

Sustainability Report 2002-2003



Southern Water provides wastewater treatment and sludge recycling services for nearly two million properties across Kent, Sussex, Hampshire and the Isle of Wight. We are also responsible for providing clean water to one million properties in this area.

This report represents our performance over the last year and demonstrates this through a combination of 2002 calendar year and 2002-2003 financial year data. This combination of data periods are required by our business regulators as water supply, wastewater treatment and biosolids recycling operators. All information presented is for Southern Water operations only, unless otherwise stated.

Our objective in producing this report is to show our performance against targets set in the previous year. The report quantifies our performance, relating it to financial information wherever possible; covers a broad range of social and environmental risks; and key issues related to our business, stakeholders and the environment.

This report is one of the ways through which we publicly account for our performance and further information and details of our family of reports can be found at www.southernwater.co.uk

This summary document explains our fundamental approach to management control and how we inform this through our relationship with key stakeholders and the environment. Case study examples are highlighted throughout and a full summary of performance against our targets is provided along with benchmarking to national industry Water UK Environment Sustainability Indicators. Additional technical detail to this report can be found at www.southernwater.co.uk/sustainability

In this report we have attempted to highlight issues of key relevance to the environment and those with interests in our business. We welcome your views on this and other aspects of our report and company performance via the feedback form on page 22 or at www.southernwater.co.uk/sustainability

Contents

3	statement of independent verification	10	managing our future
4	managing director's statement	14	performance targets
5	sustainable development policy	20	sustaining our future
6	corporate governance	21	water UK indicators
7	sharing our future	22	feedback
		23	area of operations and glossary

Stakeholder Issues	Stakeholder Groups							
	Government	Regulators	Investors and insurers	Other business partners	Community partners	Customers - domestic	Customers - commercial	Employees
Corporate social responsibility	p7-9	p7-9	p7-9	p7-9	p7-9	p7-9	p7-9	P7-9
Business ethics	p5-9	p5-9	p5-9	p5-9	p5-9	p5-9	p5-9	p5-9
Informing control and managing risks	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13
Environmental prosecutions and formal cautions	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13
Economy	(E)	(E)	(E)	(E)		(E)	(E)	(E)
Level of service	(E)	(E)	(E)	(E)	(Wt)	(E) (C)	(E) (C)	(E) (C)
Drinking water quality and water supply	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)
Water efficiency	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt) (C)	(Wt) (C)
Leakage	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)	(Wt)
Bathing and river water quality	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)			(Wa)
Wastewater quality	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)
Waste minimisation, reuse, recycling	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)	(Wa)
Energy	(En)	(En)	(En)	(En)	(En)	(En)	(En)	(En)
Transport	(En)	(En)	(En)	(En)	(En)	(En)	(En)	(En)
Atmosphere, land emissions to air	(En)	(En)	(En)	(En)	(En)	(En)	(En)	(En)
Supply chain	(M)	(M)	(M)	(M)	(M)	(M)	(M)	(M)
Resource use	(M)	(M)	(M)	(M)	(M)	(M)	(M)	(M)
Land quality	(L)	(L)	(L)	(L)	(L)			(L)
Conservation and biodiversity	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Access and recreation	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Community and social inclusion	(Co)	(Co)	(Co)	(Co)	(Co)	(Co)	(Co)	(Co)
Education and community skillsharing	(Co)	(Co)	(Co)	(Co)	(Co)	(Co)	(Co)	(Co)
Training, skillsharing, new deal and apprenticeships	(Em)	(Em)	(Em)	(Em)	(Em)	(Em)	(Em)	(Em)
Employee representation and involvement	(Em)	(Em)	(Em)	(Em)	(Co)	(Em)	(Em)	(Em)
Health and safety	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13	p10-13
Performance target summary	p14-19	p14-19	p14-19	p14-19	p14-19	p14-19	p14-19	p14-19
Water UK industry sustainability indicators and benchmarking	p21	p21	p21	p21	p21	p21	p21	p21

Key:

Wa = Wastes

Wt = Water

En = Energy and atmosphere

M = Material and resources

L = Land, conservation, access and recreation

Co = Community, education and skillsharing

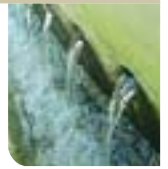
Em = Employees

C = Customers

E = Economy and key performance

Statement of independent verification

SOUTHERN WATER SUSTAINABILITY REPORT 2002-2003



Objectives

Casella Stanger has been commissioned by Southern Water to conduct an independent verification of the 2002-03 Sustainability Report. This is the second year that we have provided this service to Southern Water. The overall aim of the verification statement is to provide assurance to stakeholders that Southern Water's internal verification process is robust and hence that the information and data provided in the Sustainability Report is accurate, reliable and objective. We have also considered the completeness of the report to ensure that it is balanced, has no significant omissions and ultimately that it provides a true reflection of the sustainability impacts and performance of Southern Water over the last year.

Casella Stanger recognises that there are currently no statutory requirements in the UK with regard to the verification of sustainability reports. Therefore the process we have used in this verification exercise is based on current best practice in the Global Reporting Initiative (GRI), the Institute of Social and Ethical AccountAbility Standard AA1000 and the Association of British Insurers (ABI).

Responsibilities of the Verifier –

Casella Stanger

The verifier's obligation is to stakeholders and readers of this report. The verifier, Casella Stanger, exclusively is responsible for the contents of the verification statement, which has been published in full by Southern Water. Casella Stanger has not been involved in the preparation of any of the material included in the Sustainability Report.

Scope

The scope was limited to the verification of the Southern Water internal audit process

as applied to all statements, claims and data in the Sustainability Report.

Methodology

Southern Water, as part of its internal assurance, had compiled a comprehensive and detailed matrix of audit trails for all verifiable data and statements in the Sustainability Report. As part of this process, discussions had been held with the "data providers". The internal audit process was used to track back the evidence as far as the data providers, covering all statements in the report. Casella Stanger used interviews and document reviews to gather evidence to demonstrate performance against randomly selected statements, claims and data in the Sustainability Report. These findings were compared with the internal audit results.

Opinion

We are satisfied that Southern Water's internal audit process ensures that factual statements and data contained within the Sustainability Report are accurate and reliable. We are satisfied that this whole report is factually correct. We are satisfied that Southern Water has provided an accurate and balanced report of performance. We were extremely impressed by the diligence of the audit trail development process, which enables a transparent analysis of the information contributed to the report, tracked back to the data providers. We were pleased to note that the recommendations made during last year's verification process had all been implemented. The internal audit process has now been strengthened to ensure that each statement is audited. We feel that the internal assurance process could be strengthened further through the following recommendations.

Summary Recommendations

The following is a summary of recommendations within the scope of the verification:

- The audit trail process could be made more efficient by all data providers developing a systematic evidence gathering process at the start of the reporting year rather than reliance on the report author.
- Southern Water applies their internal audit process to all verifiable statements and data in a comprehensive and extensive manner. Casella Stanger believes that the internal audit process could be streamlined and therefore, we recommend that Southern Water considers developing appropriate criteria to focus the internal audit process.
- This summary is supported by detailed recommendations on the Sustainability Report and these have been provided in a separate document to Southern Water.

Emma Griffiths
Principal Consultant

Reviewed by Ken Smith
Director

Casella Stanger, Environmental Management,
Sustainability and Risk Group

August 2003

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STANGER

Casella Stanger has experience in the design, development and verification of sustainability reports in a wide range of sectors. Several staff are registered with the Institute of Environmental Management and Assessment as qualified auditors and members of AA1000.

www.casellastanger.com

Managing Director's statement



I AM DELIGHTED TO PRESENT THE MANAGEMENT SUMMARY TO OUR SECOND ANNUAL CORPORATE SUSTAINABILITY REPORT.

In the last year we have finalised the new ownership and refinancing of the business. We can now look to a stable future within a long-term, low-risk operational vision that focuses on our core functions of water supply, wastewater treatment and biosolids recycling. The principles of sustainable management are firmly in our sights as we move forward and over the last year we have looked to strengthen our company culture in this direction specifically through:

- Defining our company commitment to sustainable management through the publication of our new sustainable development policy
- Holding sustainable development and corporate social responsibility awareness briefings with our senior management team in addition to continuing our programme of environmental management awareness briefings across employees in the wider business
- Independent external review of our Environmental Management System and accredited quality management systems
- Developing our increasingly comprehensive programme of internal audits
- Reviewing and enhancing employee development opportunities combined with a balanced understanding of other roles in our business through the introduction of a job-swapping scheme, mirroring and mentoring schemes
- Enhancing employee representation and consultation in how the business is run through the introduction of our Business Involvement Groups

We are increasingly focusing on new ways to share successes with our employees and involve individuals in the broader issues affecting our operations which their role alone may not give them access to. Employee feedback through annual surveys has been key to this process and developing mechanisms for risk assessment and control.

In addition to maintaining and developing our performance management focus with a view to continuous improvement we will be reviewing our internal reporting processes to ensure key management information is captured and reflected to enhance potential for creating value across our business operations. We are also looking to the future through the water industry periodic review process. Our next five year Draft Business Plan for the period 2005-2010 has recently been submitted to the Director General of Water Services.

I am delighted to highlight external recognition of our performance over the last year to include:

- Ranking 74 in the KPMG Top Track 100 for companies not quoted on the stock exchange.
- Royal Horticultural Society Silver Medal for Chelsea Flower Show water efficient gardening exhibit
- Environment Agency Water Efficiency Awards Winners for the 'Education, Communications & Engagement' category
- Environment Agency Water Efficiency Awards Commendation and separate Joint Finalists' award both under the 'OFWAT Economic Research' category

- DeHoxar Spiral Separators presented a Major Commitment award by 'Business Commitment to the Environment'
- 11th in Business in the Environment's 7th non-FTSE Index of Corporate Engagement and highest new entrants (ranking 5th in our sector overall)
- Royal Society for the Prevention of Accidents Gold Award 2003 our third consecutive award
- Communicators in Business award of Excellence for our campaign encouraging people to fit water-saving cistern displacement devices in 2002
- Customer Services Investors in People award
- Accreditation to the Matrix standard for learning
- Accreditation to the Matrix standard for information, advice and guidance (Prince's Trust Volunteers)

Stuart Derwent
Managing Director, Southern Water
July 2003

Sustainable development policy

TO VIEW AND COMMENT ON OUR OTHER EXISTING POLICIES AND PERFORMANCE AS REPORTED, INCLUDING OUR ENVIRONMENT POLICY AND ANNUAL SUSTAINABILITY REPORT, VISIT WWW.SOUTHERN WATER.CO.UK/LIBRARY.



Southern Water is a regulated water and sewerage utility company with its key regulators including OFWAT, the Environment Agency and the Drinking Water Inspectorate. Under Section 4 of the Environment Act 1995 the Environment Agency has the principal objective of achieving Sustainable Development.

In addition, the (draft) Water Bill proposes that OFWAT has a duty towards Sustainable Development. This demonstrates the importance of Sustainable Development, not only to the company, but also its regulators.

Sustainable development at Southern Water means seeking an increasing focus on the balanced consideration of economic, social and environmental aspects in making business decisions. Within and beyond the regulatory framework of the water industry, Southern Water believes adopting Sustainable Development principles will:

- Ensure the continued supply of quality drinking water and the provision of wastewater services.
- Secure future water supplies and the effective management of water resources.
- Ensure the safe and long-term recycling of wastewater and sludge to the environment.
- Improve future services by providing them in a sustainable and cost effective way.
- Involve our communities and influence our business partners in working towards more sustainable futures.

Our commitment

- To ensure the continued delivery of quality services to our customers, stakeholders and the environment across our operations.
- To consider the balance between economic, environmental and social aspects of our business decisions against sustainable development principles.
- To listen to and work with our customers, employees, regulators, investors and other stakeholders to ensure continuous improvement in the sustainable development of our operations.
- To report publicly on our performance.

What we will do to deliver on our commitment

- Focus on our core operations as a long-term, low-risk water supply, wastewater treatment and sludge recycling business.
- Continue to develop and maintain formal systems of operational control and review these annually.
- Continue to develop and maintain our performance management culture aimed at delivering efficiencies benefiting our customers, the environment, employees, investors and other stakeholders. This means we:
 - > Set commercially practical goals and manage operational targets of performance.
 - > Regularly measure and monitor our performance against these targets.

> Understand and reflect on our performance and set targets for future improvement.

- Continue to support our employees to achieve shared goals for their development within a stable working environment.
- Continue to research projects and initiatives providing more sustainable routes for our business operations and service delivery.
- Engage in dialogue with our stakeholders locally, regionally and nationally and form relevant partnerships to deliver customer service alongside community and environmental benefits.
- Report our economic, environmental and social performance to the public annually.

What can you do?

- Use water wisely and dispose of wastes and chemicals safely.
- Seek our guidance when you are uncertain, helping us to help you by tailoring our services to best meet your requirements and to ensure the sustainability of our joint actions.

Comment and further information

To comment on this policy, email

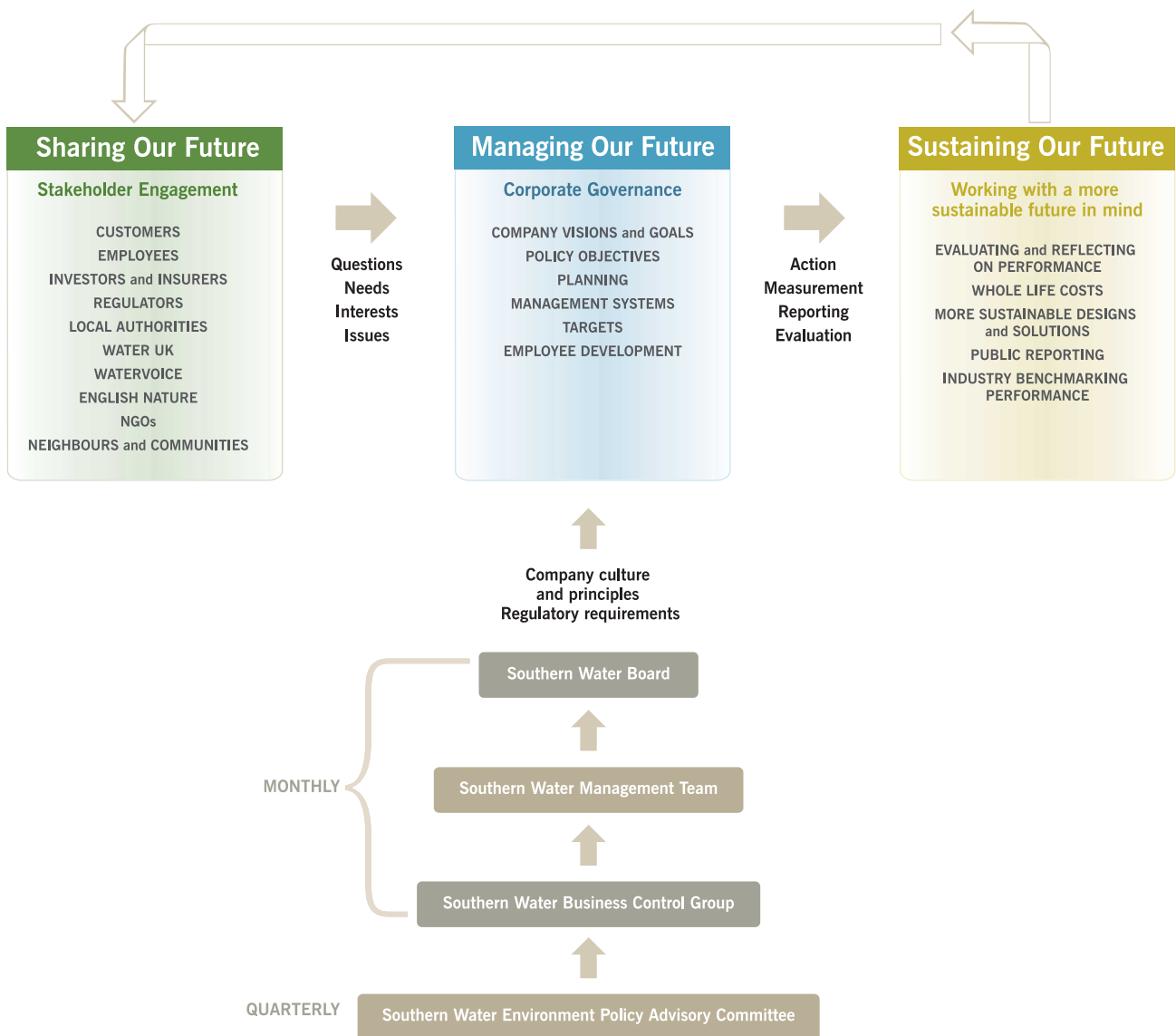
conservation@southernwater.co.uk

Our company website provides information about our recreational sites, their events and facilities, our community talks and initiatives and education resources, as well as a feedback facility, visit www.southernwater.co.uk

Corporate governance



THERE IS AN INCREASING EMPHASIS ON CORPORATE SOCIAL RESPONSIBILITY AND TRANSPARENCY IN DEMONSTRATING HOW IT IS BEING ACHIEVED IN THE BUSINESS COMMUNITY TODAY. OUR CORE SYSTEMS INVOLVED IN GOVERNING COMPANY OPERATIONS ARE ILLUSTRATED BELOW.



The following sections of this report detail our approach to working with stakeholders and managing our business risks and opportunities. Technical performance detail on a variety of areas of stakeholder interest is provided at www.southernwater.co.uk/sustainability.

Sharing our future

CUSTOMER PARTICIPATION AND FEEDBACK IS CRUCIAL TO THE SUCCESS OF OUR WATER EFFICIENCY PROGRAMME AND WE SEE THE CAMPAIGN AS A PARTNERSHIP BETWEEN OUR CUSTOMERS AND US.



