Questacon – the National Science and Technology Centre, and Trustee and Deputy Chancellor of the University of Western Sydney.

DAVID EVANS
MANAGING DIRECTOR
BEc (Hons), FAICD

Managing Director of Sydney Water since April 2004, David is a member of all six of Sydney Water's Board Committees – Audit, Environment, Remuneration, Public Health, Research and Development, Property, and Asset Management.

He was Managing Director of Hunter Water Corporation from 1993 to 2004 and is Chief Executive Officer of the Regional Land Management Corporation.

THE HON EMERITUS PROFESSOR PETER BAUME AO
MBBS, MD, HonDLitt, FRACP, FRACGP, FAFPHM

A non-executive Director of Sydney Water since September 1998, Professor Baume is Chair of the Board's Public Health, Research and Development Committee. He is also Chair of BCB Services Pty Ltd, Chancellor of the Australian National University since 1994, and Emeritus Professor of Community Medicine at the University of NSW.

Professor Baume is a Governor of the Foundation for Development Cooperation, a member of the Editorial Board of Australian Health Review, and an Honorary Research Associate, Social Policy Research Centre, University of NSW.

Previously a Commissioner of the Australian Law Reform Commission, Professor Baume is also former Head of the School of Community Medicine at the University of NSW, and as a former Senator for NSW he was a Federal Minister with the portfolios of Aboriginal Affairs, Education, and Health, and was Minister Assisting for National Development and Energy.

JOHN BROWN
BCom, FICA, MIIA, MISACA, MIPAA

Appointed a non-executive Director of Sydney Water in September 2004, John is Chair of the Board's Audit Committee and is a member of its Asset Management Committee. He is also a partner with KPMG and head of KPMG's NSW Government Practice.

John is an audit and risk specialist with significant experience in financial due diligence and risk management.

BRIAN GILLIGAN
BA, DipEd, MA, FAICD, FAIM, MEIA

A non-executive Director of Sydney Water since May 2004, Brian is Chair 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 Leadership Forum, a Director of the Council of Wetlands International – Oceania Program, and a Director of the Hunter Valley Research Foundation.

Brian's former appointments include Director-General, NSW National Parks and Wildlife Service (1998–2003), Executive Director Operations, NSW Environment Protection Authority (1996–98), and Director, Hunter Water Corporation (1989–92).

RALPH KELLY
BCom, MBA, FSIA, FAICD

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

Experienced in corporate finance advice, Ralph is an executive in the Corporate Advisory and Equities division of Westpac Institutional Bank. He is also a Director of Ausflag Limited.

GARRY McCULLY
MRAPI, MIMM, MICMA

A non-executive Director of Sydney Water since March 1999, Garry is Chair of the Board's Property Committee and a member of the Environment Committee and Remuneration Committee.

He is General Manager of Liverpool City Council, a Special Environment Levy Trust member and a Life Member of Curtin University Alumni.

