Severn Trent Water

## Focus on water

Strategic Direction Statement  $2010 \rightarrow 2035$ 

December 2007





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### **Executive Summary**

#### Our Key Strategic Intentions over the next 25 years are:

- 1. Providing a continuous supply of quality water
- 2. Dealing effectively with waste water
- 3. Responding to customers' needs
- 4. Minimising our carbon footprint
- 5. Having the lowest possible charges
- 6. Having the right skills to deliver
- 7. Maintaining investor confidence
- 8. Promoting an effective regulatory regime

#### Our proposals are based on making improvements which customers support and ensuring that we have a sustainable impact on the environment



**Tony Wray** Chief Executive Severn Trent Plc

"we will achieve the highest customer service and environmental standards"

#### Severn Trent's Vision

The demands of our modern lifestyles, the impact of climate change and the need to protect our environment and natural resources for future generations will create a complex and demanding set of challenges for the water industry over the next 25 years and beyond. This summer, we have already seen the impact of climate change in the unprecedented flooding in the Midlands and Gloucestershire which has highlighted the importance of some of our proposals.

At Severn Trent we believe that through continuous improvement and innovation we can meet these challenges and deliver our aim of being the best water and waste services company. We will achieve the highest customer service and environmental standards while at the same time offering our customers the lowest possible prices.

We will deliver these aims with an inspired and motivated work force equipped with the right skills, tools and strong quality controls. We aim to have the best health and safety performance in the industry so that no-one within our organisation, or in our community, gets hurt or made unwell by what we do.

#### Key Strategic Intentions

Our strategic direction is based upon eight key strategic intentions (KSIs) which we will deliver over the next 25 years, while ensuring we have a sustainable impact on the environment and playing a critical role in the communities we serve. These KSIs reflect what our customers tell us they consider important and the views of the wider stakeholder groups we have consulted during the preparation of this statement.

#### KSI 1 – Providing a continuous supply of quality water

Our research shows that ensuring a reliable, safe water supply is the top priority for our customers. It also shows that customers are willing to pay for improvements in drinking water such as taste, odour and hardness. To achieve this we will:

- Ensure that we meet water quality standards and improve the acceptability of drinking water.
- Improve our networks and treatment works to increase reliability of supply.
- Reduce leakage through improving the distribution network, improving detection methods and speeding up response rates.
- Reduce demand through:
- -Accelerating the installation of customer meters, coupled with appropriate tariffs.
- -Promoting water efficiency programmes for businesses and consumers.
- -Using an education programme to promote water efficiency from an early age.
- Develop new sources of supply by identifying the most sustainable abstraction or storage solutions, and using supplies from other producers where sustainable and economic.
- Adopt customer supply pipes to reduce leakage and improve water quality.





#### KSI 2 – Dealing effectively with waste water

Our customers should have confidence that we will take away their waste and treat it to the highest environmental standards before returning it to our region's rivers.

To achieve this we will:

- Meet higher standards for waste treatment resulting from new legislation such as the Water Framework Directive and other legislation.
- Improve our sewerage network to ensure we have no serious pollution incidents, nor any pollution incidents caused by our assets or actions.
- Ensure that no customer community is subjected to internal sewer flooding.
- Improve the capacity of our network to cope with all but the most extreme forms of weather.

#### KSI 3 – Responding to customers' needs

Our customers tell us that, in addition to providing the highest levels of water and waste services, they expect to see higher standards of customer service.

To deliver this, we will:

- Provide an excellent operational service, thereby reducing the need for customers to contact us about these issues.
- Make it easy for customers to contact us by using new technology to provide new and multiple communication channels.
- Provide a speedy and efficient response to customers by dealing with issues at the first point of contact wherever possible.



- Progressively separate foul and surface water drainage.
- Promote the installation of Sustainable Urban Drainage Systems (SUDS).
- Support the transfer of privately owned sewers to Severn Trent Water.

"our customers expect to see higher standards of services"



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#### KSI 4 – Minimising our carbon footprint

We believe we can deliver a leading position in sustainable operations thereby minimising our carbon footprint, provided it does not compromise standards or increase bills beyond levels which customers are willing to pay.

To achieve this we will:

- Expand our renewable energy operations to convert all sewage sludge to fuel.
- Work towards being carbon neutral in our operations.
- Achieve the Government's carbon reduction targets.

#### KSI 5 – Having the lowest possible charges

Bills for water and sewerage services have seen large increases since the industry was privatised in 1989. This has funded a large investment programme which has resulted in huge improvements to drinking water quality, river quality and the robustness of our assets. At Severn Trent, our bills have been amongst the lowest in the industry since privatisation and our aim is to maintain this position over the next 25 years.

#### To do this we will:

- Ensure we improve our efficiency, to keep costs and bills no higher than they need to be.
- Invest as required to meet statutory obligations, but do this at the lowest possible cost to customers.
- Ensure that other investment is supported by customers by continuing to research their willingness to pay for discretionary improvements.
- Innovate across our business and adopt best practice from wherever we find it.

We will accelerate the installation of meters as the fairest method of charging for our services. We recognise that there might be affordability consequences of extending metering. We will

#### KSI 6 – Having the right skills to deliver

To deliver our aims, we will ensure we have the right skills, both in Severn Trent and in our supply chain. This will mean playing a leading role in education, training and development in the communities we operate in.

To achieve this we will:

- Continue to invest in learning and development and offer our employees the right environment in which to develop their careers.
- Develop productive relationships with our suppliers and use experts from outside the organisation where necessary.

#### Investing in employees



• Continue to invest in delivering water education services to the wider community, including schools and visitors to our public access sites.



- Streamline processes to reduce energy use.
- Develop other energy sources such as wind energy.

develop tariffs which encourage water efficiency savings and avoid high charges for essential use.

We will move to a predominantly metered charging basis and develop more sophisticated tariffs to enable management of water usage and demand. We will move to assessed property charges (based on property type) for those who are not metered as a simple and understandable means of charging for a non-measured service.

We believe it is the role of Government to ensure those in most need are protected through the welfare system. We know that some customers have difficulty paying their water bills and we will develop payment options and continue to support our charitable trust which provides help to those in debt – to help the most needy and least able to pay. We will also make sure that those who can pay but won't are pursued effectively.



"our bills have

the lowest in the industry"

been amongst

#### KSI 7 – Maintaining investor confidence

We believe that the current ownership model, with finance from shareholders and borrowing, has served the industry well since privatisation and should continue.

The ongoing cost of our programme of investment in quality, capacity and asset maintenance amounts to far more than the money collected from customers through their bills. This has been provided through private finance (from both debt and equity) and is expected to continue into the future.

To ensure we can continue to finance our activities and investment programme by raising money in the markets it is essential that the financial markets have confidence in the business model.

To achieve this we will:

- Provide investors with an adequate return on the monies they invest.
- Seek to avoid rapid increases in spending and borrowing.

#### KSI 8 – Promoting an effective regulatory regime

It seems likely that water and waste will, to some extent, remain monopoly services for a number of years to come and will therefore continue to be subject to regulation, both economic and environmental.

Regulation of the water industry has clearly helped to deliver significant improvements since privatisation and has given confidence to investors to continue to invest in the industry. Nevertheless we believe the regulatory regime needs to develop to reflect the challenges of the 21st century and we will seek to positively influence the regime in the following ways:

- A move away from the five-year price-setting framework, to a system which encourages innovation, better planning and development of long-term, sustainable solutions.
- Setting river water quality standards at an appropriate level and ensuring these are delivered in the most cost-effective way.
- Increasing competition where this benefits customers.

#### Next steps

This statement sets out our specific aims in the eight key strategic areas, the challenges we believe we face and the assumptions we have made about what the world might look like in 25 years time. We have consulted our stakeholders in order to develop these positions and published a draft statement in October 2007. In this revised statement we have taken into account the extensive comments which we have received. The business plan we submit to Ofwat in 2008 for the next 5 years will build on and reflect the priorities in this statement. Although we have set out our proposed direction of travel for the next 25 years, we recognise that it cannot be set in stone. We will update this document as new challenges present themselves, or as our statutory obligations, the regulatory regime or customers' expectations change. "the regulatory regime needs to develop to reflect the challenges of the 21st century"

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- Communicate regularly with investors in order to avoid surprises and keep them informed of our plans and priorities.
- Plan sensibly to avoid cost and credit shocks.
- Maintain a broad range of funding options equity and a broad debt portfolio.
- Avoid bunching debt maturity dates to promote a stable and balanced financial environment.



- Establishing better approaches to measuring performance and target-setting, which encourages companies to meet customers' needs.
- Maintaining a long term return on capital that ensures water remains attractive to investors in order to secure sufficient financing for our significant planned investment programme.
- Improving communication and co-operation between regulators and between companies and regulators.

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### About us

Severn Trent Water provides water to 7.4 million people, and sewerage services to 8.5 million people in an area covering 21,000 square kilometres in the Midlands and mid-Wales. We are one of the largest water companies in England and Wales, supplying around 1,900 million litres of water per day, and treating around 2,500 million litres of waste water per day.