Background:

- 23,024 technical issues were reported by our customers for investigation in 2002-2003
- MORI social research into customer perceptions of the Water Industry undertook 2,076 interviews at 230 points across England and Wales, 246 interviews in the Southern area at 27 sampling points in 2002
- We received 24,000 responses to 60,000 customer water use questionnaires sent to households in 2002
- A key business customer took advantage of the water efficiency advice and services we make available, and is now consuming 26% less water annually than in 1999
- 146 WaterWise talks given to community groups
- 2,271 items of written feedback were received from members of the public within the consultation period for the Brighton and Hove scheme
- 14 separate interest and residents groups responded to the Brighton and Hove scheme consultation with their views on proposed schemes
- 795 employees responded to 2002 Stress Survey
- Currently establishing Business Involvement Groups to ensure full employee involvement and representation

Stakeholder Engagement

There is a strong network of consultation, discussion and feedback to our business from a variety of interested parties and individuals. To illustrate this wide range of activity, our formal processes include:

Customer billing, service and technical enquiries are managed by our Customer Services team and, where relevant, these are passed on to our technical teams for further investigation and response. Regular customer satisfaction surveys are also undertaken by our Customer Services team. Community WaterWise talks continued over the past year, given by volunteers across the business. We also gave our public tours of Brighton's Victorian sewerage system explaining its historic background and how it works today.

We have developed policies, procedures and guidance for developers to follow in planning, designing and laying water supply pipes and industry guidance has been developed for sewer systems. Work continues, in consultation with key stakeholders, to develop framework guidance for the design and development of 'sustainable drainage systems' with a focus on surface water drainage issues.

In 2002 we conducted a further employee stress survey. Results have been assessed to identify future actions and, as well as being fed back to employees, are being used to develop a method for assessing future risks to support the forthcoming year's proposed company-wide risk assessment. Over the past year we have also been considering ways to increase involvement, participation and consultation with all our employees. 'Business Involvement Groups' are being established for each business function. Group representatives are nominated by employees.

Liaison with regulatory bodies and Government (eg Environment Agency, English Nature, OFWAT, DEFRA, DWI) is managed through our Corporate Strategy department. We contribute to the advice given to Government and regulators on the possible impacts of developments in legislation and actively participate in a range of Water UK networking groups focused on selected technical areas. These include a Sustainability Forum currently redefining a range of measurable sustainability indicators and what corporate social responsibility means for the industry. We are also members of a number of multi-representative environment groups organised at both at local and regional advisory levels. These groups represent



(left) The plans were on display at the Lewes Sewerage Improvement Scheme public exhibition in June 2003

CASE STUDY:

Brighton and Hove Scheme Planning Consultation Processes



In 2001, the Secretary of State for the Environment, Transport and the Regions dismissed our appeal against the refusal of planning permission by East Sussex County Council for a new wastewater treatment works and sludge recycling centre (which deals with solid waste removed during the treatment process) at our long established Portobello works. We set up a project team to conduct a fresh and thorough review of potential locations for an alternative site for these much-needed works. Some 66 locations were reviewed against planning, environmental, engineering and operational considerations and a total of eight sites were identified for further evaluation.

Preliminary scheme designs were produced for the eight sites, each of which was subject to our thorough consultation process including:

- Regular consultation with the Local Authorities Consultative Group. Formal responses were received from five local authorities.*
- Meetings with statutory agencies e.g. Department for Environment, Food and Rural Affairs (DEFRA), Environment Agency. In all, five statutory agencies sent formal responses.*

- Presentations to councillors and the Board of Newhaven Economic Partnership.*
- Public exhibitions widely promoted in advance of arrival, visited each of the neighbourhoods in the vicinity of the eight sites. This comprised a written and illustrated exhibition presenting each of the eight options with members of the project team on-hand to answer queries. Members of the public were also invited to complete a feedback form expressing their preference and comments with brochures available to take away.*
- Online public consultation was also made available via www.southernwater.co.uk/brightonandhove where the exhibition material was published along with an online feedback form.*

All views presented throughout the consultation process have been assessed and reported for consideration as the decision towards the preferred site is progressed.

a range of individuals' views from local councillors and industry to English Nature and community representatives.

We share our expertise on a more global level via group visits from water representatives outside the UK, including China and Japan in 2002, and through our work with WaterAid.

Our range of publications is produced for a variety of audiences, covering our operations, services and to provide water efficiency advice. These are available at www.southernwater.co.uk/library and include our customer magazine "Splash" featuring customer tips on how to reduce water wastage and other water efficient messages. We plan to include an even greater water efficiency coverage in next year's issue. All our water efficiency information and education activities fall under one recognisable campaign brand "H₂OK". Our communication strategy is to 'keep it simple and keep repeating' with one main water saving message focus every year. Wherever possible, we have run joint promotional events with South East Water over the last year.

Managing the Benefits of Stakeholder Dialogue

In addition to MORI's national poll of customer perception of the UK water industry, we received 24,000 responses to 60,000 customer water use questionnaires sent to households in 2002. Data obtained from this exercise is informing future water demand forecasting and the identification of potential problem areas for water quality, in addition to our customer-partnering programme of water efficiency initiatives. In January 2003 we completed the third phase of research into customer satisfaction and attitudes towards

Links: www.environment-agency.gov.uk | www.water.org.uk | www.watervoice.org.uk | www.mori.com
www.southernwater.co.uk/brightonandhove | www.southernwater.co.uk/customer-zone | www.english-nature.org.uk
www.southernwater.co.uk/whysavewater | www.wateraid.org.uk

our service undertaken by an independent body. We sought guidance from specialist agencies in the development of a range of assistance for our customers with special needs. We have also sought to target information on these services to specific audiences through partnerships with community organisations like Neighbourhood Watch. Over the last year we have continued to deliver regular water consumption reports to key business customers and continue to advise them on water efficiency.

Customer participation and feedback is crucial to the success of our water efficiency programme and we see the campaign as a partnership between our customers and us. Our future strategy takes into account the outcomes and feedback from previous initiatives to ensure planned campaigns will be cost effective, reach appropriate audiences and incorporate appropriate research findings.

Our water efficiency initiatives are promoted with the media. We continue our 'Simple Utility Management' workshops with local authorities where we provide local businesses with water efficiency advice, taking part in four of these over the 2002-2003 financial year. We also maintain active links with local waste minimisation initiatives.

For more information visit:
www.southernwater.co.uk/sustainability/water

This year we aim to develop our HR (Human Resources) Integrated Framework. Our stress awareness programme continues with regular updates available via the intranet and monthly posters raising awareness of support and advice available.

Delivery of development to and improvement of our existing works through our capital investment programme has involved partnering with our construction contractors through working as integrated project teams over the last year. These teams delivered 41 of their 42 targets identified for completion by the end of March 2003 and represented by some £60m investment. We have also partnered with key contractors in sponsoring delivery of our Learn to Swim scheme over the past year.

Our dedicated agricultural team have been pro-active in industry-wide partnering initiatives aimed at driving forward the adoption of the voluntary 'Safe Sludge Matrix' code into legislation. They have also worked to communicate both the scientific food safety and sustainability arguments of biosolids recycling to land to wider audiences with interests in this field.

The Matrix represents agreement between Water UK, representing the UK water industry, and the British Retail Consortium, in consultation with the Environment Agency, Department for Environment, Food and Rural Affairs, the National Farmers Union, Country Land and Business Association as well as food manufacturers and processors and other interested parties.

CASE STUDY:

Flooding Information Programme



Our flooding consultation programme has been running since September 2001. This involves delivering local authority, parish council and public presentations to explain how different types of flooding issues arise, and the different responsibilities involved. Over 60 such presentations have been made to date. Part of this presentation includes showing our video 'Facts about Flooding', currently being re-filmed. Each presentation also details the work we are doing to meet our responsibilities and address issues specific to the community in question. We have pro-actively sought to agenda these community meetings across our region largely through contacts with local and parish councils. The meetings also provide attendees with an opportunity to ask questions and raise issues we then feed back into our business. Delivery of our programme often involves major works for which usual planning procedures apply.

Where possible we have also run local public exhibitions regarding delivery of flood alleviation schemes. Exhibitions were promoted locally and attendees could feed their comments back to our business for further attention and response. As well as detailing the intended benefits of the alleviation schemes, this process helped to communicate potential temporary community disruptions occurring at stages of the construction process. Preparations are currently under way for the next phase of flood alleviation schemes forming part of our overall business plan.

Managing our future



Background

- Royal Society for the Prevention of Accidents Gold Award 2003
- 11th in Business in the Environment's 7th non-FTSE Index of Corporate Engagement (ranking 5th in our sector overall)
- Customer Services Investors in People award
- Regulatory Capital Value was £2192m on the 31st March 2003
- Interest Cover was 2.1 on the 31st March 2003

Informing control and managing risk

Our Risk and Control Framework, focussing around our Business Control Group's monthly review of business risk and their relative priorities, is illustrated on page 12.

Our business control audit programme, generated annually for the year ahead, supports our risk and control framework. This is also subject to independent scrutiny through our annual audit of regulatory accounts and processes.

Performance-Driven Management Control Systems

Accredited Systems:

Our water supply operations are certified to the International BS EN ISO 9002:1994 quality standard. Our future internal audit plan for this system is currently established until 2007. The British Standards Institution audits these operations twice yearly and we are currently on course to be certified to the revised ISO9001:2000 standard by the end of 2003. Our group scientific services are accredited to ISO quality standard 17025 and are audited by independent external auditors annually. Our internal audit programme is currently defined through to March 2005.

Our Project Delivery services are accredited to ISO 9001:

1994 quality standard and we are currently working towards independent accreditation to the revised ISO9001:2000 standard. Our Project Delivery services cover the design, procurement and project management of wastewater and potable water projects, including planning supervisor services. The quality management system governing these operations includes a formal link

CASE STUDY:

Flooding Incident team



Over the last wet weather season, we maintained regular meetings of our Flooding Incident Team. These ensure managed communication relating to flooding incidents and emergency works reaches concerned parties both within and outside of the organisation.

Part of our pro-active management of flooding issues, this aspect manages risk through facilitating rapid operational response to unpredictable events via the provision of current information.

For more information visit: www.southernwater.co.uk/sustainability/customers and page 9, Flood Information Programme

Weather forecasts and groundwater levels were regularly monitored against incident data to establish flooding trigger points that may become areas of future need. The resulting data was consolidated onto a shared information resource. Communication of our operational response to various external agencies also assists in keeping the general public informed of the progress and duration of necessary remedial works we undertake throughout this period.

Links: www.ofwat.gov.uk | www.environment-agency.gov.uk | www.defra.gov.uk | www.hse.org.uk
www.rosspa.com | www.mori.com | www.english-nature.org.uk | www.iipuk.co.uk | www.acca.org.uk

to our Environmental Management System, specifying procedures to adopt in obtaining environmental advice for project proposals and environmental site management planning. A comprehensive audit programme established for the year ahead ensures quality controls are in place.

Non-Accredited Systems:

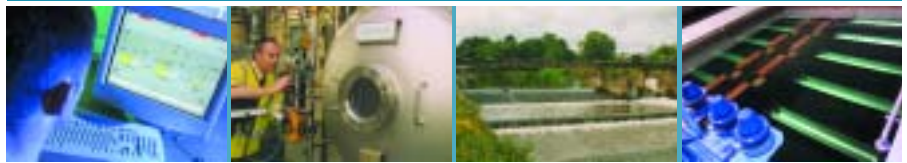
Our Environmental Management System (EMS) was reviewed this year by independent consultants and their recommendations are currently being actioned. A thorough analysis of the system was also conducted internally to identify and develop additional procedures needed. EMS awareness presentations have now been rolled-out to 82% of our business. Information on the system and general environmental management is currently being inserted in our employee handbook.

In 2002, of the 38 non-FITSE companies registered, we were the highest-ranking new entrant in Business in the Environment's 7th Index of Corporate Environmental Engagement. Scoring in the 81-90% range, we were placed at 11th position in the non-FITSE companies. We ranked 5th overall for our sector (FITSE and non-FITSE water companies).

Our Field Event Coordinators are notified of any pollution incidents and they manage on-site attendance needs for these. Our Pollution Incident Response team give specialist advice relating to potential environmental impact and can undertake on-site chemical and biological sampling as required. 235 incidents were recorded in total over the calendar year 2002. Pollution Incident Response advised on 62 of these incidents between June 2002 and April 2003.

CASE STUDY:

Periodic Review 2004



The Office of Water Services (OFWAT), review UK water industry future planning needs five-yearly, within a process known as the 'periodic review'. The 2004 periodic review process began in 2002 and will take effect from April 2005. Our past approach to drafting business plans for OFWAT periodic review has considered both the condition of our assets and our current and future expected performance. This approach forms the basis of the current periodic review. One of the significant differences of this review's process compared to previous ones, is OFWAT's greater emphasis on public consultation within the overall process.

As part of the 2004 Periodic Review, MORI (Market & Opinion Research International) conducted social research into customer views on the industry. Results for the UK indicated that customers were prepared to pay more to address:

- Improving tap water taste and smell
- Maintaining quality of coastal and bathing waters
- Reducing flooding of properties by sewage
- Maintaining tap water
- Maintaining water and sewerage pipes
- Preventing bursts and leaks
- Reducing smells from sewage works

This customer research was undertaken in 2002, a further second phase of research will commence after all water companies have submitted their draft business plans in August 2003. On the basis of this and consultation with other stakeholders, final Ministerial guidance will direct the development of our final business plan by April 2004.

Our approach also involves consultation with other statutory agencies, and incorporates their recommendations into projects proposed for delivery in the next investment phase. However, the five-yearly approach to price setting affects the continuity of longer-term investment and so we are currently in consultation with OFWAT regarding outputs for the coming year and 2005-2006. OFWAT have also made a commitment to look ahead to the next five year period and consider what can be done to agree outputs in advance in order to avoid significant year-on-year changes to each company's investment programme.

For more information visit:
www.southernwater.co.uk/sustainability/economy

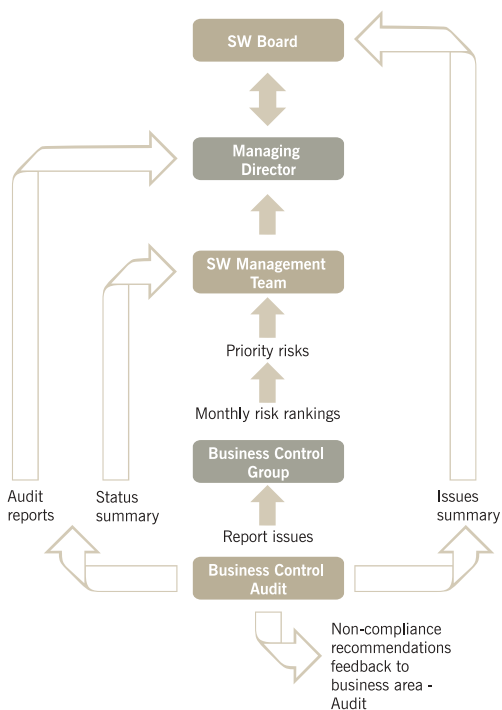
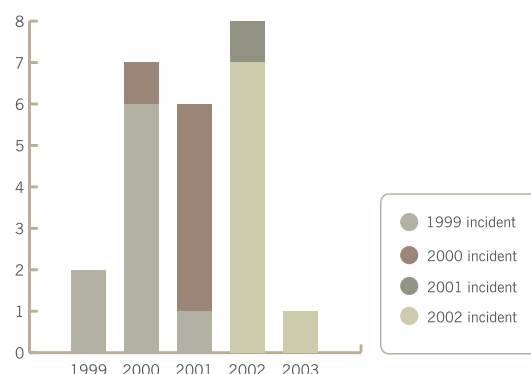


Diagram 1 (left):
The risk and control process

Diagram 2 (right):
Prosecutions and formal cautions (to March 2003) by year of outcome



Over the past year we have continued to produce Health and Safety bulletins for our staff and contractors as well as producing our fifth Health and Safety video 'Visiting Sites'. Developments to our Health and Safety Management System in 2002 included promoting 'near miss' reporting and we plan to conduct a staff-attitude survey across the business again this year.

Managing Opportunity

Following the finalisation of our new ownership, we are focusing on our core functions of water supply, wastewater treatment and biosolids recycling as a long-term low risk business. Within this framework, opportunities exist to make better use of our existing range of services. We are currently drafting a Business Customer Charter to set out our commitment to delivery of high standards to our business customers.

A comprehensive range of water efficiency and water management services is available to all our business customers. We have balanced the development of our services to business customers against risk management through review of emergency supply plans in the event of loss of standard mains supply.

Our range of environmental services includes:

- water leakage detection and management
- water metering, data logging and consumption management
- managing data analysis processes for other infrastructure networks and energy consumption information management for any multi-site business
- maintenance, verification and calibration of water utility measurement equipment
- environmental site assessment services - including sampling and analysis for solids, liquids and gases (in-situ) from potentially

contaminated sites to industrial and surface water sources as well as clean water and building-environment samples

- treatment of cess liquid wastes, trade effluents and other tankered wastes
- production and provision of fertiliser and soil conditioning products ('Bestway' Fertiliser Products).