ALISON PETERS
LLB, BCom

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

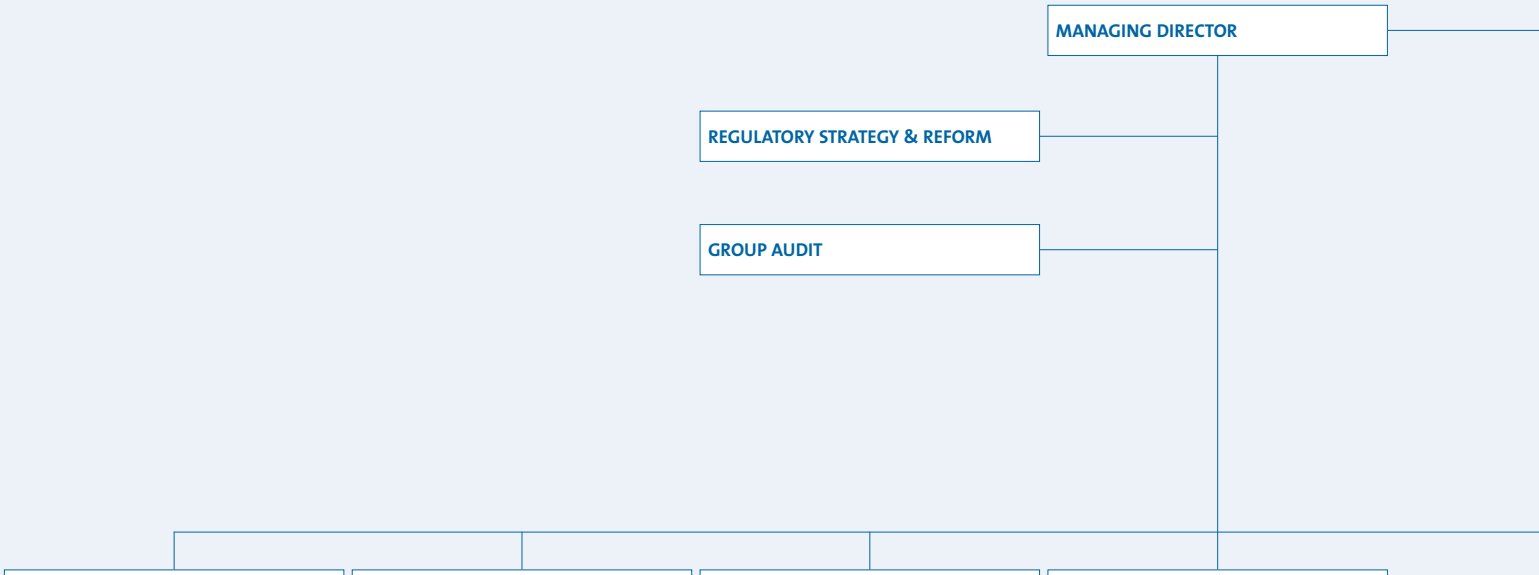
She is the Deputy Assistant Secretary (Community Affairs) for Unions NSW and is also a member of the NSW Co-operatives Council, Professional Standards Council and the NSW Privacy Advisory Committee.

JOHN PRIEST
BBus, FCPA, FAICD

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

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 of Apollo Life Sciences Limited.

ORGANISATIONAL CHART



ASSET MANAGEMENT

- Asset Planning
- Strategic Asset Management
- Strategic Operations
- Investment Program Management
- Stormwater

ASSET SOLUTIONS

- Program Delivery
- Procurement & Support
- Design Services
- Commercial Operations

CUSTOMER & COMMUNITY RELATIONS

- Customer Operations
- Developer Operations
- Business Operations
- Customer Resource Management
- Communications & Marketing
- Corporate Relations

FINANCE

- Financial Control
- Financial Accounting & Statutory Reporting
- Shared Services
- Business Assurance
- Information Technology
- Business Improvement

PAUL FREEMAN

BE(Mech)
GENERAL MANAGER, ASSET MANAGEMENT

Paul was appointed General Manager, Asset Management in July 2000. Paul joined Sydney Water in 1978 as a trainee mechanical engineer. In a career spanning 25 years with Sydney Water, he started working in design, water planning, maintenance workshops, plant branch and at the Malabar STP. He then moved on to operation and management roles within the Wastewater Treatment business. He was promoted in 1998 to Wastewater Distribution Manager in the newly formed Distribution business, and became General Manager, Distribution, in 1999.

RON QUILL

BE(Civ)
GENERAL MANAGER, ASSET SOLUTIONS

Ron was appointed General Manager, Asset Solutions in April 2000. Ron has been with Sydney Water for over 30 years. With his engineering background, he worked in corporate planning and as a ministerial policy adviser before becoming the Bulk Water Manager and Regional Manager for Illawarra and the Greater Western Regions. He was then promoted to the role of General Manager of TransWater.

ANGELA TSOUKATOS

BSocWk, MM, GAICD
GENERAL MANAGER, CUSTOMER AND COMMUNITY RELATIONS

After six years as General Manager, Corporate Services, Angela was appointed General Manager, Customer and Community Relations in April 2005. Angela joined Sydney Water in 1990. She has held many challenging roles in the areas of policy, standards of service, regulatory compliance and executive support. In 1998, Angela managed the Sydney Water response to the government inquiry into the water crisis. 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 Ethnic Affairs Adviser.

DENISE DAWSON

BBus, GradDip(Acctg)
CHIEF FINANCIAL OFFICER

Denise was appointed Chief Financial Officer in January 2004. Denise joined Sydney Water as General Manager, Customer Service in September 2001 bringing 20 years' experience in the electricity industry. Prior to joining Sydney Water, she 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.

BUSINESS SERVICES

MICHAEL WANDMAKER
BE(Mech&Comp)
GROUP GENERAL MANAGER, BUSINESS SERVICES

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 2,200 staff across Australia. Prior to this he worked extensively for Siemens and Fluor Daniel. His other experience includes 20 years with the Royal Australian Navy. Together with several engineering qualifications, Michael is also a qualified Fitter and Machinist.