We have a significant impact on our communities and regional economy, through the services we deliver, as a major employer and as a purchaser of goods and services. We also have a significant impact on the local environment through abstraction of water and discharge of waste water, and through our management of our public access recreational sites. We recognise our responsibility to take full account of our impact on the local community and environment in everything we do.

#### Our physical assets include:

- 46,000 kilometres of water mains
- 181 ground water treatment works
- 54,000 kilometres of sewers
- 1,017 sewage treatment works

#### Operational facts and figures 2006-07:

- 250,000 water quality tests
- drinking water quality compliance 99.9%
- more than 4 million visits to our recreational sites
- nearly 25,000 children visited our education centres
- 2.4 million customer contacts
- average cost of water and sewerage service – 78p per day
- 40% of our water comes from river abstraction
- 30% comes from groundwater (such as boreholes)
- 30% comes from reservoirs

The water industry has come a long way in the eighteen years since privatisation, but there is still more to do. At Severn Trent we alone have invested over £10 billion since 1990, and made major improvements to both water and sewerage services, which have included:

- Improved sewage treatment, which has contributed to 59% of rivers being assessed as being in a good state in 2006, compared with only 37% in 1990.
- Improved water pressure, which has reduced the number of properties as being at risk of receiving low pressure from over 23,000 fifteen years ago to just over 300.
- Meeting higher drinking water standards, and at the same time improving our performance against those higher standards. The number of drinking water tests failing to meet required standards has fallen (by 93% over the last fifteen years), with only about one in 5,000 tests failing.
- Reducing the number of serious pollution incidents from 238 in 1994 to only 10 last year.

The need to finance improvements was a primary reason for the industry being privatised in 1989. Privatisation and the regulatory regime within which we operate has provided a stimulus for increased efficiency, which has limited the need for increases in bills to pay for improvements.

We are committed to continuing private ownership, with a balance between finance from shareholders and borrowings, as the best way to deliver future improvements effectively.

#### **Our Strategic Direction Statement**

This Strategic Direction Statement sets out our aims, and how we intend to achieve them, over the next 25 years. We invest in assets which have a very long life – water mains and sewers may be in the ground for over 100 years. In order to make the right decisions we need to look ahead to what the needs of customers and other stakeholders will be over the

"we have invested over £10 billion since 1990"



long term. The water industry is vital to people's health, to the environment, and to the economy, and it is essential that we have long-term plans in place to meet society's needs in the future.

We have listened to the views of our stakeholders. The draft document was sent to:

- the Environment Agency (EA).
- the Drinking Water Inspectorate (DWI).
- Department for Environment, Food and Rural Affairs (Defra).
- Ofwat.
- the Consumer Council for Water (CCWater).
- the Countryside Commission for Wales.
- Natural England.

Investors, local councils, MPs in our region and employees were also consulted. We have also taken into account the objectives for the water industry set out in the EA's Water Sector Plan.

Customer views were taken into account through market research which we have carried out with our domestic and business customers including a major willingness to pay survey carried out earlier this year. This involved interviews with 1,000 domestic customers and nearly 500 business customers, to establish customers' priorities and their willingness to pay for improvements in the different areas of service provision.

We have indicated in this statement the level of customer support for the improvements we are

proposing. For each of the proposed improvements we have shown whether customer willingness to pay was:

- Generally greater than the costs of improvements.
- Marginal relative to costs.
- Generally less than the costs of improvements.

We published this statement on our website to give everyone the opportunity to comment on our strategic intentions. We also put it on our internal website to give our employees the chance to contribute. The statement was broadly supported. We are grateful for all the contributions and have revised the statement to reflect comments received.

We continue to welcome feedback on this document and consider our Strategic Direction Statement to be a living document. Its content will need to be reviewed as new information becomes available. For example, Defra will publish their Strategic Intentions for the next 5 years in 2008 and our Statement will be reviewed in light of this.

We will continue to involve stakeholders as we develop our draft Business Plan for the 2009 price review, to be submitted to Ofwat in August 2008. We welcome any further comments on our strategy.

Comments can be sent to: Jo Dempster-Fowle Severn Trent Water 2297 Coventry Road Birmingham B26 3PU Email: Jo.Dempster-Fowle@severntrent.co.uk "it is essential we have long-term plans in place to meet society's future needs"

### **Our vision**

Our vision is that we will be the water and waste services company which achieves the highest quality and customer service standards while offering our customers the lowest prices, with great people delivering the service.

We believe we can raise standards while reducing costs through the implementation of better processes and innovation. We are currently very close to having the lowest bills in the UK.

We believe our customers want us to make significant improvements in services. In order to achieve this we will have to increase our spending to ensure that assets are in the right condition and to maintain the advances in service performance already made. In addition, we intend to meet all the future requirements for improvements while keeping our bills as low as possible. Increases in bills in recent years have raised concerns about the ability of low-income customers to pay their water bills.

We will achieve objectives on services and bills by:

- Making sure we increase efficiency, to keep costs and bills no higher than they need to be. Getting things right first time will both improve service to customers and reduce costs. We have reorganised around key processes (Water, Waste Water, and Customer Service) to increase our effectiveness.
- Ensuring that we have the right recruitment processes and training so that we have employees who understand customer needs and can deliver the right services effectively.
- Basing the scope and pace of improvements on customer priorities – we will weigh up potential improvements in terms of whether their benefits to customers and the environment exceed the costs. This is an approach supported by both Ofwat and CCWater.
- Providing stable returns for investors, and limiting the extent of the future capital programme to that which can be financed without excessive increases in the cost of raising finance.

Planning on a long-term basis will assist in delivering improvements cost-effectively. We have a large capital expenditure programme (over £2 billion for the current five-year period) investing in very long-life assets. A long-term strategy will assist in developing sustainable solutions and enable investment decisions to be based on the lowest whole-life cost.

All improvements will need to be sustainable in terms of their impact on the local environment and on climate change. We are an industry leader in terms of avoiding serious pollution incidents, meeting environmental standards for discharges to rivers, and minimising our "carbon footprint" by generating renewable electricity, and we intend to maintain that position.

#### Key strategic intentions

Our strategy is based on eight key strategic intentions and our plans for improvements in each of these areas are set out in this statement:

- 1. Providing a continuous supply of quality water.
- 2. Dealing effectively with waste water.
- 3. Responding to customers' needs.
- 4. Minimising our carbon footprint.
- 5. Having the lowest possible charges.
- 6. Having the right skills to deliver.
- 7. Maintaining investor confidence.
- 8. Promoting an effective regulatory regime.

#### The challenges we face

There will be a wide range of changes over the next 25 years which we will need to address:

- Customers will expect better standards of service. Some aspects of service fall short of what customers believe that they are already paying for and have every right to receive.
- There is a need to adapt to and help mitigate the effects of climate change. Climate change is bringing more variability in weather patterns. We will need to increase the resilience of our assets to cope with greater extremes, for example by providing additional sewer capacity.

2006 to 2010"

"we are investing

£2 billion from

change

0

1

3

4

in °C



- The population is growing, with smaller households, and shifts in population. This will require us to plan changes in our networks and treatment works capacity for both water and sewerage. There is currently a drive from national government to dramatically increase the supply of new housing. Many towns and cities in the Midlands have been identified as growth points. To meet this additional demand we will need to ensure that treatment works capacity for both water and sewerage can be planned and timed to provide services for new residents.
- Legal requirements will result in further new investment increasing our costs, in particular the Water Framework Directive requirements to achieve good river quality and the adoption of private sewers.

#### Example climate change scenarios for the West Midlands Percent change in Summer precipitation (High Emissions scenario) % change -15 -45 -60 2020s 2080s Percent change in Winter precipitation (High Emissions scenario) くろ % change 15 30



2020s





2080s Source: UKCIP02 Climate Change Scenarios

(funded by Defra, produced by Tyndall and Hadley Centres for UKCIP)

• We will need to ensure that we can continue to access finance for the requirements of our operations and investment programme.





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#### A growing population



#### Responding to the challenges

We will respond to these challenges:

- We will make significant improvements in services, with the programme determined by the views of customers and other stakeholders. In particular, homes being flooded by sewers overflowing is not acceptable, and we will need to reduce the risk of customers' water supply being interrupted.
- We will adapt our operations and assets to respond to climate change, and we will set a target to reduce our carbon footprint.
- We will adopt a range of measures to balance supply and demand – including increased metering, leakage control and water efficiency to manage peak demand.
- We will support more sustainable solutions to surface water drainage – including Sustainable Urban Drainage Systems and surface and foul water separation.
- We will encourage addressing pollution at source to improve river quality and will support sewage treatment improvements when the benefits justify the costs.
- We support the adoption of private sewers, which will lift a significant burden from some of our customers.