2002 Enforcements	Total No	Fine (£)	Details
Prosecutions	5	4,500	Failure to prevent the escape of controlled waste (sewage) – a power surge in the mains electricity supply disabled the outlet pumps, but inlet pumps continued working resulting in sewage flooding local residents' gardens and reaching a nearby lake
			Pollution of controlled waters due to contractor fencing catching filter arm of treatment works preventing full treatment of effluent discharged
			Pollution of controlled waters - valve failure on a rising main caused sewage to enter a stream
			Pollution of controlled waters - a rising main burst and caused sewage to enter stream
			Pollution of controlled waters - a blocked sewer caused sewage to enter a river
Formal Cautions	3		Breach of consent to discharge - a small hole formed on the underside of a floating arm in a settlement tank at a treatment works allowing small amounts of silt to discharge to the river
			Discharge of sewage - a piece of wood caused a blockage in a sewer
			Breach of discharge consent - inlet works blocked during rainfall and all flows then discharged via the storm outfall

2002 Management System Target	2002 Progress	2003 Management System Target
No formal 2002 target		Maintain bi-annual and annual audits of water supply and laboratory operations
No formal 2002 target		Achieve ISO9001:2000 accreditation of water supply operations
No formal 2002 target		Achieve ISO9001:2000 accreditation of Project Delivery operations
Develop an EMS induction for new starters	Completed	
Carry out a 'gap analysis' of EMS to establish the need for additional environmental procedures	Completed	Annual independent review of EMS
Maintain the EMS management programmes and implement the EMS audit programme	Completed	Review EMS target progress quarterly
No formal 2002 target		Continue the annual review and planning of our Health and Safety management system

Southern Water performance target summary

CALENDAR YEAR PERFORMANCE TARGETS				
2002 Performance Target	2001 Progress	2002 Progress		2003 Target
WATER QUALITY				
Zero treatment works failing coliform standard with enforcement action	Completed/target reached	Completed/target reached		Maintain target
Zero service reservoirs failing coliform standard with enforcement action	Completed/target reached	Completed/target reached		Maintain target
99.7% of customer taps samples with no coliforms	99.8%	99.8%		Maintain target
Physico-chemical compliance customer taps 99.8% compliant	99.8%	99.8%		Maintain target
WASTEWATER QUALITY				
95% population equivalent served by Water Resources Act compliant works	89%	91%		Maintain target
95% population equivalent served by Urban Waste Water Treatment Directive compliant works	84%	98%		Maintain target
BATHING WATER QUALITY				
95% Bathing waters compliant with mandatory standard of European Union Bathing Waters Directive	98.7%	98.7% DEFRA report 99% for the Southern region and 98% for the UK		Maintain target
HEALTH AND SAFETY				
100% delivery and 90% delegate attendance rate of Health and Safety training as a percentage of formal training identified in the annual company training plan	3,500 formal Health and Safety (H&S) training places delivered in 2001-2002. 77% delegate attendance rate	100% delivery and 84% delegate attendance rate		100% delivery and 95% delegate attendance rate of Health and Safety training as a percentage of formal training identified in the annual company training plan
100% Occupational health surveillance completed of total planned by Human Resources	Practical measures in development. Screening in place for primary groups at suspected risk of Hand-Arm vibration	99% annual surveillance complete for employees seen once over the year 98% tri-annual surveillance complete		Maintain target
100% senior management to plan their personal targets for site/workplace inspections	New 2002 target	Formalised in requirements for senior management roles		Maintain target
Work to develop industry specific targets arising from UK government targets set in 'Revitalising Health & Safety' by 2010	Active participation with Water UK and Health & Safety Executive to develop the industry's 'Clearwater 2010' ten year strategy	Working groups have met to discuss priority issues e.g. stress in the workplace. Risk assessment methodologies are under development		Maintain target



CALENDAR YEAR PERFORMANCE TARGETS

2002 Performance Target	2001 Progress	2002 Progress	2003 Target
HUMAN RESOURCES			
New target	-	-	To establish a company-wide Business Involvement Group to consider issues that go across the business by June 2003
New target	-	-	Implement the new Human Resources Integrated Framework for employees




FINANCIAL YEAR PERFORMANCE TARGETS

2002-03 Performance Target	2001-02 Progress	2002-03 Progress	2003-04 Target
WASTEWATER QUALITY			
New target	-	-	Install turbidity monitors on 57 wastewater treatment works by April 2005
New target	-	-	Install flow monitoring installation on 248 wastewater treatment works by April 2005

MATERIALS AND RESOURCES

Carry out six procurement audits in accordance with procurement audit procedures	Completed	Completed		Undertake procurement audits of preferred contractors for key contracts
Establish a methodology for recording 'percentage of materials purchased from recycled sources'	New 2002 target	Incomplete due to complexity of supply chain. Completion of this target was not practical. Target revised		Develop an environmental questionnaire to be included in tender documentation and establish a baseline for environmental performance of suppliers
Environment and Product Quality Team to meet Procurement at least twice a year to identify potential environmental benefits in new framework agreements	New 2002 target	Meetings held to define audit programme. These will continue on a quarterly basis. Existing framework agreements monitored		
Detail the major chemicals we use. Identify the sites where the major chemicals are stored and used	Various site-specific initiatives have delivered improved performance efficiencies and in cases reduced chemical inputs	Completed		Trial study to review consumption of dosed chemicals at wastewater treatment works. Undertake audits to optimise chemical use at major surface water supply works
Implement a system for reporting chemical use and supply	New 2002 target	Completed for water supply works and work is underway for wastewater		Enhance chemical use data at wastewater treatment works
Establish measurable indicators to compare chemical and oil use between sites	New 2002 target	Completed for water supply works and complete for certain chemicals used in wastewater treatment		Monitor oil use between water supply sites

Southern Water performance target summary










FINANCIAL YEAR PERFORMANCE TARGETS			
2002-03 Performance Target	2001-02 Progress	2002-03 Progress	2003-04 Target
ENERGY			
Develop a system for calculating unit energy production efficiencies for major processes at the highest energy consuming sites. Unit energy production efficiencies to be used in setting future targets for energy usage at these sites. Initial focus on 20 highest energy-consuming sites	Annual company average energy efficiency in water production has been established for 2000-01 and from this overall energy efficiency improvement targets have been set within the Operating Plan for 2002-03 and 2003-04	Flow data for 16 water supply and 12 wastewater treatment sites has been added to our energy management information system and this is being used to identify works and processes for energy efficiency improvements 	Implement use of Energy Auditing and Modelling database
Improve company overall energy efficiency for water production compare with 2000-01 performance		Water supply pumping system efficiency study under way 	Improve energy efficiency for six water supply sites compared with 2002-03 performance
Improve energy efficiency in wastewater treatment at ten large sites compared with 2001-02 performance		Seven sites showed efficiency improvements 	Increase the number of sites where unit energy production efficiencies are calculated and used (from current level of 28 sites to 50) by 2004
Promote energy efficiency awareness amongst employees	New 2002 target	Completed 	No formal target but we continue to take opportunities to raise awareness
Investigate and where possible utilise appropriate forms of 'green energy'	New 2002 target	Biogas fuelled microturbine trial is planned at one of our sites – this would generate electricity from the gas produced as a by-product of our wastewater treatment process. Work is under way to install intelligent motor control units that will regulate electricity provided to a pump in accordance with the load it has to pump 	Undertake a feasibility study into the opportunities for energy generation from wind at our sites
WASTE			
Develop company-wide waste exchange	Short-term goal of 'a greater understanding of waste streams' achieved	This target has not been completed and emphasis has been placed on waste minimisation 	Develop a 'controlled waste' database monitoring system
Identify highest waste producing sites and investigate and implement potential efficiency savings	2001 target of 15 waste audits met	Highest waste producing sites have been identified for grits and screenings. The potential for efficiency savings is being taken forward 	Pilot 'grits and screenings' composting research and development project
Increase internal publicity activities to raise awareness of waste issues (March 2003)	Awareness sessions were delivered over the year to Project Delivery and commissioning teams	Completed 	No formal target. We continue to take opportunities to raise awareness of waste issues



FINANCIAL YEAR PERFORMANCE TARGETS

2002-03 Performance Target	2001-02 Progress	2002-03 Progress	2003-04 Target
WASTE <i>continued</i>			
Produce gap analysis for waste recycling/minimisation (June 2003)	Waste reporting now covers the majority of waste streams	Gap analysis complete at five main office sites 	Establish staged reporting for waste management returns
Zero prosecutions for waste management offences	The company was not prosecuted for any waste management offences in 2001	One prosecution for failing to prevent the escape of controlled waste 	Maintain target
WATER EFFICIENCY			
Establish a data set of our sites where water consumption is currently recorded	Metering of main offices completed	Completed 	Input internal water use data for wastewater sites serving a population equivalent above 25,000 into our Optima6 management system
Introduce and maintain water efficiency measures in our offices	Water efficient installations completed across main offices	Completed 	No formal target but progress continues
Develop water efficiency design standard to ensure that water efficiency is considered as part of project planning	Programme of improving water efficiency on operational sites continued in 2001	Completed and will be regularly reviewed 	
WATER RESOURCES			
Audit of meters at abstraction points	We carry out annual meter audits and calibration reporting internally and to the Environment Agency on request.	Completed 	Trial Water Production Management Tool to optimise source operation in a sustainable manner
Revise our water resources policies in line with proposed legislation (Water Bill) and publish within our company Water Supply Manual	The need to develop new water resources policies was formalised in 2001	Currently under development 	No formal target - completion awaits finalisation of Water Bill
TRANSPORT			
Investigate video conferencing opportunities in relation to transport policy and a possible reduction in work-related journeys	New 2002 target Hybrid electric/petrol car evaluated in 2001	Video conferencing facilities are in use at our headquarters. The New & Emerging Technology Group are looking at the various opportunities for bringing in to the rest of the business 	Develop a Transport Training Plan (including driver legislative awareness)
Investigate alternative methods of transport i.e. car sharing, encouraging cycling, provision of facts and figures	New 2002 target	Incomplete 	Review Transport Manual and development of Driver Handbook (including good driving practices and fuel efficiency)
AIR			
Develop operational level report of odour trends linked to incident reports enhancing pro-active mitigation of incidents	New 2002 target Odour complaints data reporting automated	Reports generated are stored electronically in a shared location for access by key wastewater process employees 	Implement formal training for operational staff on how to deal with potential odour issues

Southern Water performance target summary

FINANCIAL YEAR PERFORMANCE TARGETS				
2002-03 Performance Target		2001-02 Progress	2002-03 Progress	2003-04 Target
HEALTH AND SAFETY				
100% site safety/workplace inspections of total planned by department manager		923 inspections planned. 916 completed. 99% achieved	100% achieved across the business 	Maintain target
100% team managers completing informal Health and Safety training updates		Team managers already completing informal training. Development of system to ensure next year's target	Team Managers completing informal training 	Maintain target
EDUCATION				
Water efficiency programme in schools to continue through school tours with further help and advice for schools with high water use	Drips in Schools play	Estimated 30,000 pupils had seen 'Drips in Schools' by the end of March 2002	2002 tour included 39 schools reaching some 4,500 pupils in our region 	Maintain progress and promote water efficiency in homes. Promote water efficient gardening.
	Education Service	130 packs sent to students	32 general information packs 30 schools packs 26 CD-rom sent 	Continue service
	Schools' Water audits	New target. In 2001-02, various teaching resources were sent to schools in our region and published online	12 Hastings schools audits in 2003. Case study school water audit pack available via www.southernwater.co.uk . The Environment Agency use the pack as part of their grant application scheme for water efficiency improvement in schools 	Continue to support Southern Region Environment Agency water efficient schools grant scheme with on-site water audits and help with grant applications
	Why save water website at www.southernwater.co.uk	New target	Averaging 279 visits per month 	Maintain and develop site
WaterWise community talks programme to continue		188 talks provided in 2001-2002 financial year	Total of 146 talks over the year 	Maintain programme
COMMUNITY				
Encourage an increase in applications for financial support from environmental projects which actively involve the community to consider favourably environmentally beneficial applications from organisations or individuals that may attract seed-corn or matched funds from other bodies		New 2002 target	Incomplete We have continued to support a variety of employee fundraising activities and community-based charities in our region over the past year 	Continue to support fundraising activities and community initiatives. Continue to seek partner-funding for our Learn to Swim scheme.
Introduce a system to record the environmental initiatives we support and feed useful information back into the Environmental Management System		New 2002 target	Complete 	



FINANCIAL YEAR PERFORMANCE TARGETS

2002-03 Performance Target	2001-02 Progress	2002-03 Progress	2003-04 Target
LAND, CONSERVATION, ACCESS AND RECREATION			
Land contamination: integrating the gathered generic risk data into the company's Environmental Geographic Information System (EGIS)	Contamination Risk Project completed in 2001	Complete 	Establish procedures for using and updating risk data to EGIS
Complete and implement remaining plans (40 sites) and increase land under positive conservation management by 10% (with baseline at 69%)	30 Conservation Management Plans were completed by the end of May 2002, and the task of integrating management objectives into routine site maintenance began	Conservation Management Plans (CMP's) have been completed for our 40 most sensitive sites. These plans integrate site specific operational requirements with management strategies to improve and enhance the value of the site for biodiversity potential. We have and will continue to implement the objectives of these Conservation Management Plans 	
Publish corporate Biodiversity Action Plan	New target	We have drafted the Corporate Biodiversity Action Plan. Publication on the company website is expected later this year 	
Trial biodiversity index for measuring Sites of Special Scientific Interest (SSSI) management success	Plan to identify six sites on which to undertake trials for a biodiversity index	Incomplete 	Review status of statutory designated landholdings and evaluate future asset maintenance implications
Collate and present data on enhancement schemes as part of construction projects	Presentation of data on enhancement schemes was reported in our 2001-2002 Sustainability Performance detail 'Land' online report	Presentation of data on enhancement schemes is presented in this report, in the 'Biodiversity' and 'Environmental Enhancement' sections of www.southernwater.co.uk/sustainability/conservation 	This public reporting will continue
Complete audit of all phase 1 data and quantify our habitat resource	New target	Analysis of Environmental Geographic Information System site data has allowed the identification of key habitats and species on Southern Water sites. This has led to a prioritised approach to implementing conservation management initiatives which has been summarised within our Corporate Biodiversity Action Plan 	Erect barn owl boxes on suitable sites and monitor activity

Sustaining our future



Links: www.southernwater.co.uk/library | www.unep.org.uk | www.wbcsd.ch
www.water.org.uk | www.ukwir.org | www.environment-agency.gov.uk
www.acca.org.uk | www.bestwayfertiliser.co.uk | www.brc.org.uk | www.nfu.org
www.ic.ac.uk | www.ciria.org.uk

Background

- UK Water Industry Research Limited completed their review of greenhouse gas emissions reporting and are presenting their findings to industry partners in 2003
- UK Water Industry Research 'Quantification of Savings, Costs and Benefits of Water Efficiency' project participants
- Construction Industry Research and Information Association (CIRIA) 'Key Performance Indicators and Benchmarking for Water Use in Buildings' project participants
- We are looking into the feasibility of installing electricity generating equipment using renewable energy sources with Imperial College (small scale wind turbines and photovoltaic technology)

We are looking to the future as a business through a variety of performance efficiency drives, research and projects designed to deliver more sustainable operational processes. We also partner with the rest of the industry via a series of technical groups and research initiatives developing guidance and influencing future policy through sharing our expertise.

As participants in Water UK's Sustainability Forum, we have, over the last year, been redefining a range of measurable sustainability indicators to enhance the existing set of environmental sustainability indicators reported here (page 21) against our company performance. Through provision of data to a water industry funded project conducted by Corporate Edge in partnership with Water UK, we are also assisting to define what corporate social responsibility means for the industry.

CASE STUDIES:

Combined Heat and Power



We are progressing a project to install biogas fuelled Combined Heat and Power (CHP) systems at five key wastewater sludge recycling centres by 2004. It is estimated that the new systems will generate around 15GWh of renewable energy every year in addition to heat. A large proportion of this energy will be used on site to support the main treatment processes while reducing the amount of fossil-fuel-generated electricity imported to the sites from the National Grid. Any excess energy generated will be exported for use on our other sites. The heat produced by the systems will be used on the sites to heat the sludge recycling process, again reducing fossil-fuel consumption that would otherwise be required.

Biosolids - A Sustainable Resource



It has become noticeable over the past few years that customers had not realised that Biosolids – the treated form of sewage sludge – has been in use as fertiliser products in UK and European agriculture for over forty years. Biosolids contain plant nutrients produced through a highly regulated process developed with the highest possible standards of food safety in mind and based on years of research. As well as providing a sustainable disposal route for one of society's more significant solid waste resources, this practice also provides a more sustainable source of agricultural fertiliser through recycling essential soil nutrient resources like phosphate. Equivalent manufactured products are reliant on finite resources of mined phosphate. The voluntary industry-wide 'Safe Sludge Matrix' consists mainly of a table of crop types with clear guidance on the acceptable treatment required for any biosolids product (wastewater industry derived) that may be applied to it. The Matrix also represents an agreement reached between Water UK, representing the UK water industry, and the British Retail Consortium, and including consultation with the Environment Agency, Department for Environment, Food and Rural Affairs, the National Farmers Union, Country Land and Business Association as well as food manufacturers and processors and other interested parties. Research continues and the water industry is currently investing some £450 million to improve treatment and management practices further.