SUSTAINABILITY

- Strategic Directions
- Urban Growth
- Environmental Planning & Management
- Science & Technology

JUDI HANSEN
BSc(Biol), MSc(Microbiol), PhD(MarineEcol)
GENERAL MANAGER, SUSTAINABILITY

Judi was appointed General Manager, Environment and Innovation in July 2001. The division was restructured to Sustainability in September 2003. Judi joined Sydney Water in 1990 as a marine scientist subsequently moving 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, working on ecological processes in urban coastal, coral reef and Antarctic marine waters. She has held positions at the CSIRO, the Australian Institute for Marine Science and the University of Sydney.

PEOPLE & PROPERTY

- Group Property
- Workplace Accommodation
- Property Rationalisation
- Planning & Compliance
- Health & Safety
- Human Resources

IAN GREY
BEc, MCom(IndRel)
GENERAL MANAGER, PEOPLE AND PROPERTY

Ian joined Sydney Water as General Manager, People and Quality in July 2001. The division was restructured to People and Property in January 2004. His previous role was as Director of HR for P&O Ports where he was involved with waterfront reform in Australia. At P&O he also managed the human resource aspects of international mergers and acquisitions around the world and led the company's safety and environment management. He previously worked for Sydney Water designing and then project managing an extensive change program in STPs. He was also the organisation's Personnel Manager. His other positions have included Industrial Relations Manager at the Maritime Services Board and a decade as a union official spent mainly in shipping and related industries.

WATER SERVICES

- Civil Maintenance
- Mechanical/Electrical Maintenance
- Construction Services
- Engineering & Contracts

MICHAEL KEELAN
BE(Civ), MBA
GENERAL MANAGER, WATER SERVICES

Michael was appointed General Manager, Water Services in July 2001. Michael joined Sydney Water in January 1975 as a civil engineering cadet and has worked in system planning and investigations, construction and operations and maintenance. Since 1990 he 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.

MONITORING SERVICES

- Analytical Services
- Field Services
- Monitoring Information Systems

TREATMENT OPERATIONS

- Water Treatment
- Wastewater Treatment

GLOBAL REPORTING INITIATIVE CONTENT INDEX

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* IFC – Inside Front Cover

** BC – Back Cover

GLOSSARY AND SHORTENED FORMS

ADWQ: Annual Drinking Water Quality, the name of a report.

Anaerobic: Not needing or without oxygen.

AWT: Australian Water Technologies Pty Ltd, a subsidiary of Sydney Water.

BASIX: Building Sustainability Index.

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

Biosolids: Solids from wastewater treatment processed into products suitable for beneficial uses such as agriculture or forestry.

BOD: Biochemical oxygen demand; a measure of the food value or energy in a sample of wastewater.

BSM: Be Safe Mate, an internal safety program.

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

CCTV: Closed circuit television.

Climate corrected demand: Customer demand for water that is adjusted to account for weather conditions that are significantly above or below average for that period of the year and which have a heavy influence over customer water use.

CMP: Conservation Management Plan.

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.

DEC: Department of Environment and Conservation, the primary NSW public sector organisation responsible for protecting the environment.

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.

DIPNR: Department of Infrastructure, Planning and 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.

DWQ: Drinking Water Quality, the name of quarterly reports.

EAPS: Ethnic Affairs Priorities Statement.

Ecologically Sustainable Development (ESD): Ecologically sustainable development, 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 conservation programs run for business and the community.

EEO: Equal employment opportunity.

Effluent: A waste product that is discharged to the environment, usually used to mean wastewater discharged from sewage (wastewater) treatment plants.

EIA: Environmental Impact Assessment, see also EIS.

EICR: Environmental Indicators Compliance Report, the name of a report.

EIS: Environmental Impact Statement, usually prepared following completion of a feasibility study and initial concept development.

EMP: Environmental Management Plan.

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 (DEC).

ESDI/EP: Ecologically Sustainable Development Indicators/Environment Plan, the name of a report.

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.

Freshwater: Water found in lakes, rivers, streams, generally containing less than 1,000 mg/L of dissolved solids.

FTE: Full-time employees.

GIS: Geographic information system.

GJ: Gigajoule, a measure of energy equal to a billion joules.

GL: Gigalitre, measure of volume equal to a billion litres.