#### Increased leakage control

"it is essential we have long-term plans in place to meet society's future needs"



#### Innovation

We will innovate to make our activities more efficient and sustainable, including:

- Water and Waste Water Treatment
- Developing treatment processes which are more energy-efficient and use less chemicals.
- New developments in catchment management to improve the quality of water and waste water entering treatment works, so reducing the cost of treatment.
- Climate Change Adaptation and Mitigation - Introducing new approaches to
- generating renewable electricity from sewage sludge.
- Reducing our carbon footprint through increasing use of video-conferencing and ensuring that our new headquarters uses appropriate technology to be energy and water efficient.
- Developing more sustainable drainage systems to cope with increased volumes of rainwater.
- Water and Sewerage Networks
- Improving methods for finding and fixing leaks.
- Improving methods of laying water mains to ensure that they are laid without leaks.
- Introducing new methods of monitoring the water and sewerage networks to enable faults to be identified more quickly.
- Water Use
- Encouraging introduction of new water-using appliances which use water more efficiently.
- Development of more sophisticated meters to allow us to manage demand more effectively.
- Customer Service
- Establishing new ways to communicate with our customers, to improve service and enable us to reduce costs and bills.
- Systems
- Improve our information systems so that we can manage information more efficiently, enabling us to assess trends in asset and service performance more rapidly and respond more quickly.



#### The future is uncertain

We will have to be prepared to adapt our plans over time and the further we look out the more uncertain the world looks. Some of the major influences on our business are highly uncertain and we will need to be flexible in the way that our business operates and in our response to challenges. Some of the most significant uncertainties for the next 25 years are:

- Climate change the extent of the need to adapt to climate change remains uncertain.
- The costs of private sewer adoption are unknown.
- We may be required to implement a larger environmental programme than we believe will be justified by an assessment of costs and benefits.
- There may be changes in the standards for drinking water quality which would add to the costs of treatment.
- There may be significant changes in input costs, for example:
- energy prices may increase due to rising world oil prices or taxation changes to include carbon impacts in the price.
- construction costs may increase with high demand because of other major construction projects,
  e.g. the Thames Tideway and the Olympics.

- costs of chemicals used in water and sewage treatment may rise because of growing world demand.
- Costs resulting from the Traffic Management Act could be higher than expected, either in terms of charges from local authorities for occupation of roads in carrying out repairs, or costs of changing the way we operate.
- The contribution we will need to make to reducing carbon impact, and the extent to which there will be conflicting pressures to increase energy use, remains uncertain.
- The extent of the need to provide for new housing, and the location of new demand, could be significantly different from our expectations. This will be affected by the pressure on water infrastructure caused by the Government's drive to increase the supply of new houses.
- Interest rates have been low by historical standards for some years but instability in financial markets generally, or uncertainty about water industry returns, could cause this to change.

There are likely to be a number of other areas of uncertainty and we will need to be able to respond to an ever changing world. "We will have to be prepared to adapt our plans over time."

# KSI 1

## Providing a continuous supply of quality water

Our research shows that ensuring a safe, reliable water supply is the top priority for our customers and in addition customers have said they are willing to pay for improvements in improving drinking water acceptability, such as taste, odour and hardness.

#### The key challenges facing us are:

- → Based on the current trends of increasing population, more households and increasing use per household, we do not have sufficient water available to meet long-term demand.
- $\rightarrow$  We will have less water available in future as climate change reduces rainfall.
- → There is environmental pressure to reduce our use of water from some rivers and groundwater sources.
- → Our existing water supply system is unable to meet customers' increasing expectations of service in terms of continuity of supply, pressure and quality.

#### Our key strategic responses are to:

- → Ensure that we meet water quality standards and improve the acceptability of drinking water, through improved process efficiency and network design.
- → Improve our networks and treatment works to increase certainty of supply.
- → Reduce leakage through improving the distribution network, improving detection methods and speeding up response rates.
- → Reduce demand through:
  - Accelerating the installation of customer metering, coupled with appropriate tariffs.
  - Promoting water efficiency through the use of more water-efficient equipment, and ensuring new housing developments provide for economical use of water.
  - Using an education programme to promote water efficiency from an early age.
  - Making best use of our existing water sources through supply integration projects, using supplies from other producers where sustainable and economic, and, where necessary, developing new sources of supply by identifying the most sustainable abstraction or storage solutions.

#### Adopting customer supply pipes to reduce leakage and improve quality.

#### → Providing safe, acceptable drinking water

Our performance in 2006 on meeting water quality standards was amongst the best in the country. We are close to 100% compliance against a very tight standard – more demanding than the standard for bottled water. Fewer customers contact us regarding acceptability of drinking water than most other companies (1.86 customers per 1,000 population in 2006, compared with a national average of 2.89). DWI's view is that standards are there to be met 100% of the time, and that there should be a reduction in risk of failure. High quality drinking water



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"our 2006 performance on meeting water quality standards was amongst the best in the country" We have made the assumption that there will be no further significant changes in drinking water quality standards. We will continue to implement a comprehensive risk assessment and management approach, as recommended by the Drinking Water Inspectorate. Water safety is our customers' top priority and we will ensure that our assets are maintained to continue to deliver this and to eliminate discolouration problems.

We intend to make improvements on performance against current standards by:

- Changing treatment processes where required because of deteriorating raw water quality e.g. increasing nitrate levels. Changes in agricultural practices may be more economic than removal of contaminants at treatment works, but any such changes take a long time to have an impact on levels of nitrates in groundwater. We will continue to work on catchment management policies.
- Improving water quality monitoring at treatment works and in distribution – to measure performance and identify issues requiring action before customers experience problems.
- Monitoring asset condition and performance to take action before problems arise.

Performance in terms of meeting drinking water standards is good and these standards ensure a safe supply. Other water attributes such as taste, colour, odour and hardness are important to customers but are more subjective. Our willingness to pay survey suggests that customers would support further improvements in drinking water acceptability.

Our surveys tell us that a number of customers would like to see improvements in these elements:

- We have improved our performance on discolouration, but we still receive around 8,000 complaints per year.
- 12% of customers find the taste of the water we provide unacceptable.
- 14% are dissatisfied with the hardness of water.

Discolouration is not acceptable. We have improved in this area but we will need to ensure we have the right programme of mains renewal and cleaning to eliminate problems. We have a programme of improvements for taste and odour (changing processes at three water treatment works) and for hardness (reducing hardness at four works). We are surveying customers before and after improvements are made to assess the value customers put on the improvements achieved and the scale of the future programme for taste and odour and hardness will be dependent on the reaction of customers in the areas where changes are being made. We expect to have a programme of further improvements, where the benefits exceed the costs.

F	Potential 2	2035 impac	t on bills of	water q	uality imp	rover	nents: +£3
	$\rightarrow$	÷					
£	20	£5	£1	0	£1	5	£20

#### → Avoiding interruptions to supply

In 2006/07 0.7% of customers experienced an interruption to supply of over 6 hours, compared with an industry average of 0.5%. Performance in 2007/08 will show deterioration, mainly because of a prolonged interruption to supplies to customers in the Cheltenham, Gloucester and Tewkesbury area as a result of the treatment works at Tewkesbury being flooded in July 2007.

Our objective is to set the standard for the industry, with less than 0.1% of customers affected by interruptions of over 6 hours. We also aim to minimise the number of interruptions of shorter duration. Customers told us that they would pay for reductions in interruptions to supply.

In order to reduce the risk of interruptions, we will need to:

- reduce the frequency of water mains bursts to reduce the number of relatively short interruptions to supply (we currently have around 7,500 bursts per year).
- reduce the likelihood of major interruptions, by improving our network to reduce the impact of loss of supply from a treatment works.

We have increased our rate of mains replacement since 2004/05 and are currently replacing about 0.7% of mains each year. A further increase in the rate of replacement is likely to be needed – we are planning for replacement to rise to 1% per year. This will also make a significant contribution to reducing leakage. We will also increase the maintenance of our aqueducts, where failure would have a major impact on water supply.



"we are planning to increase the rate of water mains replacement to 1% per year"



Despite higher replacement, there will still be a significant amount of mains bursts in the medium term, due to the size and age of our network.

- Reducing interruptions will also require action on: • our speed of response when there is a mains burst or other operational issue;
  - providing duplicate supply routes to allow continuity of supply when assets fail.

We have been improving supply security by duplicating networks supplying areas of over 20,000 population. We will continue this programme beyond 2010. We have also been implementing three strategic water mains projects to reduce the impact of treatment works failure.

We will review whether we should extend and improve the resilience of our strategic water mains to reduce the risk of customers losing water supply as a result of a treatment works being out of action. A significant proportion of our network is based on the premise of supplies being predominantly from a single source.

Following the flooding at Mythe works at Tewkesbury, we are planning to improve the link with our Strensham works in Worcestershire. Full coverage against treatment works failure would be very costly, particularly for the largest works. There will need to be some discussion of the extent to which risks should be provided for by duplicating supply capacity.