Water UK sustainability indicators

UK INDUSTRY FIGURES

Water UK Sustainability Indicator*	UK 99-00	SW 99-00	UK 00-01	SW 00-01	UK 01-02	SW 01-02	SW 02-03
WATER SERVICES							
Population with sufficient resources (%)	100	100	100	100	100	100	N/A
Per capita water consumption (litres per head per day)	148.9	156.6	147.4	155.3	149.4	161.3	159.4
Water efficiency (litres per £GDP)	1.95	N/A	2.0	1.75	1.71	1.83	1.77
Actual leakage (Ml/day) No company benchmark comparable to UK total leakage	4420	-	4410	-	4725	-	-
Tests complying with drinking water standards (%)	99.64	99.87 customer taps	99.72	99.82	99.78	99.81	99.89
Properties sewer-flooded (%)	0.029	0.029	0.015	0.0018	0.0185	0.0153	0.019
Intermittent discharges in satisfactory condition (%)	76	81	78	83	81.15	84.11	87.49
% Population served by wastewater treatment works meeting numerical standards (%)	96.3	100	96.3	100	92.8	91.2	97.2
ENVIRONMENTAL MANAGEMENT							
BiE sectoral ranking (%)	90	ScottishPower top utility in BiE index	90	-	91	-	5th in our sector
Number of category 1 public health and environmental convictions – indicator changed from 'total convictions in the regulated business'	51	9	62	0	63	0	2
BIODIVERSITY AND THE ENVIRONMENT							
Priority species with Biodiversity Action Plans (%)	75	100	52	100	70	100	100
Priority habitats with Biodiversity Action Plans (%)	59	100	59.5	100	83	100	100
Rivers in Environment Agency classes A-D (%)	90	91	96.5	93	95	93	N/A
Designated bathing waters achieving mandatory standards (%) and guideline standards (%)	93.7 49.7	93.7 48.1	94.9 49.3	97.5 46.8	95.4 65.5	98.7 54.4	98.7 75.9
ENERGY AND MATERIALS							
Energy used per Ml water supplied (kWh)	553	698	538	648	600.5	684	682
Energy used per Ml wastewater treated (kWh)	445	702	454	387	598.2	420	450
Renewable energy as percentage of total energy used (%)	5	14	3.9	0.76	4.4	0.68	0.54
Carbon dioxide fixed site emissions per head of population (tonnes/yr)	0.042	0.064	0.0445	0.04	0.049	0.042	0.040
Carbon dioxide road transport emissions per head of population (tonnes/yr)	0.0017	0.002	0.00178	0.00141	0.00173	0.00132	0.00121
Sludge reused/recycled (%)	55	75	71	86	66	91**	69**
Excavated materials recycled (%)	-	-	-	-	34	N/A	N/A *

Explanation of Water UK Sustainability Indicators is provided in their report 'Towards Sustainability' 2001-02

N/A = Not Available at time of printing;

- = Not Applicable (or under development)

**This figure considers both drinking water and wastewater sludges and does not include biosolids currently in Southern Water storage

Further information and feedback

THE FULL SUSTAINABILITY REPORT CAN BE VIEWED ON THE SOUTHERN WATER WEBSITE AT WWW.SOUTHERNWATER.CO.UK/SUSTAINABILITY. THE REPORT IS BROKEN DOWN INTO THE FOLLOWING SECTIONS:

SUSTAINABILITY REPORT 2003:

SUMMARY
WASTES
WATER
ENERGY AND ATMOSPHERE
MATERIALS AND RESOURCES
LAND, CONSERVATION, ACCESS AND RECREATION
COMMUNITY, EDUCATION AND SKILLSHARING
EMPLOYEES
CUSTOMERS
ECONOMY AND KEY PERFORMANCE
TARGETS

We hope that you have found this Southern Water Sustainability Report summary informative and interesting. Our aim has been to provide readers with an understanding of our environmental and societal contribution to our community, both locally and regionally and a review of our performance during 2002-03.

We would very much welcome your feedback on this publication. To help us make improvements to next year's Sustainability Report, we invite you to complete and return the reply card below.

To view the full Sustainability Report, as well as all other Southern Water publications, visit our website at: www.southernwater.co.uk



sustainability report 2002-2003 feedback

Please take a few minutes to fill in this form, remove it from the report and return it to Sustainability Report, Southern Water, Communications Dept., Southern House, Yeoman Road, Worthing BN13 3NX.

1. How much of this report did you read?

- All Most Some

2. Which sections did you find most interesting?

3. How did you rate the overall content of this report?

- V. Good Good Fair Poor

4. How did you rate the readability of this report?

- Editorial: V. Good Good Fair Poor
 Design: V. Good Good Fair Poor

6. How do you believe Southern Water is managing environmental issues?

- Very well Quite well Poorly

7. If 'poorly' can you state why you believe this?

Please use this space for any additional comments you may have:

Please help us to keep our mailing list up to date by providing your details below:

Name

Address

Postcode

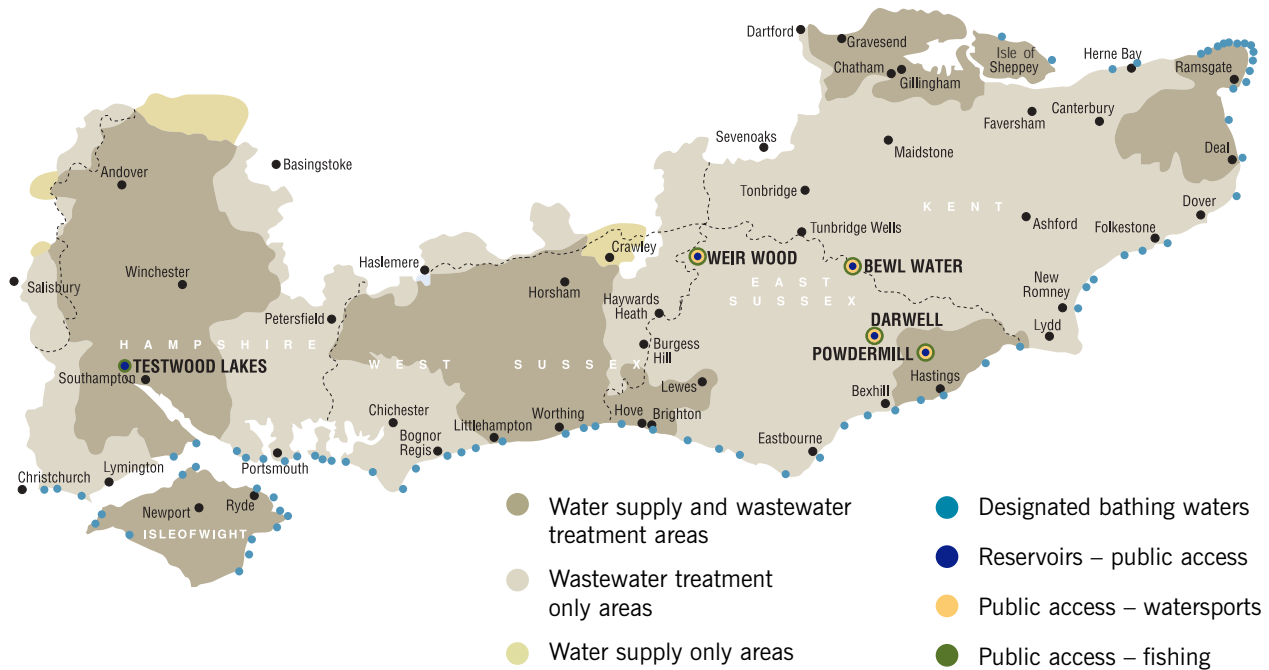
Telephone No.

Would you like to be kept informed of Southern Water's environmental initiatives via email?

- Yes

Email

Area of Operations and Glossary



AONB	Area of Outstanding Natural Beauty.
Asset	A capital cost item.
Audit	A process whereby an aspect of operations is critically evaluated from legal and good practice standpoints.
Benchmarking	A process allowing comparison of one data set (e.g. company performance) to another (e.g. industry performance).
Biodiversity	The variety of life forms around us. The term covers all lifeforms, from mammals, birds, reptiles and amphibians to plants, fungi and micro-organisms including bacteria and viruses.
Consent	A permit defining levels of legally allowed operational performance.
Controlled Waters	Watercourses under Environment Agency control.
DEFRA	Department for Environment, Food and Rural Affairs. Now holds responsibility for the guidelines for Conservation, Access and Recreation reporting.

DWI	Drinking Water Inspectorate. The government body which regulates the water industry, ensuring compliance with Drinking Water Standards.
EMS	Environmental Management System.
Intranet	Internal company-wide website available to staff only.
kWh	Kilowatts per hour, a unit of energy.
Management Control	Management decisions and actions undertaken to prevent losses occurring.
Management System	A systemised approach to management control (usually involving formal documentation and manuals containing operational instruction).
MI	Megalitre. One million litres, a volumetric measurement.
OFWAT	Office of Water Services, the government body which regulates the water industry.

Risk	The likelihood of an incident occurring (with associated potential to cause loss).
Settlement tank	These are used to settle-out solid matter from liquid wastewater at several stages in the treatment process.
Sludge recycling	Use of the treated bioproduct from the wastewater process as a soil conditioner and fertiliser.
Stakeholders	Those that may affect or be affected by particular decisions, activities or operations.
Target	A level of performance set for attainment.
Turbidity	A measure of the opaqueness of a liquid.
Wastewater Treatment	Involves separation of solid matter from wastewater followed by biological (and sometimes other kinds of) treatment of liquid.

Wastes



THE TREATMENT OF WASTEWATER, OR SEWAGE, IS A CORE FUNCTION OF OUR BUSINESS. THE FINAL TREATED EFFLUENT RESULTING FROM THIS PROCESS IS PUT BACK INTO THE ENVIRONMENT BY CONSENTED DISCHARGES TO RIVERS AND COASTAL WATERS. THE QUALITY OF THIS FINAL EFFLUENT IS THEREFORE A HIGH PRIORITY TO OUR BUSINESS, ESPECIALLY IN TERMS OF POTENTIAL ENVIRONMENTAL RISK.

SUSTAINABILITY REPORT 2003:

SUMMARY
WASTES
WATER
ENERGY AND ATMOSPHERE
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LAND, CONSERVATION, ACCESS AND RECREATION
COMMUNITY, EDUCATION AND SKILLSHARING
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CUSTOMERS
ECONOMY AND KEY PERFORMANCE
TARGETS

One by-product of this process is biosolids. Our strategy is to treat this by-product to a high standard and to beneficially recycle to agricultural land as a soil conditioner and fertiliser. Another by-product of the treatment process is biogas, this can be used as a fuel. We have been monitoring our biogas generation and use. In addition to these process by-products, we generate certain other wastes that we then either reuse, recycle or dispose of in the general operation of our business.

For more information visit:

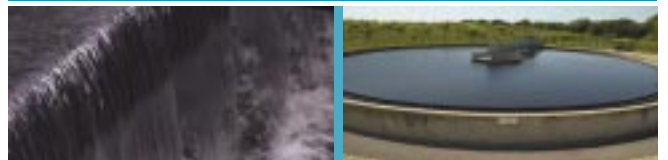
www.southernwater.co.uk/sustainability/energyatmosphere

Background

- We maintain 369 wastewater treatment works
- A population of some 4.5m is connected to our sewerage system
- 450kWh energy per Ml wastewater treated
- Our sewerage system extends to 21,000km or the equivalent distance of 505 marathon runs
- Our wastewater operating expenditure for 2002-03 was £104m
- We processed 108,400 tonnes dry solids of sewage sludge in 2002-03
- Approximately 1,400Ml incoming crude flow is received across our wastewater treatment sites daily. This is equivalent to a volume occupied by 1,842,105 composting bins full of liquid waste.

CASE STUDY:

Monitoring turbidity



Turbidity is a measure of how opaque or 'cloudy' a liquid is. Over the last year we have increased our turbidity early-warning monitoring programme of final effluent at wastewater treatment works. Early warning turbidity levels are calculated by our process scientists for each individual site. Actual turbidity is monitored 24 hours a day in 15-minute intervals across 170 sites. Any exceedence of our early-warning levels automatically generates an email to process employees who then investigate and make sure any necessary action is taken. In addition, the data is used to generate daily averages for each site. This is then assessed against discharge consents thresholds based on parameters defined by the Environment Agency. Results are reported across our business on a weekly and monthly basis as lists of sites ranked in order of performance of turbidity quality of our treated effluent. Overall we think this system has been a major contributor to the improvement in the sanitary quality of our treated effluents.

Links:

www.environment-agency.gov.uk | www.ofwat.gov.uk | www.defra.gov.uk/environment/water/quality/bathing
www.southernwater.co.uk/bathingwaterquality | www.water.org.uk

Wastewater Quality

Wastewater quality is measured by quantifying the chemical and biological content of the final liquid product of our wastewater treatment processes. We call this final product 'final effluent' or 'treated effluent'. Crude wastewater refers to wastewater in the condition we receive it at our wastewater treatment works.

Progress to date:

Our performance against targets over the last year has improved in all areas compared to 2001. We have achieved our performance targets, with the exception of our 95% performance target to Water Resources Act criteria. This is an overall improvement on 2001 performance. Our performance against sanitary quality requirements considerably improved this year and the number of our customers serviced with secondary treatment processes continues to increase.

We believe our early-warning turbidity monitoring programme has contributed significantly to these quality improvements. We failed to meet our performance target in 2002 for exceedences against metals concentrations. Thorough investigations into these events indicate a range of local trade discharges and/or 'run-off' sources as likely causes. Our Process Scientists will be following a range of measures including increased sampling of crude and final effluents and investigating trade discharges in the relevant catchment areas to help improve our performance.

We have maintained performance to the mandatory European Union (EU) Bathing Waters Directive Standard, in addition to a significant increase in performance against the guideline standard, once again outperforming all previous years.

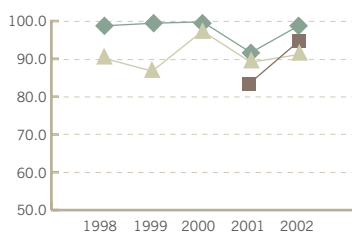
Our programme of ultra-violet (UV) treatment continues at four treatment works neighbouring designated bathing waters or shellfish areas, where our regulators have determined that disinfection is necessary. UV treatment is energy-intensive, and works by breaking down the structure of micro-organisms present in the final effluent. Data monitoring performance of our treatment against the Environment

Agency standard stating '99% of all the measurements taken during specified periods be above the dose level set for an individual site' has proven our 2002 compliance against these dose rates.

In addition to our ongoing final effluent quality monitoring and investigation programmes, we are driving forward our treated wastewater effluent flow-monitoring programme.

Environment Agency general chemical River Water Quality data showed increasing improvements over the five-year period to 2000. Subsequent 2001 data showed quality across the region was maintained.

Wastewater quality to 2002



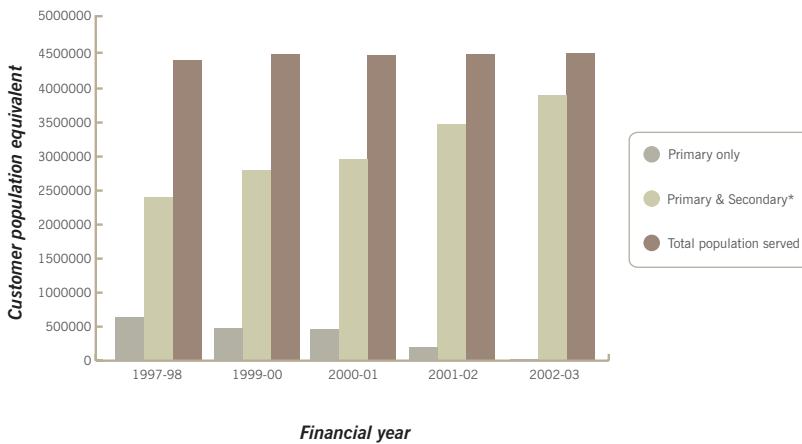
- ◆ % Population Equivalent served by Wastewater Treatment Works compliant against sanitary regulations*
- % Population Equivalent served by Urban Wastewater Treatment Directive Compliant Works
- ▲ % Population Equivalent served by Water Resources Act Compliant Works

* Figures calculated using greater 2002 Population Equivalents than may have been operable for year in question. Sanitary compliance calculated in accordance with OFWAT (to represent look-up table consent conditions).

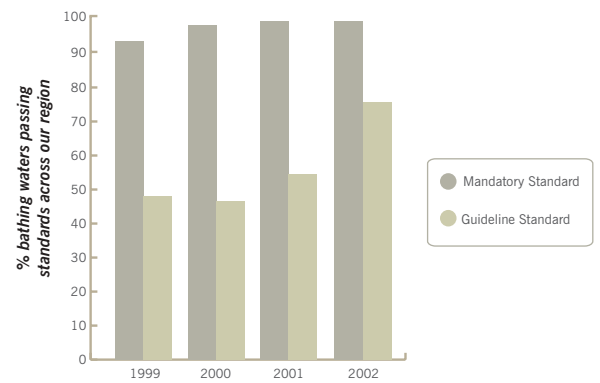
Chart trend of primary v secondary treatment over last 5 years.