Greenhouse gas emissions: Gases such as carbon dioxide and other forms of air pollutants, resulting from the burning fossil fuels such as coal, natural gas or oil, which contribute to the warming of the Earth's atmosphere.

GRI: Global Reporting Initiative, an official collaborating centre of the United Nations Environment Program that has developed voluntary sustainability reporting guidelines.

Grit: Hard and heavier solid matter removed from wastewater, generally inorganic.

Gross pollutant trap: A stormwater control device for capturing sediment and rubbish.

Groundwater: Water found below the surface, usually in porous rock or soil or in underground aquifers (natural underground formations that contains sufficient saturated, permeable material to yield significant quantities of water).

IICATS: Integrated Instrumentation, Control, Automation and Telemetry System.

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.

LTIFR: Lost Time Injuries Frequency Rate, number of injuries/illnesses where one or more full days were lost due to a work related incident, per million hours worked.

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

MOU: Memorandum of Understanding.

NILS: No Interest Loans Schemes.

NRI: Natural Resources Inventory.

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

OH&S: Occupational health and safety, protection of the health, safety and welfare of employees, contractors and visitors who are at, or may be affected by, a worksite.

Operating Licence: A licence issued under the Sydney Water Act 1994, that defines many of Sydney Water's performance standards.

Organic: Of animal or vegetable origin.

Osmosis: Movement of water molecules through a thin membrane from an area of high concentration to an area of low concentration.

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

GLOSSARY AND SHORTENED FORMS

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

PAS: Payment Assistance Scheme.

PENGOs: Peak environmental non-government organisations.

PIAC: Public Interest Advocacy Centre.

POEO: Protection of the Environment Operations Act.

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

Potable: Fit or suitable for drinking.

PPIP: Privacy and Personal Information Protection Act.

PRP: Pollution Reduction Program.

PSP: Priority Sewerage Program.

R&D: Research and development.

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 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 watering gardens. It is not for drinking or personal use.

Regulators: Organisations that set standards and guidelines for Sydney Water.

RIAMP: Reliability Improvement and Modernisation Program.

SCA: 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.

SCAMPS: Sewer Catchment Area Management Plans.

SCI: Statement of Corporate Intent, an annual statement that specifies business drivers for financial management and commercial performance targets agreed by Sydney Water and its voting shareholders.

SEIP: Stormwater Environment Improvement Program.

SEL: Special Environment Levy, a levy on Sydney Water customers to be spent on projects providing environmental benefit in addition to the normal program of work planned by the Corporation.

Sewage: The wastewater from homes, offices, shops, factories and other premises discharged to the sewer. About 99 per cent of sewage is water.

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

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

SMCMA: Sydney Metropolitan Catchment Management Authority.

SPS: Sewage pumping station.

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

Stormwater: Rainwater that runs off the land, frequently carrying various forms of pollution such as litter and detritus, animal droppings and dissolved chemicals. This untreated water is carried in stormwater channels and discharged directly into creeks, rivers, the harbour and the ocean.

STP: Sewage treatment plant – a facility to improve sewage quality before discharge to receiving waters.

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

Sustainable development: Activities that can be maintained over the long term while achieving a balance between the environment, the economy and society.

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.

Sustainability: See ESD.

SWSSS: South Western Sydney Sewerage Scheme.

TCorp: Treasury Corporation.

Trade waste: Industrial or commercial wastewater which contains significant quantities of potential contaminants, commonly controlled by trade waste agreements limiting trade waste inputs to the wastewater system at the source.

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.

Unaccounted for water: The difference between the amount of water measured entering the water supply system and the amount used by customers, caused by leaks, inaccurate metering and illegal use.

Upgrade: To improve something.

UV: Ultraviolet, a high energy light used for disinfection.

Waste: Discarded, rejected, unwanted, surplus or abandoned substances, excluding gas, water, wastewater, beneficially used biosolids and reuse water.

Wastewater: The dirty water or wastewater that goes down the drains of homes, offices, shops, factories and other premises and is discharged into the wastewater system. Also known as sewage.

Wastewater system: The system of pipes and pump stations for collecting and transporting wastewater from each property to the wastewater (sewage) treatment plant.

Water conservation: 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 ground water.

Water demand: Total water use requirements for drinking, agriculture, industry, recreation and gardening; seasonal and highly influenced by the weather.

Water quality: Physical, chemical and biological measures of water.

Water Sensitive Urban Design (WSUD): Incorporates a range of initiatives designed to reduce the impact of urban stormwater discharge.