Potential 2035 impact on bills of plans to avoid supply

interruptions: +£15

"we don't have enough water available to meet long term demand"



#### Increased metering



 $\rightarrow$  Having enough water available to meet demand

We don't currently have enough water available to meet long term demand. We estimate that we will be about 250 million litres per day short over the next 25 years. That is about 14% of our current supply of 1,900 million litres per day.

Climate change is likely to make things more difficult for us. Climate change scenarios indicate that the Midlands area could see an increase in average temperature of around 1° to 3.5°C and up to 11% overall reduction in rainfall by 2080 with:

- Summers becoming hotter and drier.
- Winters becoming milder and wetter.

Rain is likely to fall in more intense periods in the winter which makes meeting the higher demands in the summer more difficult.

We will need to get the right balance between increasing water storage or abstraction, reducing leakage, and reducing demand.

Water has been relatively plentiful and cheap in the past, which has limited the need to make savings in water use. As the climate changes, and we need to reduce our impact on the environment by reducing our use of water from rivers and groundwater sources in order to preserve biodiversity, we will need to change this. That means Severn Trent will need to get more efficient in the production and distribution system, where current leakage levels are estimated to be around 25% of the water we put into supply. It also means that customers will be encouraged to reduce their usage, particularly in the summer when supplies may be more restricted.

Our aim is that we will only have to resort to a hosepipe ban once every thirty years. Our survey of customers did not suggest that we should change the level of investment to change the frequency of

Customers generally willing to pay	Customers may be willing to pay	Customers less willing to pay
Internal flooding	Hosepipe bans	External flooding
Low pressure	Leakage	River quality
Supply pipe adoption	Renewable energy	Low flow rivers
Interruptions	Hardness	Metering
Treatment works odour		
Discoloration		
Taste and odour		

Customer willingness to pay for improvements relative to costs of improvements

hosepipe bans. This will be kept under review as future changes take place, such as climate change and increasing rates of house building in the region.

To balance supply and demand we will need to reduce leakage, reduce demand through metering and reduce demand through encouraging more efficient use of water. Even then we may still need to develop new sources of supply or provide additional storage. We are currently evaluating the options as part of our Water Resources Plan which will be completed by March 2008. Any new resource schemes will need to include action to mitigate environmental impacts, and to provide improved habitats for wildlife.

We believe that the right balance should be struck based on minimising costs; for example, we do not believe that customers should pay for reducing leakage when other options are more cost-effective. The appropriate balance will, however, be influenced by the current reviews of the approach to setting leakage targets and of the assessment of environmental and social costs. Together with our regulators and customers we will need to take proper account of social and environmental costs as well as economic costs.

We have summarised below the actions we will take to provide a continuous supply of quality water, and the impact those actions are likely to have on bills in 2035.

#### → Reducing leakage

Reductions in leakage are a particularly high priority for ourselves, Ofwat, the EA and CCWater. Customers agreed that leakage should be reduced but we are keen to ensure that the costs are justified. We will aim to make leakage control more economic by increasing the effectiveness of monitoring water flows, to identify where leaks are arising, and introducing new leak detection techniques. Adoption of customer supply pipes would contribute to making leakage reduction more effective by making replacement of leaky supply pipes easier. Our analysis for the draft Water Resources Plan indicates that around 60 Ml/d of the supply / demand imbalance should be addressed by reducing leakage.

Potential 2035 impact on bills of leakage reduction plans: +£5						
-	→←					
£0	£5	£10	£	15 £20		

#### → Reducing demand through metering

In a future world, where climate change has meant that water is more scarce, and because we want to have less impact on the environment, it is clear that we will need to increase the number of customers who are metered. The majority of customers accept that metering is the fairest method of charging. Additionally we believe that, with the right meters and tariffs, customers would be encouraged to reduce water use by being able to see the cost of their water usage and by being charged appropriately for high use.

Customers do not want bills to increase to pay for a rapid extension of metering so we will need to ensure an appropriate rate of increase of metering.

Currently just over a quarter of our domestic customers are metered, which is below the national average. This is steadily increasing, as a result of all new properties being metered and customers taking up the option to have a meter installed free of charge. However, on current policies, about a third of customers will still be charged on an unmeasured basis in 2035.

Our objective is that all customers should be metered. We propose to accelerate the installation of meters through targeting a higher rate of metering in areas where there are supply deficits, and additional resources are expensive, where summer demand is high, or where we need to reduce water abstraction to improve the environment. This may be achieved through metering properties where there is a change of occupier. We do not currently have the power to compulsorily meter existing customers.

We will seek to positively influence the debate and sensible policy developments in this area to achieve our goals.

We will support further research and development into metering to develop more sophisticated and costeffective meters. As these developments take place we will review the speed of progress with metering.

Potential 2035 impact on bills of increasing the rate of metering: +£3						
$\rightarrow$	<del>(</del>					
£0	£5	£10	£15	£20		

"we want to accelerate the installation of meters"



#### → Reducing waste through increasing water efficiency

We see increasing water efficiency as an important part of the strategy to balance supply and demand and to reduce impact on the environment. A wholesale change to our approach to water use will be required over the next 25 years. We cannot do this alone and it will require a combined and sustained effort from government, regulators and all agencies. We will actively play our part.

The water appliances and devices we use will need to be designed to be more efficient. We will work with equipment manufacturers to support this and seek input from those who set the standards. We will work with our customers to do what we can to reduce water use, for example from toilet flushing, by replacing existing water appliances with more efficient ones.

We will work with developers in our region to provide water-efficient houses and developments, for example through rainwater recycling and promoting the installation of more efficient fittings.

We will improve the efficiency of water use on our own sites, including ensuring that our new head office is water-efficient.

We will seek to influence the attitudes of the current next generation of customers to water use through focused awareness activities. We will build on our education programme to influence future generations. We expect the increasing use of appliances with low water use to result in falling water consumption per person.

"we will build on our education programme to influence future generations"



Severn Trent Water Strategic Direction Statement 2010 → 2035 Options for reducing demand by water re-use include:

- Rainwater harvesting for non-potable use for new developments (domestic & commercial buildings).
- Retrofit rainwater harvesting for non-potable use for existing commercial buildings.
- Commercial water reuse schemes and grey water use (especially for industry).

We will carry out trials to determine the scope for increasing water re-use cost-effectively.

We currently have three water efficiency projects under way, the results of which will influence our future approach:

- A household water efficiency trial, including the audit and retrofit of efficient devices.
- A school water efficiency trial, assessing similar aspects within schools.
- Local government partnership a pilot audit scheme in one of our council areas to investigate opportunities to promote water efficiency.

We expect to develop these opportunities further after reviewing the trial results.



➔ Increasing long-term water supply capacity

In our 2004 Water Resources Plan we identified the need for additional supply capacity of 273 MI/d between 2010 and 2030. The 2009 Plan is likely to show a similar need. We will address this by reducing leakage, increasing metering and improving water efficiency, to an economic point, i.e. where further measures would result in higher costs, including social and environmental costs, than if we meet demand through additional resource development. It is likely that our programme will include some additional resource capacity. The options considered will need to take into account the need for increased security of supply to reduce the potential impact of asset failure.

In addition to providing extra water resources and treatment capacity, we will need to increase network capacity by, for example, increasing pipe diameters, in order to meet higher demands in hot weather.

With summers becoming hotter and drier, further capacity problems are likely to be identified. Shifts of population to more rural areas, and increasing peak use as a result of more use of sprinklers, pools and other high water use summer activities, will also have to be taken into account. We will increase the extent to which we can anticipate these problems through network modelling, and expand capacity before supply becomes inadequate.

Potentia	l 2035 impact o	n bills of increas	ing supply capa	city: +£9
£0	£5	£10	£15	£20
,				

#### $\rightarrow$ Ensuring water is at an adequate pressure

We have taken action to reduce the number of low pressure problems, and at 31st March 2007 only 314 properties were on our register of customers at risk of low pressure. Against current standards, our performance is very good. Less than one customer in 10,000 is on the register, a lower rate than most other companies.



However, we realise that for those customers affected our performance is not good enough. To address this, we are improving the extent of pressure monitoring by installing permanent pressure monitoring devices at all critical points, which may result in more problems being identified. We will continue to deal with low pressure problems as they are identified to keep the register at a low level.

The main remaining low pressure problems relate to properties with joint supplies, where a single pipe leading from the water mains supplies several properties (typically four to six). We get around 2,000 complaints a year about low pressure where a customer is on a joint supply. We believe that joint supply pipes will become increasingly unsatisfactory for customers. Modern appliances, for example instant showers and closed circuit boilers, demand a higher and more consistent pressure. We do not know how many joint supplies there are, but our estimate is 250,000. We are carrying out work to improve the estimate.



We have a programme to separate 7,540 supply pipes in the five years to 2009/10, but have only carried out about 1,000 in the first two years. This is because, despite promotion, few customers have taken up the scheme, as the customer has to pay for the replacement of the pipe within their property. Many of the affected properties are terraced houses where income is often relatively low.