Wastewater Quality

Treatment types servicing our customers



Bathing Waters chart mandatory and guideline



* Some populations also receive tertiary treatment processes

CALENDAR YEAR PERFORMANCE TARGETS

2002 Performance Target	Progress Against Target	2003 Target
WASTEWATER QUALITY		
95% population equivalent served by Water Resources Act compliant works	91%	Maintain target
95% population equivalent served by Urban Waste Water Treatment Directive compliant works	98%	Maintain target
95% Bathing waters compliant with mandatory standard of European Union Bathing Waters Directive	98.7% DEFRA report 99% for the Southern region and 98% for the UK	Maintain target

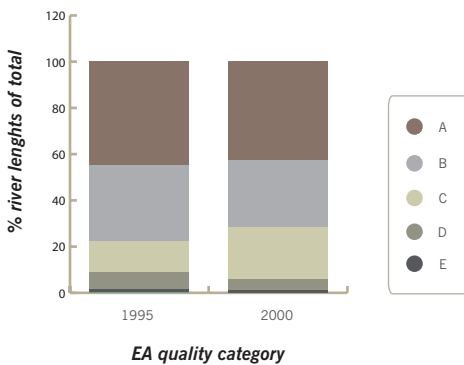
FINANCIAL YEAR PERFORMANCE TARGETS

2002-03 Performance Target	Progress Against Target	2003-04 Target
New target		Install turbidity monitors on 57 wastewater treatment works by April 2005
New target		Install flow monitoring installation on 248 wastewater treatment works by April 2005

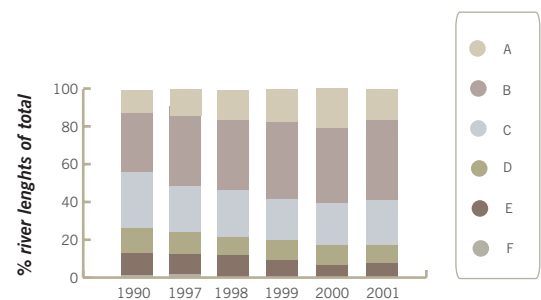


Waste Management

River lengths by EA Biological Category 1995-2000



River lengths by EA Chemical Quality Category



Waste Management

The solid wastes generated through our business operations are largely recycled or landfilled. Unfortunately, not all our waste can be recycled, and certain types of recycling cost more than others, so targeting future changes can be difficult.

Progress to date:

Our general non-sludge waste has increased in tonnage to landfill by 15% compared to our last financial year, but is 5% less than our 2000-01 figure. Recycled waste has increased by 50% from last year and by 70% compared to 2000-2001 financial year. Recycling our waste proved £35/tonne less expensive than landfilling over 2002-2003. Landfilling our 2002-2003 recycled waste would have cost £32,548. We also raised £520 in raised for charity through our recycling efforts.

Biosolids is the treated form of sewage sludge, the solid waste product resulting from the treatment of society's sewage. Biosolids have been in use as fertiliser products in UK and European agriculture for over forty years.

Recycling the plant-available nutrients they contain provides a sustainable disposal route for this waste resource, and a more sustainable source of agricultural fertiliser through the recycling of resources like phosphate-an essential soil conditioning nutrient-than use of an equivalent manufactured product made from mined resources.

For more information:

Management summary, page 19, Sustaining our future, Biosolids case study

Of the 108,400tds of sludge processed during the year 93% of this was either minimised through digestion or beneficially recycled to agricultural land whilst the remainder, 7%, was landfilled.

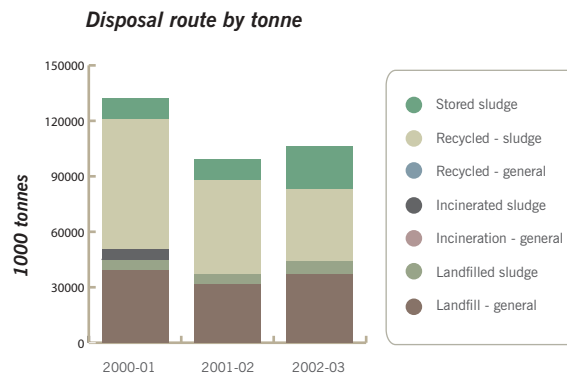
We have invested in our sludge digestion treatment processes to ensure that the mass of biosolids we generate is roughly 40% less than that received at our works. (This is an improvement on our pre-2001 30% reduction in volume).

Not only does this form of treatment reduce the overall volume of waste we generate from our operations, in keeping with good waste management practice of 'reduce, re-use, recover and recycle' but it also naturally reduces the amount and cost of haulage required to transport this waste product. Additionally, it gives us a more concentrated biosolids product. As an industry,

Waste Management

wastewater treatment companies recycling their sludge have been working to industry guidance 'Hazard Analysis Critical Control Point' (HACCP) since the start of 2002. This involves storing biosolids for a 'stabilisation period' that ensures reduction of any possible harmful pathogen content. We regularly monitor and report HACCP quality information across our business.

Prior to this, common practice included use of raw sludge by the agricultural industry, and our 2000-2001 figures illustrated here reflect this.



FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
WASTE MANAGEMENT		
Develop company-wide waste exchange	This target has not been completed and emphasis has been placed on waste minimisation	Develop a 'controlled waste' database monitoring system
Identify highest waste producing sites and investigate and implement potential efficiency savings	Highest waste producing sites have been identified for grits and screenings. The potential for efficiency savings is being taken forward	Pilot 'grits and screenings' composting research and development project
Increase internal publicity activities to raise awareness of waste issues (March 2003)	Completed	No formal target. We continue to take opportunities to raise awareness of waste issues
Produce gap analysis for waste recycling/minimisation (June 2003)	Gap analysis complete at five main office sites	Establish staged reporting for waste management returns
Zero prosecutions for waste management offences	One prosecution for failing to prevent the escape of controlled waste	Maintain target



Water



THE GEOLOGY OF OUR REGION MEANS MUCH OF OUR RAW WATER COMES FROM UNDERGROUND SOURCES. WATER PUMPED FROM THESE SOURCES IS OF A NATURALLY HIGH QUALITY.

SUSTAINABILITY REPORT 2003:

SUMMARY
WASTES
WATER
ENERGY AND ATMOSPHERE
MATERIALS AND RESOURCES
LAND, CONSERVATION, ACCESS AND RECREATION
COMMUNITY, EDUCATION AND SKILLSHARING
EMPLOYEES
CUSTOMERS
ECONOMY AND KEY PERFORMANCE
TARGETS

CASE STUDY:

Broughton abstraction licence



We handed back our Broughton abstraction licence to the Environment Agency in March this year having completed a project laying a new pipeline to allow supply to be taken from a more sustainable source at Timsbury. Our new pipeline runs from Michelmersh to Broughton. We progressed this project as we considered that previous licensed abstraction at Broughton was an element contributing to the low flows experienced in the Wallop Brook at certain times of year. On the understanding that the licence gained by the Environment Agency will be used for environmental purposes and not reissued, a higher water table should be maintained in the area thus avoiding low flows.

Background

- We maintain 102 water treatment works
- Our distribution mains extend to 13,400km or the total distance run by completing 320 marathons
- We supply a resident population of some 2.2m
- 682kWh energy used for each MI water supplied
- Our operational expenditure for 2002-03 water supply was £59m
- 14.96MI/day water saved through water efficiency initiatives we have run since 1997 or the equivalent of 27 swimming pools of water every day
- We put an average of 595MI water into distribution daily throughout 2002-2003 or the equivalent of 1,058 swimming pools of water every day
- Water consumption average reductions for 2002/03 efficiency initiatives were 2.59l/head/day for domestic customers and 0.44l/day for commercial customers
- Following our 2002-03 service review, our auditors commented on the low overall unit cost of our water efficiency programme compared with other companies
- Southern Water 2002 Drinking Water Inspectorate Overall Quality Index 99.93
- Southern Water 2002 Drinking Water Inspectorate Operational Performance Index 99.92

Water Quality

Links:

www.southernwater.co.uk/library | www.dwi.gov.uk | www.water.org.uk | www.southernwater.co.uk/sustainability/summary - Sharing our future, page 10

Water supplied from rivers and reservoirs contains much higher levels of impurities and requires more treatment to make it of drinkable quality before entering our supply network. Preventing leakage of clean water from our supply network and partnering with customers in water efficiency campaigns help to conserve the resources we have.

Water Quality

The Drinking Water Inspectorate regulates drinking water quality. In December 2000, they announced new water quality regulations to come into force in December 2003. 'Change-over' regulations are currently in force to allow water companies time to put any needed programmes of work in place to meet the new standards.

The quality management system controlling our water supply operations is discussed in the 'Managing our Future' section of the management summary report, customer and regulator consultation is considered in 'Sharing our Future' and our UK Industry benchmarking in 'Sustaining our Future'.

For more information: Management summary, page 7, Sharing our future, page 10, Managing our future and page 19, Sustaining our future.

In addition to this, any customer calls registered by our Customer Service Centre relating to water quality queries are analysed and reported across our business monthly.




In 2002 we have maintained our target performance compared to 2001 and increased our 2002 Water UK Sustainability Indicator performance to 99.89%.

Our work to control the solubility of lead in water supplies (resulting from lead service pipes) continues and by the end of December 2003, 40 sites will be installed with automatic treatment monitored and recorded 24 hours a day. Water from our water supply works is 'lead free' but lead can be absorbed when water comes into contact with lead pipes. Lead was historically used in service pipes (between the main and a customer's property) as well as in internal customer plumbing.

To ensure levels of lead are minimised at the tap, customers will need to change any remaining lead pipework within their plumbing systems. Advice on this is available from our Customer Service Centre. We replace free of charge any lead pipework between the main and the property boundary.

Our operation and maintenance strategy to maintain and improve water quality in distribution informs our company business plan on water quality initiatives requiring funding over the next investment period. Agreed programmes will be actioned through our water quality management system and by targeted investment and maintenance. Area assessments will ensure appropriate investment, maintenance and operational procedures are directed to areas with risk of discolouration of water supplies.

These assessments will consider factors of treated water quality, mains condition, operational factors and customer complaint history to arrive at an overall risk assessment for the area.

CALENDAR YEAR PERFORMANCE TARGETS		
2002 Performance Target	Progress Against Target	2003 Target
WATER QUALITY		
Zero treatment works failing coliform standard with enforcement action	Completed/target reached 	Maintain target
Zero service reservoirs failing coliform standard with enforcement action	Completed/target reached 	Maintain target
99.7% of customer taps samples with no coliforms	99.8% 	Maintain target
Physico-chemical compliance customer taps 99.8% compliant	99.8% 	Maintain target



Water Resources

Links:

www.environment-agency.gov.uk | www.southernwater.co.uk/sustainability/summary - Sharing our future, page 10

The Environment Agency regulates our programme of water abstraction via a series of licences to abstract from particular locations.

Water Resources

Conservation of available water resources is achieved through leakage detection and reduction across the distribution system, together with water efficiency and demand management campaigns (see Water Efficiency, page 4).

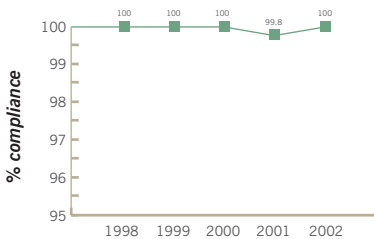
We are continuing to progress work on the River Itchen, North Kent, Swanbourne Lake and Little Stour major schemes forming part of our strategy to maintain our environmental management of water resources.

For more information:

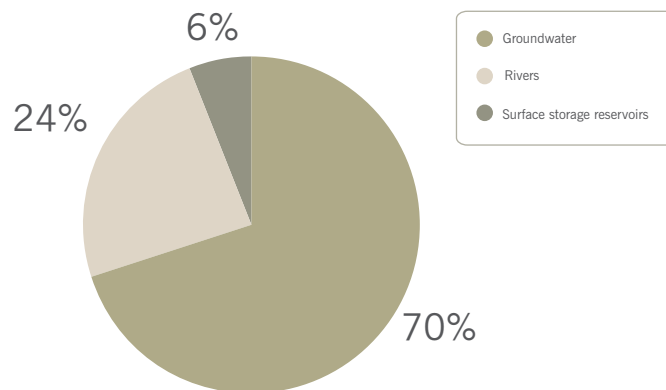
www.southernwater.co.uk/sustainability/conservation

Our involvement in the Environment Agency consultation programme for establishing Catchment Abstraction Management plans continues. The Agency have published final reports for certain catchments, others are under progress. Recommendations for further study are included in these reports and are being fed into our business plan for the next investment phase in accordance with Environment Agency guidance.

Abstraction licence compliance



Water abstraction - Sources



FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
WATER RESOURCES		
Audit of meters at abstraction points	Completed	Trial water production management tool to optimise source operation in a sustainable manner
Revise our water resources policies in line with proposed legislation (Water Bill) and publish within our company Water Supply Manual	Currently under development	No formal target - completion awaits finalisation of Water Bill

Incomplete
In progress
Complete

Water Efficiency

Links:

www.ofwat.gov.uk | www.southernwater.co.uk/whysavewater | www.southernwater.co.uk/sustainability/community
www.southernwater.co.uk/sustainability/customers | www.southernwater.co.uk/sustainability/summary - Sharing our future, page 10
www.southernwater.co.uk/sustainability/summary - Sustaining our future, page 19

Water Efficiency

The primary aim of our five-year water efficiency plan is to conserve water resources primarily through partnering with our domestic customers on water-saving initiatives, but also with business and organisations such as schools and hospitals. Our plan is updated annually and agreed with the Director General of Water Services.

We recognise we must set a good example if we wish our customers to follow suit and to this end continue to achieve our leakage targets and have completed a water reduction programme at our main offices. Our initiatives since 2000 have adopted a partnership approach with other organisation and our customers.

We have set-up a working group to review our own internal water use and policies relating to both office and operational water-use are now in force.

Over the last year some 20,000 of our water efficiency leaflets and booklets were distributed from a variety of outlets including libraries, promotional events, direct mailing and customer requests.

Our education programme continued see community, education and skillsharing and the average number of visits to the 'Why Save Water' section of our website has reached 279 per month.

Our advice pack to business customers is available in printed form and through our website and we continue to offer free water audits.

For more information:
www.southernwater.co.uk/sustainability/customers

In 2002-03 our cistern displacement devices were again available to customers on request and via water efficiency packs. Results from our customer survey indicate

67% of metered and 45% unmetered households in our supply region have these devices installed.

The main messages of our water efficiency promotions over the year were focussed on local demand drivers: in Sussex North the main message was water efficient gardening due to the high peak summer demands for water; in Hastings the message was to take showers instead of baths as average demands in this area are high.

We have maintained our free domestic customer leak detection and supply pipe repair services, and 2002-03 levels of activity continued to decrease from the 1998 level (one year after introducing these services).

Our mail order garden water-butt service with free three month trial proved successful with 9,187 selling over 2002-03, almost three times the total for the previous year.

Effects of our water efficiency campaigns determined through customer survey	Response
Cistern displacement devices	67% metered and 45% unmetered customer respondees participating
Garden water butts	42% metered and 33% unmetered customer respondees own butts
Turn off the tap while brushing your teeth	79% customers respondees participating
Use bucketed water to wash your car	49% customer respondees participating

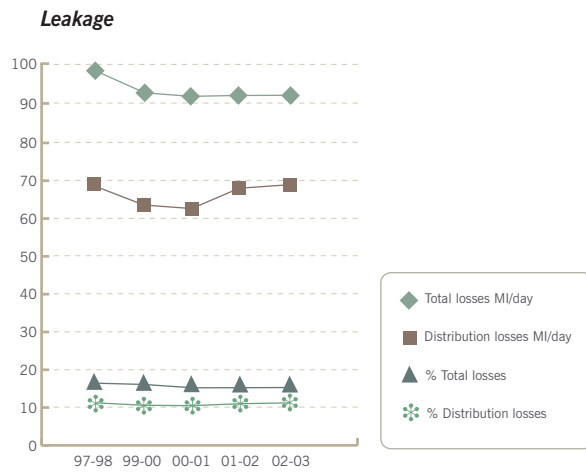
Water Efficiency

A comprehensive range of gardening advice is offered through our website including a database of plants suitable for different conditions in the garden. Our water efficient garden at Bewl Water Visitors Centre continues our promotion, receiving over 200,000 visitors a year. We have also constructed a small water efficient garden in the grounds of Chichester College, Brinsbury Campus.

Research continues into the benefits of a variety of water efficiency devices and initiatives as follows:

- Effect of water butts on consumption and peak demands
- Micro-components of domestic demand
- Showering versus bathing and the effects on household demand

For more information: Management summary, page 19, Sustaining our future.



The amount of water we calculate to have been saved through water efficiency initiatives over 2002 - 2003 amounts to 5.74MI/day or 2,095MI over the year.

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
WATER EFFICIENCY		
Establish a data set of our sites where water consumption is currently recorded	Completed	Input internal water use data for wastewater sites serving a population equivalent above 25,000 into our Optima6 management system
Introduce and maintain water efficiency measures in our offices	Completed	No formal target but progress continues
Develop water efficiency design standard to ensure that water efficiency is considered as part of project planning	Completed and will be regularly reviewed	



Energy and Atmosphere



ENERGY AND TRANSPORT ARE INTRINSICALLY RELATED IN TERMS OF RESOURCE CONSUMPTION AND EMISSIONS TO ATMOSPHERE. WE CONSIDER THEM IN THIS SECTION OF OUR REPORT ALONGSIDE EMISSIONS TO ATMOSPHERE. ELECTRICITY GENERATION AND THE BURNING OF FOSSIL FUELS FOR ENERGY ALSO RELEASE EMISSIONS TO AIR.

SUSTAINABILITY REPORT 2003:

SUMMARY
WASTES
WATER
ENERGY AND ATMOSPHERE
MATERIALS AND RESOURCES
LAND, CONSERVATION, ACCESS AND RECREATION
COMMUNITY, EDUCATION AND SKILLSHARING
EMPLOYEES
CUSTOMERS
ECONOMY AND KEY PERFORMANCE
TARGETS

Background

- 450kWh energy used per MI wastewater treated
- 682kWh energy used per MI water supplied
- 1,352MWh electricity generated from renewable sources exported to the grid
- 57% biogas generated is recycled as a source of fuel for boilers in producing heat used in digestion and dryers or as a fuel in combined heat and power units
- Our vehicle fleet currently stands at:
 - 349 cars
 - 595 commercial vehicles
 - 30 heavy goods vehicles
 - 41 plant vehicles (tractors etc)

Our wastewater treatment processes generate a gas by-product, we refer to this as 'biogas'. Resources are considered in our report under the heading 'Materials and Resources'.