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

WaterPlan 21: Sydney Water's long-term strategic plan to provide water, wastewater and stormwater services to communities in a sustainable way.

Waterways: All streams, creeks, rivers, estuaries, inlets and harbours.

Wetlands: A low-lying area inundated or permanently covered by shallow water, natural or manmade.

WFP: Water filtration plant, a facility that improves water quality by removing impurities through filtration.

WRAPP: Waste Reduction and Purchasing Policy.

WSAA: Water Services Association of Australia.

CONTENT INDEX

* IFC – Inside Front Cover

ABOUT THIS REPORT

This report details Sydney Water's environmental, social and economic performance for the 2004–05 financial year. Specifically it:

- reviews Sydney Water's performance against the Corporate Plan and records financial performance
- reviews Sydney Water's performance against its ESD Indicators and progress towards its Environment Plan actions and targets
- has considered the voluntary sustainability reporting guidelines developed by the GRI, an official collaborating centre of the United Nations Environment Program.

Relationships to Other Reports

The Annual Report 2005 is supported by four reports providing more detailed financial and environmental information, and meeting our wider regulatory reporting requirements:

- Financial Statements
- ESD Indicators and Environment Plan Report
- Environmental Indicators Compliance Report and Environmental Indicators Monitoring Program Report
- Annual Drinking Water Quality Report.

Together with the Annual Report 2005 Appendix, these reports are available on the CD attached to the inside back cover of this report and online at **www.sydneywater.com.au**

Sydney Water Customer Centres and public libraries also hold copies of the Annual Report 2005 and CD.

Listening to Your Views

Sydney Water welcomes comments and suggested improvements. Please direct your feedback to:

Email: annualreport@sydneywater.com.au
Mail: Sydney Water Annual Report 2005
PO Box A53
Sydney South NSW 1232.

Paper Stock

This report is printed on environmentally-friendly paper stock.
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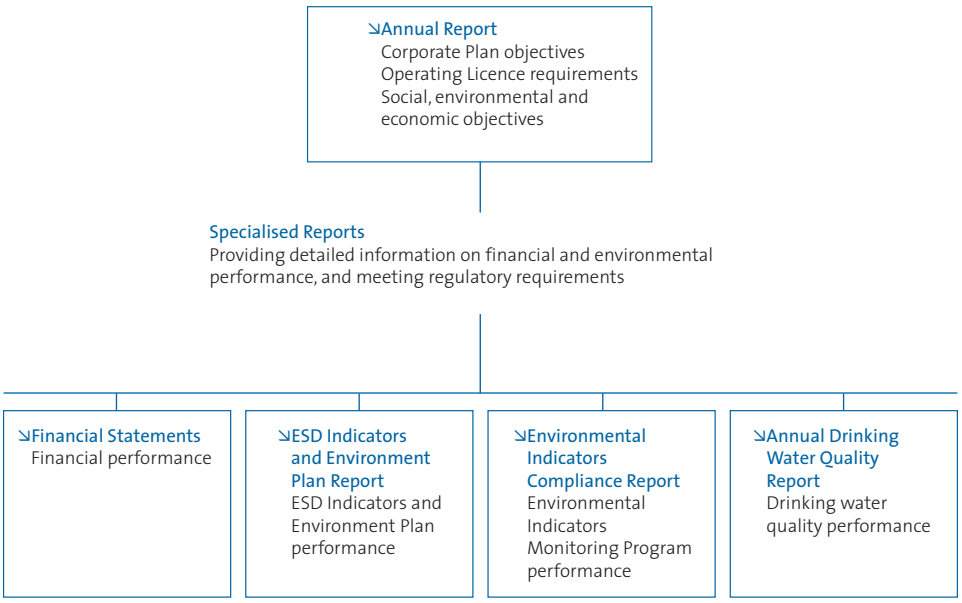
SYDNEY WATER'S SUITE OF PUBLIC REPORTS



External Production Costs

The external production costs for the Sydney Water Annual Report 2005 are approximately $70,000. External production costs include:

- photography
- proofreading
- design, production and printing 2,000 copies
- design, production and burning of the CD containing the supporting reports.

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www.sydneywater.com.au

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Emergency Services
13 20 90

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Wollongong

Katoomba
103 Katoomba Street
Katoomba

Sydney Water Corporation ABN 49 776 225 038
115–123 Bathurst Street Sydney NSW 2000 Australia

Sydney WATER