We consider that we must make progress in reducing this problem over the next 25 years. We propose that this should be associated with taking over responsibility for customers' supply pipes, up to the internal stop-tap, with us paying for all the pipe replacement work.

Our survey of willingness to pay shows significant support for taking over supply pipes (£5.55 per domestic customer) and for reducing low pressure problems (£3.57 per domestic customer to resolve 5,000 problems). Supply pipe adoption would also have benefits in terms of reducing leakage and reducing the number of customers with lead supply pipes.

Potential 2035 impact on bills of supply pipe adoption: +£8						
	-	→←				
£0	£5	£	10	£15	£20	

"we have a programme to separate 7,540 supply pipes by 2009/10"



### Dealing effectively with waste water

Our customers should have confidence that we will take away their waste and treat it to the highest environmental standards before returning it to our region's rivers.

#### The key challenges facing us are:

- → Increasing expectations for good environmental performance the Water Framework Directive requires rivers to be brought up to good ecological standard.
- → More sewer flooding problems due to:
  - Increasing storm frequency due to climate change.
  - New housing development and paving over permeable surfaces.
- → The need to reduce our carbon footprint.
- → Privately owned sewers are to be transferred into our ownership, however the timing of this, the extent and condition of these assets are unknown.
- $\rightarrow$  Pressure on the land route for sludge disposal.
- → Decreasing tolerance of odour while housing development close to treatment works increases the potential for odour problems.

#### Our key strategic responses are to:

- → Encourage solutions addressing pollution at source, and to meet higher standards for sewage treatment where this is the most cost-effective solution.
- → Have a target of no serious pollution incidents or any pollutions caused by our assets and operations.
- $\rightarrow$  Prevent sewer flooding by:
  - ensuring that no customer community is subjected to internal sewer flooding
  - improving the capacity of our network to cope with all but the most extreme forms of weather, through separation of foul and surface water drainage
  - promotion of Sustainable Drainage Systems (SUDS).
- $\rightarrow$  Support the transfer of private sewers into our ownership.
- $\rightarrow$  Minimise the nuisance from sewage treatment works.
- $\rightarrow$  Increase our use of sewage sludge as a renewable energy source.

Our proposals are based on making improvements which customers support and ensuring that we have a sustainable impact on the environment.

We have summarised below the actions we will take to deal effectively with waste water and the impact that those actions are likely to have on bills by 2035.

"we have a very good record on meeting required standards for sewage treatment discharges"

Severn Trent Water Strategic Direction Statement 2010 → 2035

#### $\rightarrow$ Meeting higher standards for sewage treatment

River water quality in the Severn Trent area has improved significantly, with an increase in the proportion of rivers of good standard from 37% to 59% over the last 15 years. Much of this improvement is due to changes in sewage treatment standards.

We have a very good record on meeting required standards for sewage treatment discharges, and failures are rare. We aim to maintain performance against current standards, and in order to achieve this the amount of maintenance work needed on assets



1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006



will increase over time. Our sewage treatment asset base has expanded significantly over the last fifteen years, to meet higher treatment standards. An increasing proportion of these assets will need replacing over the period to 2035, particularly mechanical and electrical equipment, which generally has a life of around 20 years.

We will work with our business customers to manage more effectively the waste which is sent to treatment at the sewage works. We will also need to expand our sewage treatment capacity to provide for a growing population (8% growth expected over 25 years) and for changes in the distribution of population around our area.

Customer willingness to pay for improvements relative to costs of improvements					
Customers generally willing to pay	Customers may be willing to pay	Customers less willing to pay			
Internal flooding	Hosepipe bans	External flooding			
Low pressure	Leakage	River quality			
Supply pipe adoption	Renewable energy	Low flow rivers			
Interruptions	Hardness	Metering			
Treatment works odour					
Discoloration					
Taste and odour					



"we will research new methods of sewage treatment to determine more sustainable approaches"

There will be further tightening of discharge standards. Some reduction in phosphorous in discharges is expected under the Urban Waste Water Treatment Directive, and further improvements will be required under the Water Framework Directive (WFD).

The WFD is designed to ensure that all water bodies achieve good ecological status in terms of their ability to support a wide range of wildlife. As the graph above shows, a high proportion of rivers in the Severn Trent area (Humber and Severn river basins) are at risk of not achieving good status. For around 40% of river length, point sources (including sewage treatment works) are contributing to potential failure. There are,



however, other sources of potential failure, including pollution from diffuse sources such as run-off from fields and roads.

The WFD provides for river quality objectives to be achieved by the most cost-effective means, and for objectives to be modified where costs are disproportionate to benefits. We welcome the consideration of benefits relative to costs; previous European Union directives have led to tighter standards which may not always have been justified by the net benefits, particularly when additional energy use is taken into account.

We support further sewage treatment changes if justified by the benefits to river quality relative to costs, and if this is the most cost-effective way of improving rivers. The additional power costs and resulting carbon impact need to be taken into account in this assessment. We will also research new methods of sewage treatment to determine whether more sustainable approaches can be developed.

Initial work on cost-effectiveness suggests that to achieve tighter standards, installation of sewage treatment processes at some works for removal of phosphorous and ammonia will be required, although removal of phosphates from detergents and reducing run-off from agriculture should also make a contribution. In relation to some other substances, such as certain metals and endocrine disrupters, standards would be very costly or impossible to achieve through sewage treatment. Prevention of such substances entering the sewerage system, and therefore addressing the original source of pollution, is likely to be a more cost-effective and sustainable approach.

"we will set a target of no serious pollution incidents"

In order to contribute to the assessment of benefits, we included improvements in river quality in our survey of customer willingness to pay for improvements. Domestic customers told us that they would pay around 20p per year for each 1% of river length improved to good standard. However, this would probably not be sufficient to deliver all the improvements required to bring river quality up to good standard across the region.

We consider that improvements should be spread over three six-year WFD review cycles, to 2027, rather than all being implemented in the first cycle. This will give more time to determine the most cost-effective solutions and whether the standards which have been set are necessary in order to bring rivers up to a good standard. It would also have the benefit of avoiding a step change in bills for sewerage services.

For the purpose of this strategy, we have assumed that the programme of improvements will be limited to that which is cost-effective and supported by our customers – we have included provision for additional

Severn Trent Water Strategic Direction Statement 2010 → 2035 phosphorous and ammonia removal. The programme proposed will be smaller than that in recent years. If a much larger programme is required, significant increases in bills will result.

Potential 2035 impact on bills of sewage treatment improvements: +£14 (based on our preferred programme)					
			$\rightarrow \leftarrow$		
£0	£5	£10	£15	£20	

#### $\rightarrow$ Controlling pollution

We have one of the best records in terms of number of serious pollution incidents (Categories 1 and 2). However, the number of Category 3 (less serious) pollution incidents showed an increase in 2005, and rose above the national average (see graphs below).

We believe that there is an issue about comparability of reporting of incidents arising from surface water outfalls, which means that our performance relative to other companies is likely to be better than the published figures suggest.

An action plan has been agreed with the EA and Ofwat to reduce Category 3 pollution incidents. The number of incidents is significantly down in the six months to March 2007. The graph below shows a forecast in 2007 if the reduced number of incidents is maintained.







We will invest to achieve further reductions in numbers of pollution incidents, with a target of no serious pollution incidents, and no pollution incidents caused by our assets or actions. We will continue to work with the EA to develop solutions to pollution problems.

Actions to reduce pollution incidents will include:

- Increasing telemetry on sewer overflows, storm tanks, and rising mains so that alarms will provide warning when assets are not functioning properly.
- Improving information about the condition and performance of our network so that we can target our actions more effectively.
- Maintaining our sewer cleansing programme (increased in the last two years) to reduce pollution incidents caused by blockages and siltation.
- Improving the sewer network where the design of the network causes problems.
- Reducing pollution incidents arising from sewer collapses by replacing or renovating sewers where the need is identified by our CCTV survey programme.
- Educating the public about the potential effects of disposing of oils, fats and greases in sewers.

There will initially be a disproportionate amount of pollution problems associated with the privatelyowned sewers which we will be adopting. These assets will need to be brought up to standard. We expect these sewers to be in a worse state than our own sewers in terms of materials, condition or design.

Potential 2035 impact on bills of plans to reduce pollution: +£4								
	$\rightarrow$	-						
£0		£5		£1	0	£1	5 £	220

→ Addressing flooding from sewers

Sewer flooding is extremely distressing and traumatic and can affect customers' quality of life dramatically. It is the worst service failure our customers can experience. We regard sewer flooding as being unacceptable.

Our customers told us that they would pay for significant reductions in sewer flooding, particularly for internal flooding. A more detailed survey of customer views also showed much stronger support for reducing internal flooding than external. Therefore a particularly strong focus of our future programme will be minimising the number of properties subject to internal flooding.

There are two main reasons why sewer flooding occurs:

- Sewers become overloaded due to insufficient capacity at times of high rainfall.
- Sewers fail to operate effectively due to problems such as blockages, collapses or pumping station failures.