Energy

Progress to date:

Over the past year, our existing biogas-fuelled combined heat and power systems were accredited by Ofgem (The Office of Gas and Electricity Markets who regulate UK gas and electricity industry) under the Renewables Obligations. One of these systems currently does not fully use the biogas available at the site and so we are planning to trial a 'microturbine' system that will generate further renewable electricity. Plans for five additional combined heat and power systems are also being progressed and we are running a project to look at the feasibility of installing other electricity generating equipment using renewable energy sources (small scale wind turbines and photovoltaic technology).

For more information:

Management summary, page 19, Sustaining our future.

CASE STUDY:

Operational efficiency of pumps



We are progressing a project to improve the operational efficiency of a number of our key water supply pumping systems. Work involves testing pumps to determine their current efficiency and refurbishing them where necessary. Once re-installed, the pumps are re-tested to check performance. Pump scheduling arrangements are also reviewed and modified in order to use the most efficient pumping combinations possible across our systems.

Energy

Links:

www.ukwir.org | www.waterorg.uk | www.defra.gov.uk | www.dft.gov.uk | www.ofgem.gov.uk

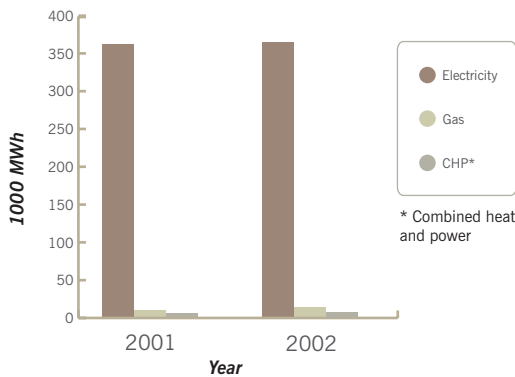
Our computer-based management of energy information via our Optima6 system continues. This system is used to monitor energy consumption at our major water supply and wastewater treatment works. Resulting information assists us to identify

works requiring more detailed investigations into operational energy efficiency.

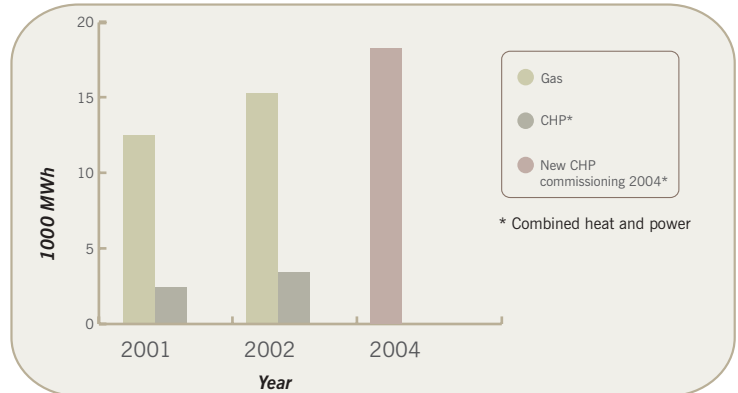
The UK water supply and wastewater treatment industries are continually investing in infrastructure to both increase the capacity

and enhance the quality of the services we provide to our customers. This naturally leads to increased energy requirements and as a business we are constantly seeking efficiencies to offset these increases in overall consumption.

Energy consumption and generation



Gas and combined heat and power



FINANCIAL YEAR PERFORMANCE TARGETS

2002-03 Performance Target	Progress Against Target	2003-04 Target
ENERGY		
Develop a system for calculating unit energy production efficiencies for major processes at the highest energy consuming sites. Unit energy production efficiencies to be used in setting future targets for energy usage at these sites. Initial focus on 20 highest energy-consuming sites.	Flow data for 16 water supply and 12 wastewater treatment sites has been added to our energy management information system and this is being used to identify works and processes for energy efficiency improvements	Implement use of Energy Auditing and Modelling database
Improve company overall energy efficiency for water production compare with 2000-2001 performance	Water supply pumping system efficiency study under way	Improve energy efficiency for six water supply sites compared with 2002/2003 performance
Improve energy efficiency in wastewater treatment at ten large sites compared with 2001-2002 performance	Seven sites showed efficiency improvements	Increase the number of sites where unit energy production efficiencies are calculated and used (from current level of 28 sites to 50) by 2004
Promote energy efficiency awareness amongst employees	Completed	No formal target but we continue to take opportunities to raise awareness
Investigate and where possible utilise appropriate forms of 'green energy'	Biogas fuelled microturbine trial is planned at one of our sites – this would generate electricity from the gas produced as a bi-product of our wastewater treatment process. Work is under way to install intelligent motor control units that will regulate electricity provided to a pump in accordance with the load it has to pump	Undertake a feasibility study into the opportunities for energy generation from wind at our sites



Emissions to Atmosphere

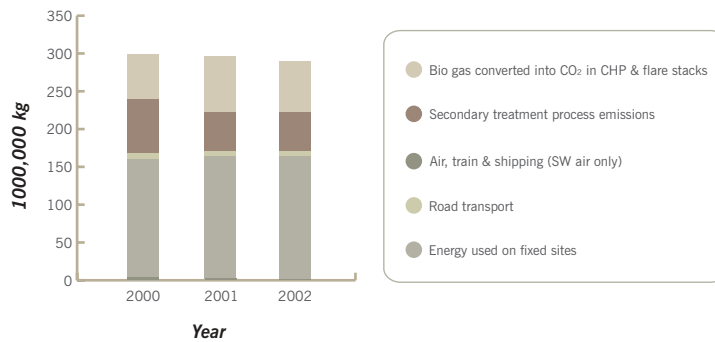
Emissions to Atmosphere

Progress to date:

Government proposals for regulations for the control of odour and other nuisance from sewage treatment works were under consultation in March 2003 (DEFRA). In the absence of statutory nuisance regulation, we have pro-actively monitored odour issues and record and analyse those reported by our customers. We closely monitor our performance in this area by tracking issues against agreed improvement actions.

Progress is monitored at meetings of our Air Quality Forum. This year we reviewed our odour issues over the last financial year in a report circulated to the Forum for discussion. This reviewed both influencing factors and long-term trends.

Total CO₂ emissions



We have been monitoring our biogas production and use within the business over the past year. We estimate that we utilised 57% of our biogas within boilers, dryers and combined heat and power through our aim to be more energy efficient. Biogas generated but not utilised is burnt off in flare stacks.

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
EMISSIONS TO ATMOSPHERE		
Develop operational level report of odour trends linked to incident reports enhancing pro-active mitigation of incidents	Reports generated are stored electronically in a shared location for access by key wastewater process employees	Implement formal training for operational staff on how to deal with potential odour issues



Transport

Transport

Progress to date:

We have recently established a new contract for the maintenance of our fleet vehicles. Service and inspection frequencies and maintenance requirements are detailed within the contract.

We ran a series of awareness training sessions for our heavy goods vehicles drivers in February this year. The training focussed on aspects of legislation and driving practice relating to road safety and environmental protection.

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
TRANSPORT		
Investigate video conferencing opportunities in relation to transport policy and a possible reduction in work-related journeys	Video conferencing facilities are in use at our headquarters. The New & Emerging Technology Group are looking at the various opportunities for bringing in to the rest of the business 	Develop a Transport Training Plan (including driver legislative awareness)
Investigate alternative methods of transport i.e. car sharing, encouraging cycling, provision of facts and figures	Incomplete 	Review Transport Manual and development of Driver Handbook (including good driving practices and fuel efficiency)

Materials and Resources



WE USE A RANGE OF SUPPLIERS OF PRODUCTS AND SERVICES ACROSS OUR OPERATIONS. WE ACTIVELY MONITOR CONTRACTS AND THE PERFORMANCE OF OUR SUPPLIERS TO PROVIDE INFORMATION ON RESOURCE USE AND APPLY EFFICIENCY MEASURES WHEREVER POSSIBLE TO OPTIMISE THIS USAGE.

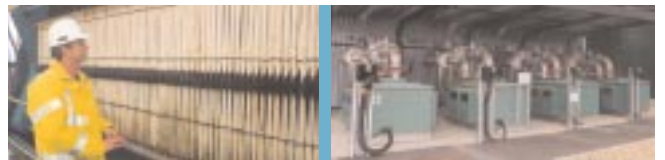
SUSTAINABILITY REPORT 2003:

SUMMARY
WASTES
WATER
ENERGY AND ATMOSPHERE
MATERIALS AND RESOURCES
LAND, CONSERVATION, ACCESS AND RECREATION
COMMUNITY, EDUCATION AND SKILLSHARING
EMPLOYEES
CUSTOMERS
ECONOMY AND KEY PERFORMANCE
TARGETS

Delivery of improvements to our existing works through our capital investment programme has involved partnering with our construction contractors. This has been achieved through working in integrated project teams. These 'integrated teams' delivered 41 of their 42 identified outputs targeted for completion by the end of March 2003 and represented by some £60m investment.

CASE STUDY:

Polymers in sludge thickening



Polymers are added to our raw sewage in order to separate the solids content for treatment at specialised sludge treatment centres. Where smaller sites have no dedicated sludge recycling centre, these solids must be transported by tanker. The process is called sludge thickening and it aims to reduce the overall volume of sludge requiring treatment. Reducing the sludge volume reduces the number of journeys we make and therefore our transport impacts to the environment are reduced. This also reduces the energy required to move them round our sludge treatment centres.

The raw sewage sludge we treated during the calendar year 2002 increased in mass by 22% from the previous year. Through monitoring our wastewater treatment processes and partnering with our polymer suppliers, consumption of sludge thickening polymers rose by only 18% over the same period (giving an overall reduction in expected consumption of 34 tonnes).

Links:

www.southernwater.co.uk/sustainability/wastewater | www.cia.org.uk | www.envirowise.gov.uk | www.bestwayfertiliser.co.uk
www.environment-agency.gov.uk







Progress to date:

We use the Environment Agency's approved criteria in the selection of our suppliers. Our programme of auditing our key suppliers continues. Where possible we influence our suppliers to provide regular updates on the service supplied to us e.g. fuel volumes data which assists in our estimation of carbon dioxide emissions from our core operations. We follow detailed procedures in carrying out these audits to ensure consistency.

The audit results are provided to the suppliers to assist them in improving their environmental performance.

Our water supply scientists have been reviewing our process performance and monitoring resource use on a monthly basis over the past year. Automatic particle monitoring equipment and control of 'particle clotting' has now been installed for our major surface water supply works.

Automatic treatment to remove phosphorus, highlighted in our report last year, has been upgraded at our Fullerton site to include monitoring of crude wastewater. This allows an automated adjustment of iron-salt dose for the treatment needed on the incoming sewage 24 hours a day, helping to reduce the amount of iron salts used over a period of time. Similar schemes are also under way on other treatment works elsewhere in our region.

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
MATERIALS AND RESOURCES		
Carry out six procurement audits in accordance with procurement audit procedures	Completed 	Undertake procurement audits of preferred contractors for key contracts
Establish a methodology for recording 'percentage of materials purchased from recycled sources'	Incomplete due to complexity of supply chain. Completion of this target was not practical. Target revised 	Develop an environmental questionnaire to be included in tender documentation and establish a baseline for environmental performance of suppliers
Environment and Product Quality Team to meet Procurement at least twice a year to identify potential environmental benefits in new framework agreements	Meetings held to define audit programme. These will continue on a quarterly basis. Existing framework agreements monitored 	
Detail the major chemicals we use. Identify the sites where the major chemicals are stored and used	Completed 	Trial study to review consumption of dosed chemicals at wastewater treatment works. Undertake audits to optimise chemical use at major surface water supply works
Implement a system for reporting chemical use and supply	Completed for water supply works and work is under way for wastewater 	Enhance chemical use data at wastewater treatment works
Establish measurable indicators to compare chemical and oil use between sites	Completed for water supply works and complete for certain chemicals used in wastewater treatment 	Monitor oil use between water supply sites



Land, Conservation, Access and Recreation



OUR COMMITMENT TO THE MANAGEMENT AND CONSERVATION OF LAND IS INHERENT IN A BROAD RANGE OF ACTIVITIES, FROM SITE CONSTRUCTION AND DEVELOPMENT TO ENSURING SUITABLE LAND HAS RECREATIONAL AND AMENITY VALUE FOR OUR COMMUNITIES. HERE WE OUTLINE OUR RESPONSIBILITIES TO THE MANAGEMENT AND CONSERVATION OF OUR NATURAL AND BUILT ENVIRONMENTS.

SUSTAINABILITY REPORT 2003:

SUMMARY
WASTES
WATER
ENERGY AND ATMOSPHERE
MATERIALS AND RESOURCES
LAND, CONSERVATION, ACCESS AND RECREATION
COMMUNITY, EDUCATION AND SKILLSHARING
EMPLOYEES
CUSTOMERS
ECONOMY AND KEY PERFORMANCE
TARGETS

We meet our requirements for Conservation, Access and Recreation reporting within this section of our Sustainability Report.

For more information:

www.defra.gov.uk/environment/water/industry/copcar

CASE STUDY:

Eastbourne Wastewater Treatment Works



Last year we successfully completed a £22 million scheme to further improve the level of treatment at Eastbourne Wastewater Treatment Works. The project will enable the works to achieve stringent European wastewater treatment standards, whilst also further improving local bathing waters. The improvement scheme was designed to minimise the impacts of construction works and to prevent the need for any permanent changes to existing above-ground structures within the high amenity seafront area. To minimise the disruption to local people and to avoid the need for further excavation work or development around this site, all construction work took place within the existing underground structure that housed the treatment works. All construction materials and equipment had to be dismantled and then lowered through a 3m x 3m hole in the roof of the underground structure. This was to ensure that local community noise, visual and access impacts were minimised. We kept local people and interested parties informed of progress of the scheme through regular leaflets and newsletters, and a helpline which was available throughout the duration of the scheme for more detailed information and to encourage feedback from the community.

Contamination Risk, Conservation of our natural and built heritage

Links:

www.ukwir.org | www.water.org.uk | www.defra.gov.uk | www.english-nature.org.uk

Contamination Risk

Progress to date:

As part of our overall programme of risk control, audit and review we have maintained audits in the areas of contamination risk throughout 2002. We have also undertaken a study looking at oil contamination risks and making recommendations for actions to be taken over the next two years.

We provide a service advising third parties on water pipe inlay into third party brownfield (sites with some nature of contamination present) development sites. This is to ensure the integrity of our pipework over time, protecting the future quality of water supply.

Over the past year we have completed a study monitoring the extent willow trees absorb heavy metal contamination. We are also active participants in UK Water Industry Research into pipe selection and specification for use in contaminated land.

Conservation of our natural and built heritage

Progress to date:

We have actively continued to support conservation of our natural and built heritage throughout construction, development, and maintenance of our assets across the region and have sought nature conservation enhancement opportunities wherever possible.

Our environmental management system includes procedures for obtaining screening opinions as part of planning applications. We routinely carry out this procedure for proposed projects. Preliminary environmental appraisals are also conducted across an extensive range of schemes in partnership with our construction contractors and over 2002 we have implemented a range of construction site-specific environment management plans.

A comprehensive programme of construction site audits is carried out to check that site operations keep to the restrictions set out in these plans.

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
CONTAMINATION RISK		
Land contamination: integrating the gathered generic risk data into the company's Environmental Geographic Information System (EGIS)	Complete 	Establish procedures for using and updating risk data to EGIS



Biodiversity

Links:

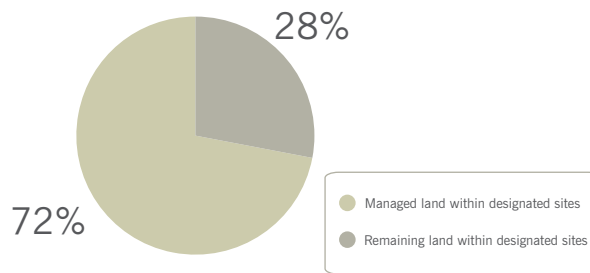
www.wildlifetrusts.org | www.btcv.org | www.froglife.fsnet.co.uk | www.bto.org | www.environment-agency.gov.uk

Progress to date:

Our landholdings include a range of the South East's most sensitive habitats. We recognise that how we manage our landholdings fundamentally affects biodiversity. Our biodiversity strategy has been formulated in consultation with the county-based local biodiversity action plans, and our corporate biodiversity action plan will be published later this year. We have used information collected in ecological surveys of our sites to ensure a prioritised approach to conservation and management of our most sensitive sites through conservation and management plans which we have started to and will continue to implement.

We have continued our participation in the BTO-Hansen Business Bird Challenge at Testwood Lakes and Weir Wood Reservoir to evaluate the quality of these two sites for their bird populations.

Land under positive conservation management



This chart represents land deemed as either wholly or partially within areas designated for their nature conservation value. Positive conservation management is also in operation on other areas of our land outside of designated sites, figures for this are not current quantifiable.

This year, common lizards (*Lacerta vivipara*) and slow worms (*Anguis fragilis*) that had lost their habitat due to a housing development have been relocated to Powdermill Reservoir in East Sussex. Part of an area of recently restored

heathland at the site will allow these translocated populations to thrive. Following advice from the Barn Owl Centre we are, and will continue to install barn owl boxes at suitable locations on operational sites across our region.