Our aim will be to eliminate flooding of properties from sewers, except as a result of exceptionally high rainfall which exceeds the design standards for our system.



We will increase our rate of dealing with problems, to address currently-known problems and deal with new ones arising. We will also aim to improve forecasting to identify and resolve potential flooding problems before they actually cause flooding.

New problems continue to be discovered as a result of:

- New developments and paving over of previously permeable surfaces.
- Problems coming to light that had previously been unreported.
- Changing weather patterns climate change may lead to increased storm frequency, with storms spread throughout the year rather than concentrated in the summer.

The implications of climate change are that:

- The sizing of schemes to address sewer flooding, in terms of sewer size and storage capacity, will need to be reviewed.
- Addressing new sewer flooding problems arising from overloaded sewers will continue to be a significant part of the capital programme.

A key aspect of keeping down the growth in sewer flooding problems is dealing more effectively with surface water (rain water). Retaining surface water in the foul or combined sewerage system and passing it to sewage works for treatment is an inefficient use of the network and assets. This inefficient use of our system potentially leads to flooding, reduced sewer capacity and an increased carbon footprint. We will investigate the scope for separating foul and surface systems with the dual benefit of creating capacity and improving the efficiency of sewage works through treating stronger sewage. We will assess the scope and cost through examining some pilot areas – separating the whole network would be an extremely costly task.

There is also great potential for sustainable drainage systems (SUDS) to deal with surface water and reduce the growth in sewer flooding problems, keeping down costs and reducing costs of pumping sewage. SUDS are designed to deal with surface water as close to the point where the rain falls as possible, by local storage

"our aim will be to eliminate flooding of properties by sewers"



#### Investigating all repeat blockages



of the rain water or providing the ability for the water to soak away. They aim to mimic natural drainage methods and avoid passing large volumes of water quickly downstream reducing flooding from sewers and watercourses, which could also create opportunities for improved habitats for wildlife.

The development of SUDS has so far been slow. We will seek the necessary legislative backing, encourage the installation of SUDS, and install our own SUDS devices in response to problems on existing systems. We will commence this by installing some trial pilot projects.

We welcome the consideration currently being given to increasing the coordination between organisations responsible for inland flood risk management – EA, water companies, highways authorities, local authorities and internal drainage boards.

"we support the transfer of private sewers to our ownership" In terms of flooding due to blockages and collapses, actions to reduce the number of problems will include:

- Increasing CCTV surveys of sewers and resolving any problems identified.
- Investigating all repeat blockages and correcting faults identified.
- Improving blockage clearance methods.
- Increased use of telemetry to monitor sewer performance.

While internal sewer flooding problems would still occur, e.g. due to exceptional storms, these measures would be intended to reduce the number of internal flooding incidents to a very small number. We would also seek to reduce significantly the number of external flooding incidents (some of which will be achieved as part of projects to address internal flooding problems), and resolve all of the most serious problems.

#### ightarrow Taking on privately-owned sewers

In February 2007 the government announced that private sewers which are connected to the public sewer network will be adopted by water and sewerage companies. Many customers are unaware that they have private sewers until those sewers fail, leaving them, in some cases, with major repair bills. We therefore support the transfer of these sewers to our ownership.

The government is currently consulting on exactly which assets will transfer, and on the timescale for transfer. Even when this is known, the increase in our costs will be uncertain, because the length of private sewers and their condition is unknown. It is, however, certain that the sewers will in many cases not be in good condition, with maintenance having been neglected, or of poor standard in terms of materials and construction.

There could be in the region of 27,000 km of private sewers (which would increase the length of our sewers by around 50%) and between 600 and 1,100 private pumping stations.

The transfer will undoubtedly increase costs significantly, particularly while initial problems are being resolved and information on the assets is collected. The national estimate in the government's recent consultation is that the transfer could add  $\pounds$ 6 to bills, but this may be an underestimate. There is, however, a wide range of uncertainty around this impact. In view of the uncertainty, there will need to be provision for customer prices to be adjusted after the price review according to whether costs are higher or lower than expected levels.

Potential 2035 impact on bills of reducing sewer flooding: +£5					
	$\rightarrow \leftarrow$				
£0	£5	£10	£15	£20	

Potential 2035 impact on bills of adopting private sewers: +£10						
		→←				
£0	£5	£10	£15	£20		

#### → Dealing with problems of odour from sewage treatment works

Odour from sewage treatment works and from the sewerage system can have a detrimental impact on the quality of the local environment for those living close by. Sewage treatment and sewerage systems will never be completely odour-free but we will aim to have eliminated the potential for this to be a significant nuisance.

The costs of odour control need to be balanced against the benefits. There is a range of options available, with differing costs and impacts on odour. We have not adopted solutions involving completely covering sewage treatment works and we do not believe that this is the most sustainable solution because of the impact on operating costs and energy use. Customers support reducing sewage odour, but not to the extent of supporting very high-cost improvements.

We are implementing a programme of odour control measures at 35 works over the five years to 2009/10 with a 50% increase in the rate of dealing with problems. This will provide for:

- Addressing existing problems.
- Resolving new issues arising as a result of decreasing tolerance of sewage treatment odour.
- Resolution of new problems arising from new development near treatment works.

We will increase the extent to which we prepare odour management plans in advance of new developments, rather than reacting to complaints following new development.

#### ightarrow Dealing with sewage sludge sustainably

We treat sewage sludge mainly by digestion followed primarily by dewatering. We are the industry leader in the use of digestion biogas in CHP (Combined Heat and Power) engines to generate power.

Nearly 80% of the sludge production is recycled to land, which is still perceived as the best practicable environmental option in most circumstances. The land route is, however, under pressure from:

- Perception by some key stakeholders, including farmers, trade/retail organisations and the public, of this being an undesirable practice.
- Changing legislation increasing requirements on product quality and limiting application rates and opportunities.

As sludge treatment requirements and costs for agricultural recycling increase other disposal routes become viable. There are further opportunities for electricity generation both for in-house use and for sale to third parties. In view of the greenhouse gases associated with sludge disposal to land, increasing electricity generation may be the best environmental option.

We are currently constructing sludge driers and expect to increase steadily the amount of sludge dried in future. Drying helps mitigate risks associated with sludge handling and secure the land route by:

- Improving sludge microbiological quality.
- Reducing sludge storage and disposal volumes.
- Reducing odour nuisance associated with the movement of stored sludge.
- Reducing vehicle movement.





Sludge drying opens other outlets including energy recovery from combustion (in-house or third party) and use as a carbon-neutral fuel in industrial processes. These opportunities are already being explored. Possibilities include collaborating with a supplier to provide an advanced thermal treatment plant trial at a sewage treatment works.

Ultimately we expect that all sewage sludge will be used for energy generation and residues from these processes will also be beneficially reused avoiding landfill disposal. Research will be needed into the potential beneficial uses for 'ash' and by-products from incinerators. We will also seek to recycle waste from activities such as sewer cleansing, rather than sending it to landfill.

Potential 2035 impact on bills of dealing with sludge: +£1						
£0	£5	£10	£15	£20		

"we expect all sewage sludge will be used for energy generation"

Potential 2035 impact on bills of odour reduction plans: +£1						
£0	£5	£10	£15	£20		



## Responding to customers' needs

Our customers tell us that, in addition to providing the highest levels of water and waste services, they expect to see higher standards of customer service.

#### The key challenges facing us are:

- $\rightarrow$  Rising customer expectations on service.
- $\rightarrow$  Changes in ways which customers want to communicate with us.
- → Performance has recently been below expectations.
- $\rightarrow$  Retail competition is likely to develop and apply to all customers.

Our key strategic responses are:

- → We will run our networks and billing systems in a way which minimises the need for customers to contact us due to service failures.
- → When customers need to contact us to report an operational issue, we will resolve the problem at the first visit or set out a clear course of action.
- $\rightarrow$  We will provide a range of channels for contact to meet customer needs.
- → We will improve our billing system to ensure that we can deal with customer queries rapidly and effectively.
- $\rightarrow$  We will improve our quality and speed of response when customers contact us.

This Strategic Direction Statement sets out proposals to reduce the number of service problems. Reducing failures, such as sending customers incorrect bills/ reminders or interruptions to supply, will reduce the need for customers to contact us, and make it easier to offer a high speed of response and standard of service to those customers who do need to contact us.

"establishing new means of communication will enable us to reduce costs and bills"

Currently we are around the industry average in terms of the number of customer contacts – reducing the number of problems will improve on this performance. In addition, improved monitoring of customer complaints will help to ensure that we focus on those areas of greatest concern to customers.

Over time we will need to change our approach, and offer more choice, to reflect changes in the way customers wish to communicate with us. We need to establish ways in which different groups of customers wish to communicate with us, whether it be web, mobile technology or telephony, and make the appropriate channels available.

For example, some people may continue to utilise the traditional telephony methods as the preferred medium of communication, while a higher proportion of customers is likely to use instant messaging or click button technology.