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
BIODIVERSITY		
Complete and implement remaining plans (40 sites) and increase land under positive conservation management by 10% (with baseline at 69%)	Conservation Management Plans (CMP's) have been completed for our 40 most sensitive sites. These plans integrate site specific operational requirements with management strategies to improve and enhance the value of the site for biodiversity potential.	✓ We have and will continue to implement the objectives of these Conservation Management Plans
Publish corporate Biodiversity Action Plan	We have drafted the Corporate Biodiversity Action Plan. Publication on the company website is expected later this year	✓
Trial biodiversity index for measuring Sites of Special Scientific Interest (SSSI) management success	Incomplete	✗ Review status of statutory designated landholdings and evaluate future asset maintenance implications
Collate and present data on enhancement schemes as part of construction projects	Presentation of data on enhancement schemes is presented here under 'Biodiversity' and 'Environmental Enhancement' sections	✓ This public reporting will continue
Complete audit of all phase 1 data and quantify our habitat resource	Analysis of Environmental Geographic Information System site data has allowed the identification of key habitats and species on Southern Water sites. This has led to a prioritised approach to implementing conservation management initiatives which has been summarised within our Corporate Biodiversity Action Plan	✓ Erect barn owl boxes on suitable sites and monitor activity



Environmental Enhancement

Links:

www.ofwat.gov.uk | www.southernwater.co.uk/whysavewater | www.southernwater.co.uk/sustainability/community
www.southernwater.co.uk/sustainability/customers | www.southernwater.co.uk/sustainability/summary - Sharing our future, page 10
www.southernwater.co.uk/sustainability/summary - Sustaining our future, page 19

Environmental Enhancement

Last year we successfully completed the first phase of environmental enhancement work at Swanbourne Lake near Arundel, West Sussex. The lake had periodically dried out in summer months due to a build-up of silt, more frequent drought periods and water abstraction during drought conditions nearby at Madehurst. The increase in water depth achieved by dredging will restore and improve the lake's recreational and aesthetic value, whilst preventing possible impacts upon abstraction for public water supply and ecological habitats within and on the lake margins. The dredged materials, which are rich in nutrients, were used as fertiliser on nearby agricultural land on the Arundel Estate, (a more sustainable alternative to transportation through the centre of Arundel for disposal to landfill).

Prior to renewing the pipeline between Colstaple and Henfield in West Sussex, we commissioned ecological surveys to identify habitat suitable for Great Crested Newts. After identification of the protected species and other unpopulated but suitable habitats, mitigation measures to protect Great Crested Newts were included in the pipeline renewal scheme.

Following completion of the project, we undertook an environmental enhancement project to improve the potential habitat for Great Crested Newts in nearby ponds, which was designed using best practice guidance. This includes the restoration of ponds to a more favourable conservation status for general nature conservation interests as well as those of amphibians.

Our re-development of our Budds Farm wastewater treatment works has rendered the final settlement lagoons on-site no longer part of the treatment process. The lagoons have a significant nature conservation interest as they shelter large numbers of some species of wintering waterfowl and are especially important for teal. We have therefore retained the lagoons and enhanced them by the addition of a new island and berms. We have also produced and are continuing to implement a management plan that focuses upon enhancement of the nature conservation value of the lagoon area for wildlife and upon increased public access to allow the community to enjoy and learn more about the wildlife using the area.

Archaeology and Built Heritage, Access and Recreation

Links:

www.the-works-trust.demon.co.uk | www.bewl.co.uk | www.forestry.gov.uk/ukwas
www.southernwater.co.uk/sustainability/summary – Area of Operations map, page 23

Archaeology and Built Heritage

Progress to date:

We recognise that archaeology and our built environment are a fragile and non-renewable part of our cultural heritage. We have commissioned The Works Trust to compile a historic buildings database for Southern Water sites. The database highlights 68 sites with historic significance located on Southern Water sites, including six Grade II listed buildings and two Scheduled Ancient Monuments. The incorporation of this information into our Environmental Geographic Information System (EGIS) will assist in our strategic planning and in following the most appropriate archaeological strategy when dealing with construction and development schemes.

Access and Recreation

Progress to date:

We continue to manage suitable sites to offer a diverse range of recreational opportunities, with an aim to promote the enjoyment and increased understanding of our environment within our communities.

Bewl Water Reservoir

Lying within the High Weald Area of Outstanding Natural Beauty, Bewl Water is Southern Water's largest reservoir. In addition to its conservation value, Bewl Water continues to be one of the largest tourist attractions in both Kent and East Sussex, with over 33,000 recorded visits, for a variety of activities, in addition to the large number of informal visitors to Bewl Water reservoir throughout 2002. Our water efficient garden at Bewl Water Visitors Centre receives over 200,000 visitors a year.

Bewl Water provides an excellent venue for a wide range of watersports, with sailing, canoeing and rowing clubs as well

as a windsurfing school and an Outdoor Centre offering land and water-based courses for all age groups. The reservoir is stocked with 55,000 trout each year and is used extensively by anglers.

A range of events took place throughout the summer months, including art and photographic exhibitions and workshops, Bewl Water Fireworks and Laser Symphony Concert and the regular "Have a Go" weekend when over 1,100 visitors of all ages tried their hand at sailing, canoeing, windsurfing, sub-aqua diving and archery. Bewl Water continued its tradition of hosting charitable events including Bewl Water Garden Show, the RNIB Aerial Slide and Abseil Event and Funraisers Dragon Boat Racing.

During 2001 we entered into a Countryside Stewardship Scheme for land within Bewl Water. As part of this scheme we have improved public access and enjoyment of the site through improvements to footpaths around the reservoir, to the picnic area and through traditional

Membership and user numbers for recreational clubs	Bewl Water	Weir Wood
Sailing	1310	439
Windsurfing	646	15
Canoeing	45	
Rowing	56	
Outdoor Centre	4711	
Angling	14148 (permits)	150 (boats) 1020 (Tickets & permits)
Police Diving		10

hedgelaying. This technique increases suitable nesting places for birds, as well as enhancing the visual quality of the site.

Weir Wood Reservoir

Weir Wood Reservoir lies on the edge of Ashdown Forest in West Sussex, with part of the site designated a Local Nature Reserve and the majority of the area a site of Special Scientific Interest (SSSI). Recreational activities include sailing, windsurfing and angling.

Powdermill Reservoir

Over the past year, comprehensive management of Powdermill Reservoir has continued on our behalf by a company (Fountains) under contract to us. Although the woodland is managed for timber production, its management plan also aims to meet nature conservation and recreational needs and is supported by a Woodland Grant Scheme. We have continued to enhance biodiversity through the management of a heathland area and an area with habitat ideal for butterflies and moths. In addition to traditional woodland management practices such as coppicing, considerable progress has been made in the further development of public and recreation facilities at the site. This includes the completion of a small car park, the removal of old fencing and the creation of site information signs, waymark posts and picnic benches, which will be installed during the coming year.

Darwell Reservoir

Fountains also manage our woodlands at Darwell Reservoir, in the heart of the High Weald Area of Outstanding Natural Beauty (AONB). Problems at the site, which include fly-tipping and environmental damage caused by vandalism, have been tackled by the implementation of a public access management plan, under the sites Woodland Welcome Grant Scheme.

To manage access to the site, and minimise negative impacts, we completed development of a small car park, rail and post fencing along the site and the removal of fly-tipped waste in liaison with neighbours and other interested parties. Footpath and stream crossing improvements have been completed to enhance enjoyment of the site. The planned installation of way marker posts for short and long routes around the reservoir and the cutting of two vistas overlooking the reservoir and site interpretation boards will further improve public access.

We have applied for certification under the UK Woodland Assurance Scheme (UKWAS) for Darwell and Powdermill woodlands. The UKWAS certification will provide independent assurance that our woodlands are being managed using sustainable, environmentally-sound management practices.

Community, Education and Skillsharing



OUR WORK IN RAISING AWARENESS OF WATER EFFICIENCY, IN SPONSORING WATER-SAFETY AND IN SHARING A VARIETY OF SKILLS DEVELOPED BY OUR EMPLOYEES AND THE WIDER INDUSTRY REACHES A VARIETY OF AUDIENCES LOCALLY, REGIONALLY, NATIONALLY AND EVEN GLOBALLY.

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Background

- 39 'Drips in Schools' educational plays delivered in 2002-03 across our region
- 146 Water Wise community talks delivered
- 1 child dies in the world every 15 seconds through lack of safe water and sanitation
- Drowning is the third biggest cause of accidental death in UK children
- 370,000 children helped to Learn to Swim in our region

CASE STUDY:

Global skillsharing - WaterAid



WaterAid has been operational in Ghana since 1985. Working as a facilitator rather than a provider, their approach focuses on assisting local communities to plan and deliver sustainable basic water and sanitation services. This takes the form of guidance and funding assistance alongside a programme

of hygiene education. Earlier this year, one of our employees, Joanne Brookes, took a trip to Ghana as part of her, and our, ongoing support of the charity. Armed with comprehensive information about the country's politics, infrastructure and economy, Joanne joined other WaterAid supporters on a two week tour of community water projects in the country.

The tour not only offers supporters involvement in local rural communities that UK residents are otherwise unlikely to experience, but also provides a platform from which supporters can raise awareness of the issues WaterAid seeks to remedy through its work.

Community

Links:

www.btcv.org | www.southernwater.co.uk/pondwardens | www.wateraid.org.uk | www.globalactionplan.org.uk

Community

We are involved with communities across our region in a number of ways, including sponsoring and working with groups to the social and environmental benefit of the local community through education, awareness raising, and skillsharing.

Progress to date:

We have continued to support a variety of employee fundraising activities and community-based charities in our region over the past year.

Our Pond Warden scheme continued over the past year and in January 2003 there were 284 fully trained and active wardens. New initiatives are under discussion for the coming year and the training programme continues to expand. Parish pond surveys have been completed, new ponds created and existing ones restored. In 2002 our wardens also participated in the national Great Crested Newt survey.

New initiatives planned include the ‘Hastings Small Change Project’, a partnership project with Global Action Plan seeking to empower local people to lead more community-based sustainable lifestyles, and the inclusion of water efficient gardening principles into the South East in Bloom project.

Community WaterWise talks continued over the past year, given by volunteers across the business. In April 2003 we ran a special WaterWise talks training course for our senior managers to supplement the team for the coming year.

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
COMMUNITY TARGETS		
Encourage an increase in applications for financial support from environmental projects which actively involve the community to consider favourably environmentally beneficial applications from organisations or individuals that may attract seed-corn or matched funds from other bodies	Incomplete We have continued to support a variety of employee fundraising activities and community-based charities in our region over the past year	Continue to support fundraising activities and community initiatives. Continue to seek partner-funding for our Learn to Swim scheme.
Introduce a system to record the environmental initiatives we support and feed useful information back into the Environmental Management System	Complete	



Links:

www.southernwater.co.uk/sustainability/employees | www.wateraid.org.uk | WaterAid 0845 330 8400
www.waterintheschool.co.uk | www.britishswimming.org | www.yesussex.co.uk

Education and community-based skillsharing

Our work in education involves a combination of provision of education and teaching resources, active teaching within schools in our region as well as awareness raising with community groups. We actively participate in skillsharing both directly with the communities in which we work, regionally and even globally through partnering with other organisations.

Progress to date:

Water efficiency education in schools was rolled out again over the past year with our 'Drips in Schools' play and feedback from schools gave a really positive response overall for both learning effectiveness and entertainment value. Our education helpline service continued, recording 80 requests for information over the year, many from primary schools.

New initiatives included the publication of our new early year's education resource "Ollie's Great Water Adventure" – a children's interactive story book and the promotion of our main message to take showers instead of baths through our schools play 'Drips in Schools'. Children seeing the play were also given a specially designed newspaper 'Drip News'.

Our Learn to Swim Scheme continued throughout 2002 with the added support of our construction partners. We estimate that by August 2003 in our 11th year of running the scheme, some 370,000 children will have benefited from the scheme across our region.

We continued to use Coastal Enterprises' services, a local authority agency providing employment and skills training for people with special needs, and our range of apprenticeship schemes also progressed over the last year.

For more information visit:

www.southernwater.co.uk/sustainability/employees

We continued our Prince's Trust Volunteers Programme over the last financial year running six 12 - week programmes with a total of 76 participants successfully completing the courses. The programme aims to support young people from a variety of backgrounds who lack opportunities to reach their potential.

Over the last year we have supported the schools' Young Enterprise scheme through sponsorship, contributing to managing the delivery of the South Downs Area programme and provision of business advisers to schools in our region.

Our fundraising work on behalf of local charities continues alongside donations to various organisations. Employees initiate a variety of activities and one individual completed a sponsored hike in Peru.

In terms of global social impacts, we seek to support the work of WaterAid through a range of fundraising activities, including our annual customer appeal and support activities for our region. WaterAid is the UK's only major charity dedicated to provision of safe domestic water, sanitation and hygiene promotion to the world's poorest. They currently have programmes in 15 countries throughout Africa and Asia.

As a company we also share our expertise with groups visiting from water industry representatives outside the UK, including Russia, China and Japan in 2002.

FINANCIAL YEAR PERFORMANCE TARGETS

2002-03 Performance Target

Progress Against Target

2003-04 Target

EDUCATION AND SKILLSHARING TARGETS

Water efficiency programme in schools to continue through school tours with further help and advice for schools with high water use

Drips in Schools play

2002 tour included 39 schools reaching some 4,500 pupils in our region



Maintain progress and promote water efficiency in homes.

Promote water efficient gardening

Education Service

32 general information packs;
30 schools packs
26 CD-rom sent



Continue service

Schools' Water audits

12 Hastings schools audits in 2003.

Case study school water audit pack available via www.southernwater.co.uk.
The Environment Agency use the pack as part of their grant application scheme for water efficiency improvement in schools



Continue to support Southern Region Environment Agency water efficient schools grant scheme with on-site water audits and help with grant applications

Why save water website at www.southernwater.co.uk

Averaging 279 visits per month



Maintain and develop site

WaterWise community talks programme to continue

Total of 146 talks over the year



Maintain programme



Employees



THIS YEAR WE ARE LOOKING TO DEVELOP OUR HR (HUMAN RESOURCES) INTEGRATED FRAMEWORK AND INTRODUCE OUR STAFF REPRESENTATIVE 'BUSINESS INVOLVEMENT GROUPS'.

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Background

- Total manpower of 2,095 fixed term and permanent employees
- Overall manpower turnover rate of 8% for the financial year 2002-2003
- 795 employees responded to 2002 Stress Survey
- Customer Services' Investors in People Award

CASE STUDY:

Customer Services



We recognise the quality of our customer service depends on the employees delivering it and how we invest in them is vital to ensuring they have the skills to do their job well. Committed to investing in people, our Customer Services team runs a comprehensive range of training for employees. This includes: entry-level, development and refresher training. Our entry-level course for our billing call centre runs over eight weeks. We have a training and development policy dedicated to our Customer Services team and this sets out our aims, vision and commitment to employees.

Links:

www.hse.org.uk | www.workstress.net | www.yournutrition.co.uk | www.nhsdirect.nhs.uk | www.inlandrevenue.gov.uk
www.dss.gov.uk | www.acas.org.uk | www.unison.org.uk

Progress to date:

Our HR Integrated Framework will be based on four main areas:

- Visible pay structure with clear criteria for progression within the company;
- Visible employee development framework for all levels;
- Structured process to enable employee transfers between business areas, maximising employee development opportunities; and
- Other rewards and benefits.

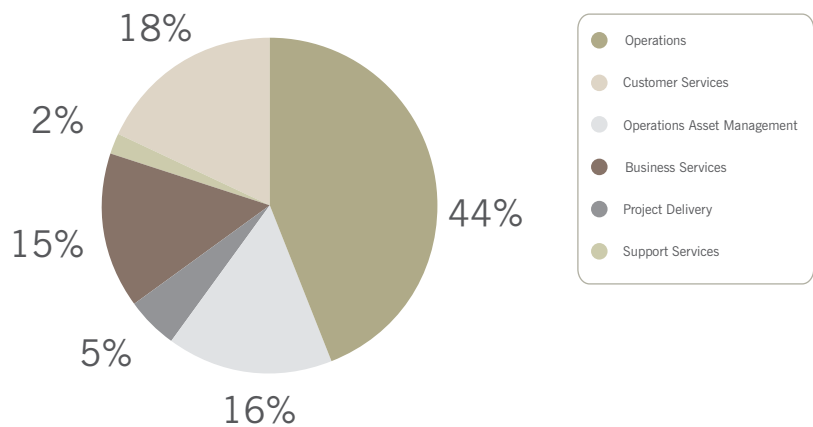
Detailed proposals for the framework are under development via a series of project groups focussing on specific areas. We are also seeking to enhance managers' approach to individual appraisal across

the business by refreshing guidance for the process and making 'tool box talks' training available to managers.

Over the past year we have been considering ways to increase involvement, participation and consultation with our employees. 'Business Involvement Groups' are being established for each business function with one team member nominated to represent each team in that business function. Invitations to nominate are being sent to all employees and once the appointment as Employee Representative is confirmed, each will be provided with appropriate training. Directors and functional managers chairing the groups are also undergoing training in readiness for the first Group meetings planned for 2003.