Establishing new means of communication, with a greater element of self-service, and reducing the number of service problems, will both improve service to customers and enable us to reduce costs and bills.

We will need to ensure that our billing systems meet the demands of our customers, our investors and our staff. We expect the retail element of our business to face much-increased competition over the next 25 years and if we do not improve the service we offer then other companies will be able to provide the service which customers require.

	Potential 2035 impact on bills of customer service improvements: Neutral or lower cost				
≽	÷				
	£0	£5	£10	£15	£20

## Minimising our carbon footprint

The need for society (and business) to minimise greenhouse gas emissions (and particularly carbon dioxide) because of climate change has become a major issue for society. The water industry will need to play a significant role in reducing its carbon footprint. We believe we can deliver a leading position in sustainable operations thereby minimising our carbon footprint, provided it does not compromise standards or increase bills beyond levels which customers are willing to pay.

#### The key challenges facing us are:

- $\rightarrow$  We will need to make our contribution to reducing carbon dioxide emissions.
- → We could be faced with requirements to increase sewage treatment which will add to energy use.

#### Our key strategic responses are:

- → To drive our programme on renewable energy generation and to maintain our leadership position in the sector.
- → To assess how our processes can be changed to achieve significant efficiencies in energy use.
- → To press for carbon impacts to be taken into account in assessing the case for further quality and environmental improvements.

The Climate Change Bill proposes binding legal commitments to reduce the UK's contribution to carbon dioxide emissions, through domestic and international action, by 60% below 1990 levels by 2050, and by between 26 and 32% by 2020. We will make our contribution and enter into Carbon Reduction Commitments.

We have a strong position compared with the rest of the water sector on power generation from sludge treatment processes. We intend to retain this leadership position.

There are some clear opportunities to increase power generation at sewage works from sewage sludge treatment. There are also potential opportunities from energy crops, wind turbines, electricity generation from burning dried sewage sludge, and additional hydroelectric power. We will actively explore all of these options.

We will reduce our carbon impact by:

- Generating more electricity from renewable sources.
- Making our energy use in pumping and in treatment processes more efficient.
- Ensuring our offices are energy-efficient and minimising fuel use for transport.

As the graph below shows, there is scope for us to significantly reduce our net energy use (by about a third compared with current use), due to efficiency savings and additional generation.



An essential part of reducing carbon emissions will be to ensure that we do not add significantly to energy use by energy-intensive treatment processes – additional processes such as phosphorous removal at sewage treatment works often involve high energy use. Sustainable solutions to achieve improvements in river quality will need to be found. We will incorporate the cost of carbon in our investment appraisals in developing our plans, including taking into account the carbon impact of our suppliers' activities.





"there is scope to reduce our net energy use by about a third"

# KSI 5

## Having the lowest possible charges

Throughout the period since privatisation in 1989, bills for Severn Trent customers have been amongst the lowest in the country, and it is our objective to maintain this position.

#### The key challenges facing us are:

- $\rightarrow$  Bills have been rising since privatisation and affordability is an issue for some customers.
- $\rightarrow$  Service improvements will increase costs and bills.
- → Existing cross-subsidies could come under pressure from competition.
- → By 2035 rateable values for charging unmeasured customers will be 60 years old.

Our key strategic responses are:

- → Limit bill increases by ensuring improvements are supported by customers.
- $\rightarrow$  Make continued improvements in efficiency to keep bills down.
- → Ensure proposed service improvements take account of willingness to pay amongst low-income groups.
- → Continue to increase metering using assessed consumption based on property type for remaining unmeasured customers.
- → Develop payment options and continue to support our charitable trust which provides help to those in debt to help the most needy and least able to pay.
- → Make sure that those who can pay but won't are pursued effectively.
- → Develop more sophisticated charges for metered customers applying rising block or seasonal tariffs.

Comparison of bills 500 400 E - 2007/08 prices 300 200 Severn Trent 🛑 Minimum — Maximum — Average < 100 0 (1998/99) (1999/00) 2000/01 2001/02 2002/03 2003/04 2003/06 989/90 .992/93 .993/94 1994/95 1995/96 1996/97 1997/98 991/92 990/91 0/900

"currently the average STW household bill is around 78p per day"

Water bills have been rising since privatisation, as a result of companies having major improvement programmes for drinking water and environmental improvements. This has led to higher bills despite substantial improvements in efficiency. Currently, the average Severn Trent household bill is £141 for water and £138 for sewerage – or around 78p per day.

Due to these increases in bills, water bills have been rising as a proportion of income and water bill debts have been increasing. In deciding on the extent of service improvements, we will give particular attention to the extent of support amongst the lowest income groups who can least afford rising water bills.

#### → Keeping bills down

In order to keep bills down we will make improvements in efficiency. We are currently putting changes in place to take the complexity and costs out of our operation and improve quality of service at the same time. New teams have been established focussed on key processes (Water, Waste Water, and Customer Services) with each having total responsibility for the capital plan, the delivery of new investments, operations and maintenance. In order to ensure that the highest standards are maintained while increasing efficiency, a new team has been established to lead our safety improvements. The team is also responsible for setting and monitoring quality and technical standards across the business.



We intend to make continuous improvements in efficiency across the business throughout the period. The areas where these will be achieved cannot all be known at this stage, but areas where we expect to see innovation to bring down costs include:

- Improvements in methods of monitoring and detecting leakage.
- Developments in monitoring of network performance to identify earlier any problems in terms of water quality or continuity of supply.
- Improved forecasting and monitoring of asset deterioration, allowing better targeting of asset maintenance.

- Increases in the efficiency of energy use, and innovation in the generation of electricity.
- New developments in catchment management, to reduce costs of water and sewage treatment.
- Introduction of "smart meters", which will improve measurement of flows in the network and permit new methods of charging to manage peak demand.
- Improved approaches to water and waste water treatment to reduce chemical use.

#### $\rightarrow$ Developing our charges

Our objective is that all customers should be metered, as the only fair means of charging for the services which we provide.

We recognise that there might be affordability consequences of extending metering which we will address through developing tariff structures which make use of smart meters. Such structures, e.g. "rising block" or seasonal tariffs, will need to encourage the efficient use of water, while avoiding high charges for essential use.

For those customers who remain unmetered in the medium term the continuing use of rateable value as a basis for charging is unlikely to be sustainable. By 2035 these values will be 60 years old. For those customers who remain unmetered, we will charge on the basis of an assessed volume of water used, dependent on property type. This is a basis of charge which we already apply to some customers.

We believe it is the role of Government to ensure those in most need are protected through the welfare system rather than through radical developments to the way in which we charge for our services. We know that some customers have difficulty paying their water bills and we will develop payment options and continue to support our charitable trust which provides help to those in debt – to help the most needy and least able to pay. We will also make sure that those who can pay but won't are pursued effectively.

"our long term aim is for universal metering"



Severn Trent Water Strategic Direction Statement 2010 → 2035

## Having the right skills to deliver

If we are to deliver the service improvements we are aiming for and improve efficiency, we need to have the right people and resources available to us. Key aspects of this are attracting and retaining the right skills among our employees and suppliers. We also play an important role in the provision of a vital public service to the communities we serve.

The key challenges facing us are:

- → Recruiting certain skills is forecast to become more difficult, particularly in the engineering and science areas.
- $\rightarrow$  Our staff profile is unrepresentative of our customers and local communities.
- → A high proportion of the workforce is approaching retirement age over 17% of the operational workforce is between the ages of 55 and 60.
- $\rightarrow$  There will be increasing competition for construction capacity for infrastructure projects.
- → The nature of our business is that good service is largely unnoticed but problems are highly visible e.g. interruptions, sewer flooding, treatment works odour.

#### Our key strategic responses are:

- → Ensure Severn Trent is a company that people choose to work for, and of which they are proud.
- → Build a talented, diverse workforce with the right skills, experience and behaviours, and ensure that we retain key skills and experience.
- → Fully deploy and embed good leadership practice into the organisation.
- → Create an environment where people want to work and can perform at their best, including giving a very high priority to health and safety.
- $\rightarrow$  Have people processes that are effective, simple and easy to use.
- $\rightarrow$  Modernise our reward systems.
- → Proactively champion skills development in the region and engage with schools and colleges.
- → Maintain a culture where valuing diversity in all its breadth is part of the normal way of working.
- → Make Severn Trent a company that suppliers want to serve.
- → Promote the well-being of the Midlands for the benefit of our communities and for Severn Trent.

#### $\rightarrow$ Attracting and retaining the right employees

We are a regional business which will increasingly need to compete for talent in key skills areas such as engineering and science-related disciplines, as well as in corporate roles such as finance. The availability of certain skills is forecast to become more difficult, particularly in the engineering and science areas where fewer people are being trained, and the competition for those is likely to become national or even international. We need to review our response to these issues now in order to protect the future.