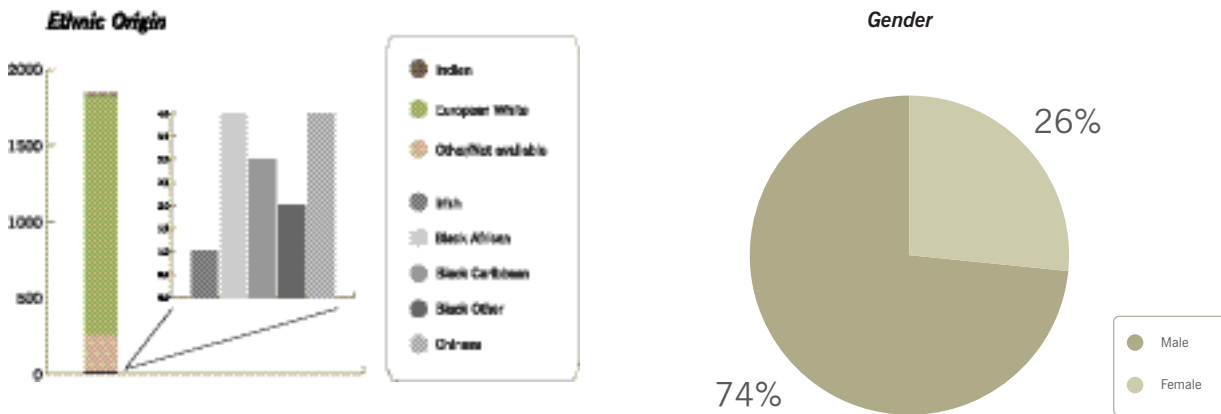
The main theme of European Health and Safety Week 2002 was "Working on Stress" and we ran a range of activities to raise awareness throughout the week. Our stress awareness programme continues with regular updates available via our company intranet and monthly posters raising awareness of support and advice available. We offer employee support through a confidential counselling service. We have recently introduced a work-related stress policy and a method developed for this year's proposed company-wide risk assessment.

Manpower by function



Four employees are registered disabled.

Employee Training and Skills-building



Employee Training and Skills-building

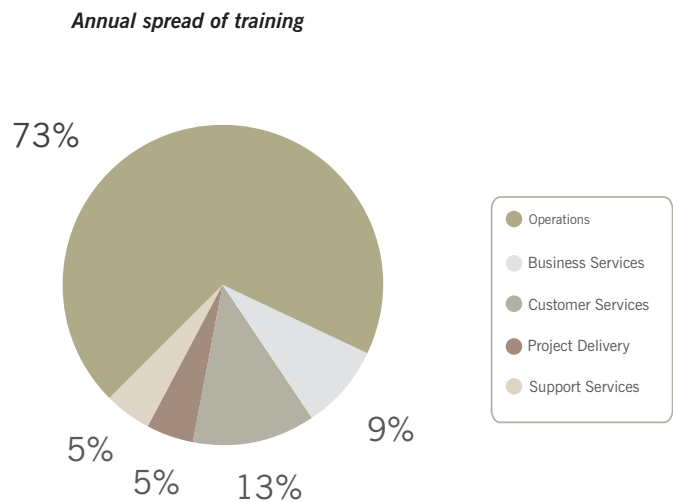
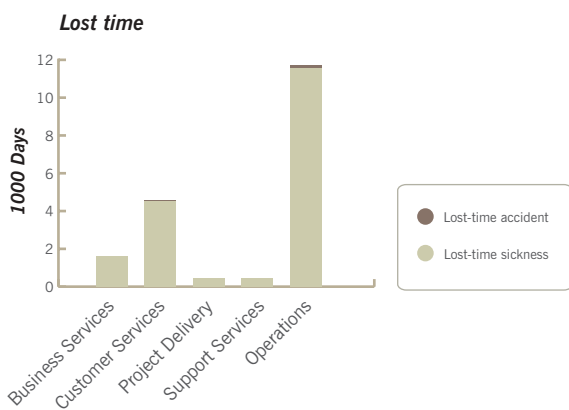
Our Open Learning programme is available to our employees and their families. In addition to employee training, the programme offers practical, vocational or personal development based courses free of charge. Learning can take place at dedicated centres, at distance or from home via a desktop computer.

The Guidance Accreditation Board accredited us to the Matrix quality standard for organisations giving information, advice and guidance on learning and work services.

Our latest New Deal training programme commencing in January 2003 was for trainee Leakage Inspectors. The programme involves a nine-month contract with training and work experience leading to City & Guilds and Health and Safety qualifications. Also over the year another New Deal scheme led to a team laying a hawthorn hedge at Bewl Water where two of the team were subsequently taken on for a summer placement this year.

Our SkillSeeker programme offers young people the opportunity to gain work experience and study towards a qualification at the same time. The programme includes regular progress monitoring. Several of our skillseekers go on to permanent positions within the company.

The annual spread of training is reflected in the chart on page 4. In total 3,660 places were delivered in the year with operations accounting for 73% of the profile. This delivery represents a 4% increase in the output achieved in 2001.



CALENDAR YEAR PERFORMANCE TARGETS		
2002 Performance Target	Progress Against Target	2003 Target
EMPLOYEES		
New Target		To establish a company-wide Business Involvement Group to consider issues that go across the business by June 2003.
New Target		Implement the new Human Resources Integrated Framework for employees
100% delivery and 90% delegate attendance rate of Health and Safety training as a percentage of formal training identified in the annual company training plan	100% delivery and 84% delegate attendance rate	100% delivery and 95% delegate attendance rate of Health and Safety training as a percentage of formal training identified in the annual company training plan
100% Occupational health surveillance completed of total planned by Human Resources	99% annual surveillance complete for employees seen once over the year 98% tri-annual surveillance complete	Maintain target

FINANCIAL YEAR PERFORMANCE TARGETS		
2002-03 Performance Target	Progress Against Target	2003-04 Target
EMPLOYEES		
100% site safety/workplace inspections of total planned by department manager	100% achieved across the business	Maintain target
100% team managers completing informal Health and Safety training updates	Team Managers completing informal training	Maintain target



Customers



EVERY DAY WE SUPPLY SOME 600 MILLION LITRES OF WATER TO ALMOST ONE MILLION HOUSEHOLDS, AS WELL AS INDUSTRY AND COMMERCE WITHIN OUR SUPPLY AREA. THIS INCLUDES WATER FOR FIRE FIGHTING SUPPLIED AT NO CHARGE. WE ALSO MANAGE THE INCREASE IN DEMAND GENERATED BY A SEASONAL INFLUX OF HOLIDAYMAKERS, WHICH AT ITS PEAK CAN RISE AS HIGH AS A TOTAL OF 850 MILLION LITRES A DAY.

SUSTAINABILITY REPORT 2003:

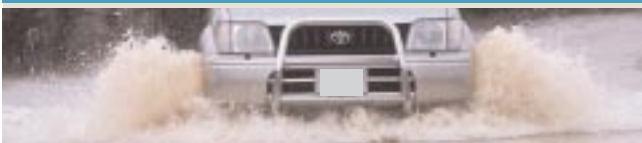
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Background

- 1,095,189 telephone calls were taken by our customer services team throughout 2002-2003
- We answered 92.6% of 2002-2003 calls within 30 seconds
- We dealt with 98.3% of billing contacts within five days
- We dealt with 99.9% of any written complaints within ten days
- We billed 99.7% of our metered customers based on our 2002-03 meter reading
- There were no customer restrictions on 2002-03 water use
- Unplanned interruptions to customer water supply exceeding 12 hours dropped from 981 in 2001-02 to 110 in 2002-03
- 548 customers are at risk of low supply pressure compared to 643 in 2001-02
- Flooding incidents due to overloaded sewers have reduced again this year to 40
- We made 1,189 payments under our Guaranteed Standards Scheme to customers totalling £84,966 in 2002-03

CASE STUDY:

Flood alleviation schemes



Previously flooding schemes were prioritised on the basis of regulatory drivers and cost per property. This approach took no account of the wider variety of impacts including: frequency and severity of flooding, public nuisance issues such as space and highway flooding and restricted toilet use. More recently, we have enhanced our methods for prioritising flooding schemes, with OFWAT approval. Our new system now ensures that for any approved level of funding the highest number of customer nuisances can be resolved.

Domestic Customers

Links: www.southernwater.co.uk/sustainability/employees | Customer Service Centre: Service enquiries (open 24 hours for emergencies) 0845 278 0845; Account enquiries 0845 2720845; Minicom users 0845 275 0845; Household metering service centre 0845 270 0845; Special needs assistance 0800 027 0800 | www.southernwater.co.uk | www.ofwat.gov.uk | www.watervoice.org.uk | WaterVoice Southern 0845 758 1658 | email: southern@watervoice.org.uk

We treat around 1,400 million litres of wastewater every day. This is a combination of rainfall, water used in factories and domestic wastewater from toilets, baths, kitchen sinks, washing machines and dishwashers.

Domestic Customers

We demonstrate our commitment to customer service through the intense training programme given to our Customer Services team. This is recognised through our Customer Services team's 'Investors in People' award. We produce an annual magazine for our customers, called 'Splash'. This details our services, facts and figures about our business, our work in the community and water-saving ideas.

Progress to date:

Our Customer Services team takes, on average, 4,380 calls a day. Where needed, they log call information for further technical investigation and response (2% of calls). Customer Satisfaction Questionnaires are sent monthly to a random selection of customers whose calls have been logged. Your customer feedback is analysed to inform our business. In January 2003 we completed the third phase of research into customer satisfaction and attitudes towards our service. This was undertaken and evaluated by an independent body.

We offer a range of assistance to our customers with special needs, developed in consultation with representative agencies. We have also sought to target information on these services to specific audiences through partnerships with community

organisations like Neighbourhood Watch.

We seek to protect the security of our customers through providing all our staff and people calling on our behalf with an identity card as part of our 'No Identity? No Entry!' scheme, as well as producing door stickers to remind customers how to check employee identity. We also give individual personal customer reference numbers to most of our representatives before a visit. In addition to this, 92 of our customers are currently registered to our password scheme - our employees must use each password correctly on any visit to one of these properties. As part of our change of company ownership, our company logo changed. To avoid any confusion with or risk to our customers, we produced cards illustrating the logo change for our representatives to show to customers.

Customers experiencing difficulty in paying for water use can find assistance through applying for support. Additionally, payment terms can be agreed in person with one of our local representatives, all of whom operate to strict terms and guidance for these agreements.

Commercial Customers

Links: www.waterconservation.co.uk | Southern Water Scientific Services: 01273 625237 email: analysis@southernwater.co.uk
www.southernwater.co.uk/scientificservices | www.bestwayfertiliser.co.uk | www.southernwater.co.uk

Commercial Customers

Our commercial customers range from those with general water supply and wastewater treatment service needs to those with specific water quality and efficiency guidance needs, or those requiring our monitoring, sampling or analytical services. We are currently drafting a Business Customer Charter to set out our commitment to delivery of high standards to our business customers.

Progress to date:

Over the last year we have continued to deliver regular water consumption reports to key business customers and to advise them on water efficiency. A comprehensive range of water efficiency and water management services is available to all our business customers. One customer using these services is now consuming 26% less water than in 1999. We also reviewed plans to supply certain key customers in the event of emergencies resulting in loss of standard mains supply and are planning to trial procedures at one hospital site with a view to sharing the learned benefits of the trial with others.

We have developed policies, procedures and guidance for developers to follow in planning, designing and laying water supply pipes and wall-mounted water meter box arrangements are also available. In 2001 the 5th edition of our industry 'Sewers for Adoption – a design and construction guide for developers' was developed in consultation with various groups including the House Builders Federation and other UK water companies.

Our range of environmental services to commercial customers includes:

- water leakage detection and management;
- water metering, data logging and consumption management;
- managing data analysis processes for other infrastructure networks and energy consumption information management for any multi-site business;
- maintenance, verification and calibration of water utility measurement equipment;
- environmental site assessment (see below);
- treatment of cess liquid wastes, trade effluents and other tankered wastes; and
- production and provision of fertiliser and soil conditioning products.

Our environmental site assessment services include sampling and analysis for solids, liquids and gases-(in-situ). In addition to samples from potentially contaminated sites, we undertake compliance monitoring and analysis from a range of industrial and surface water sources on behalf of our commercial clients. We also conduct environmental microbiology and legionella analyses as well as clean water sample analysis. As part of our service to our customers we produce guides to important legislation and to certificates issued against each sample we analyse.

Economy and Key Performance



OFWAT – THE OFFICE OF WATER SERVICES, ARE THE ARBITERS OF THE PRICES WE CAN CHARGE OUR CUSTOMERS, INVESTMENT BUDGETS AND SERVICE LEVEL PERFORMANCE CRITERIA FOR OUR CORE OPERATIONS THAT IT USES TO ASSESS OUR PERFORMANCE AS A WATER SUPPLY, WASTEWATER TREATMENT AND BIOSOLIDS RECYCLING BUSINESS.

SUSTAINABILITY REPORT 2003:

SUMMARY
WASTES
WATER
ENERGY AND ATMOSPHERE
MATERIALS AND RESOURCES
LAND, CONSERVATION, ACCESS AND RECREATION
COMMUNITY, EDUCATION AND SKILLSHARING
EMPLOYEES
CUSTOMERS
ECONOMY AND KEY PERFORMANCE
TARGETS

Background

- **The current five-year investment period is April 2000 – March 2005**
- **Preparations for next five-year Business Plan currently under way and due for submission to OFWAT in April 2004 – OFWAT call this process the 'Periodic Review'**
- **Regulatory Capital Value was £2192m on the 31st March 2003**
- **Interest Cover was 2.1 on the 31st March 2003**

CASE STUDY:

PR04 integrated team



Three consortia were set up to deliver our capital programme for the 2005-2010 draft business plan. Project control systems, developed at an early stage, have used best quality assurance practice. Scheme specific design has been undertaken using well defined specifications and standards. Risks have been identified at project level and analysed project by project to ensure an appropriate level of cost is included. A prioritised milestone programme from inception to completion has been developed for each project based upon the scheme value and adjusted according to the perceived programme risk. Team arrangements fostered close working relationships and have driven best value to our customers from combined experience, knowledge and innovative approach.

Funding, Investment and Planning for the Future

Links:

www.ofwat.gov.uk | www.watervoice.org.uk | www.environment-agency.gov.uk | www.southernwater.co.uk/library

The 'assets' that we frequently refer to here comprise the infrastructure and plant needed to run our business, and that from time to time require investment for their repair and/or improvement.

Funding, Investment and Planning for the Future

At five year intervals, the Director General of Water Services (Office of Water Services – OFWAT) seeks guidance from the Secretary of State for the Environment, Food and Rural Affairs on the quality obligations that should be funded by future UK water industry water and sewerage charges. This also involves consultation with, amongst others: the Environment Agency regarding water resources and wastewater treatment issues; and the Drinking Water Inspectorate on drinking water quality. The costs of schemes required to deliver these improvements are estimated within company Business Plans.

Following submission of the five-yearly Business Plans, the OFWAT Director General sets our price limits for water and sewerage charges for the forthcoming five-year period. Within this we must deliver the investment needed to provide specified higher quality standards for our customers and to maintain our existing assets.

Progress to date:

Our last Business Plan, submitted to OFWAT in April 1999, was based on the Ministerial guidance for quality obligations and the results of customer surveys that we carried out to establish priorities. It detailed our plans and costs of delivery for all the required obligations.

We adopted a serviceability approach to estimating the asset maintenance requirement. This entailed consideration of both the condition and service performance of the asset base. This plan was rejected by OFWAT in favour of an approach heavily based on the simple average of past expenditure. This translated past spending into future requirements with limited reference to the actual condition and performance of our assets.

Determining future investment levels always requires a balance between improving service and containing customer bills. Our initial plan to OFWAT looked for further improvements in areas of customer interest but these were not accepted. The Director General decided that due to our existing high level of service performance there should be only small provision for further improvements. It continues to be difficult to obtain recognition for the investment in service areas many would ideally like to see improved, but are outside our statutory functions as determined largely by OFWAT.

Our 2000-2005 programme includes more than 450 improvement schemes to further improve water supply, drainage and wastewater treatment and to meet stricter legislation aimed at safeguarding the environment. During this period, notwithstanding the large investment programme, our current average annual bill to domestic customers will drop by around £39. Adequate expenditure on asset maintenance is vital to preserve service levels and safeguard Health and Safety. The system for assessing these needs should be robust, forward-looking and ensure

that investment takes place early enough to avoid future performance deterioration.

The 2004 periodic review process began during 2002 and will take effect from April 2005. The industry, in collaboration with OFWAT, has developed a Common Framework for asset maintenance planning. This encourages a common approach by companies in contrast to previous Business Plan submissions. The Common Framework moves away from considering age and condition alone to a consideration of the probability and consequence of asset failure. This in turn requires a forecast of future performance to be made measured in terms of serviceability indicators. Our last business plan submission had anticipated this development.

OFWAT endorse the Common Framework approach as providing 'a consistent basis for companies to estimate their future capital maintenance requirements to meet two possible objectives:

- A cost effective objective, to provide a steady or improving service, to be used to justify base service provision; and
- A cost benefit objective, to be used to justify an enhanced level of service.'

The regulatory requirement is that the interventions required to meet either of these objectives need to be justified on the basis of minimum whole life cost. In the case of the latter, value judgements concerning the benefits of the enhanced service and customers' willingness to pay are additional ingredients.

Key Performance

Key Performance

OFWAT has a method for assessing overall service to customers so that it can compare different water companies across the UK. Performance against their various criteria are also taken into account in their setting of price limits for each company.

Performance to date:

Overall, our performance to OFWAT key customer service level indicators is improving year on year.

Service Indicator	1997-98	2000-01	2001-02	2002-03
Water Pressure: % properties receiving low water pressure	0.08	0.07	0.06	0.05
Supply Interruptions (aiming for low score)	0.40	0.47	0.67	0.30
Restrictions	0	0	0	0
Billing contacts (% dealt within five working days)	95.7	98.4	98.4	98.3
Response to written complaints (% in ten days)	99.2	99.5	99.8	99.9
Bill for metered customers (% with reading)	99.7	99.6	99.8	99.7
Telephone Contact (% calls answered in 30 secs)	88.4	92.4	91.6	92.6

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