Our staff profile is typically not representative of our customers and local communities. In addition

to the need to broaden the pool of potential recruits, we will benefit from having a staff profile which is representative of our customer base because staff will be better able to relate to the people they serve. The quality of debate and decision-making will also be enhanced by having more diverse teams.

Of critical concern is the age profile of the existing workforce, particularly those involved in operational activities. Over 17% of the operational workforce are between the ages of 55 and 60.

Specific skills shortages in the water industry include high level technicians, electricians, leakage control technicians and skilled operatives. During a period

"it is critical we are able to attract and retain the right skills levels"

KSI 6

when we are aiming to reduce staff numbers but improve performance, it will be critical to ensure we are able to attract and retain the right skills levels.

We need to ensure that we create an environment in which employees feel valued and respected, resulting in them delivering great results through greater flexibility, reduced absenteeism and increased job satisfaction. This will create an organisation which is viewed very positively internally and externally and people will be keen to come and work for us. An active community presence will also raise our positive profile in the local area.

Our proposed actions are:

- Recognising and valuing experience and knowledge within our workforce.
- Setting up a rolling resource planning system to forecast medium to long term needs.
- Proactively championing skills development in the region and engaging with schools and colleges, encouraging young people to study relevant subjects and promoting the water industry to them.
- Becoming active in national skills development initiatives.
- Delivering current people engagement programmes and continuing to upgrade these in response to changing attitudes.
- Continuing to work towards a culture where valuing diversity in all its breadth is part of the normal way of working.
- · Continuing with proactive community programmes.

#### → Health and safety

A key part of offering a high quality environment to our employees is giving a very high priority to health and safety. We intend to continue reducing the number of accidents by embedding a strong safety culture. This is important in terms of the personal impact of accidents on our employees. In addition the skills and attention to detail that achieve higher safety standards are the



same as those that achieve higher operational and environmental standards and productivity. Therefore, as our operations achieve higher safety standards, they will also achieve greater operational efficiency.

#### → Community programmes

Our basic role is to provide a vital service to the communities in which we live and work. We recognise the need for us to contribute more as a large organisation based in the Midlands.

We are involved in our communities not only through our economic impact on our region but also through water education, preserving the natural environment, supporting local projects and employee volunteering.

Conservation, access, recreation and education (CARE) are enjoyed at our public access sites by up to 3 million visitors a year. Our network of five custom-built education centres is visited by more than 20,000 children a year and we provide a range of education resources which link into the National Curriculum.

#### A range of education resources



We intend to ensure that all our activities, particularly education, are focused to promote the well-being of our region for the benefit of all our communities.

#### $\rightarrow$ Retaining the right suppliers

There will be increasing competition for construction capacity, with a number of major infrastructure projects under way over the next few years, such as construction for the Olympics. This will make it increasingly important to make ourselves attractive to suppliers. We need to work more closely with suppliers and make it easier to do business with us.

Actions to be taken include:

- Smoothing out the regulatory cycle of capex through a more continuous approach to business planning, giving contractors a more predictable workload.
- Avoiding the winter peak in work to deliver projects for a March deadline.
- Making an early start to the contractor selection strategy for the next five-year programme.

"our public access sites receive up to 3 million visits a year"

## Maintaining investor confidence

Since privatisation the privately financed company model has delivered a significant and sustained increase in funding (from both equity and debt) for investments in the maintenance of our infrastructure and operations, higher quality standards and increased capacity. This model has been underpinned by an effective and transparent economic regulatory regime.

#### The key challenges facing us are:

- $\rightarrow$  There will be a continuing large capital programme to be financed.
- → Investor confidence needs to be maintained so that finance can be maintained at reasonable cost.
- → We are vulnerable to significant changes in cost which cannot be financed in the short term by higher prices particularly energy costs and interest rates.
- → Financing costs need to be kept down to achieve the objective of minimising customer bills.

#### Our key strategic responses are:

- → Ensure that a sustainable business model is maintained.
- $\rightarrow$  Have a financial structure which enables funding of a long-term investment plan.
- Secure a long term return on capital that ensures water remains attractive to investors in order to secure sufficient financing for our significant planned investment programme.
- $\rightarrow$  Have a financial structure which can absorb the impact of business cycle changes.
- $\rightarrow$  Provide long-term reasonable returns to equity investors.

"income from customers has been insufficient to finance the capital programme"

KSI 7

#### → Financing investment

Investing in service improvements can be financed from three sources:

- Customers' bills.
- Borrowing.
- Raising money from shareholders.

The scale of improvements required since privatisation has meant that annual income from customers has been insufficient to finance the capital programme. As a result, borrowing has increased steadily. This is likely to be the case going forward given the levels of investment required to deliver the strategic intentions set out in this statement.

In order to be able to raise finance from investors on reasonable terms, there must be confidence in financial markets that they will be able to earn adequate returns from investing in the water sector. This confidence was much reduced after the 1999 price review, but regained in the 2004 price review.

Severn Trent Water Strategic Direction Statement 2010 → 2035 It was noted in the foreword to the consultation paper by Ofwat and Ofgem on "Financing Networks" that "the positive response of the equity market to the 2004 review determinations and the continuing strong appetite of the debt markets for exposure to the regulated industries bode well for the ability to raise the considerable sums required".





The finance for the investment required to deliver the improvements set out in this Strategic Direction Statement will largely (if not wholly) need to be sourced from borrowing. A stable regulatory regime in which investors have confidence is essential to be able to finance such investment on favourable terms. It is essential that Ofwat allow companies to earn a reasonable rate of return, through their assumptions on the weighted average cost of capital, to maintain investor confidence.

Another factor is that the pace of further improvements should be constrained by the need to avoid a rapid increase in borrowing. This would raise the cost of borrowing, and result in higher bills for customers.

#### $\rightarrow$ Our financing strategy

Our financing strategy going forward will need to be able to withstand:

- Cost shocks, such as increases in energy prices.
- Credit shocks, which could occur if one company in the sector found itself in financial difficulties, changing views about sector risk, or if generally reduced confidence in the market raises costs for all borrowers.

Ofwat requires that water companies maintain a strong credit rating, as assessed by ratings agencies which assess the how risky companies are. This limits the extent to which borrowing can be increased. There is also a need to be able to raise finance for the future capital programme. These needs mean that there is advantage in retaining some borrowing capacity, rather than borrowing now to the full extent possible. At 31/03/07, 57% of our Regulatory Capital Value was financed by borrowing,



with the remainder being shareholder capital (which is around the industry average).

In terms of type of debt held, index-linked debt has some advantages so long as it continues to match the regulatory regime (with a return being earned on regulatory capital value based on a real rate of return, and the capital value indexed up with inflation). It would be unwise to assume that indexlinked debt will be available on favourable terms to finance the whole capital programme, as this market is reliant on a limited number of key investors.

#### **Developing investor relations**



There may also be advantages in having a mix of fixed and floating rate debt, in that it limits the exposure to changes in the extent to which the regulatory cost of capital is based on current market rates.

These considerations suggest a need to have a balance between funding from shareholders and from debt financing, in the type of debt held, and in the spread of debt maturities.

"a stable regulatory regime in which investors have confidence is essential"

# KSI 8

## Promoting an effective regulatory regime

The regulatory regime for the water industry has played a major role in ensuring increased efficiency and service and environmental improvements over the last 15 years. We believe, however, that the framework needs to develop to respond to the new challenges facing the industry going forward in particular to encourage innovation and long-term sustainable solutions.

#### The key challenges facing us are:

- → Persuading our regulators of the need to change to deal effectively with today's and the future agenda, which has changed significantly since privatisation given the regulatory regime on the whole has performed well.
- → Gaining the trust of our regulators given well documented mis-reporting and performance issues we have faced in recent times.

Our key strategic responses are:

- → Continue to work constructively with our regulators on ways in which the regulatory regime could be improved so that it works more effectively in customers' interests.
- $\rightarrow$  Ensure our performance meets with our regulators' expectations.
- $\rightarrow$  Ensure we put forward realistic and robust business plans.

The increasing emphasis on long-term planning (i.e. asking companies to provide Strategic Direction Statements) and balancing benefits and costs are steps in the right direction but we feel that there is scope for further improvements in the regulatory regime.

"we will work with Ofwat to develop a new framework for competition"

#### → The Regulatory Framework

- Government is responsible for setting water quality and environmental standards.
- The economic regulator Ofwat is responsible for determining price levels and ensuring companies carry out their functions.
- The Environment Agency (EA) is responsible for the licensing of water abstraction and effluent discharges.
- The Drinking Water Inspectorate (DWI) is responsible for the enforcement of drinking water quality standards.
- The Consumer Council for Water (CCWater) represents water customers.

#### $\rightarrow$ Economic regulation

The framework for economic regulation underpinned by the legislative framework and overseen by Ofwat has:

- Provided a major stimulus for significant improvements in efficiency through the price cap mechanism.
- Driven service improvements through a comparative competition regime.
- Helped ensure investor confidence through ensuring investors earn a return on their investment.

There are, however, a number of limitations of the framework for economic regulation:

- It can encourage short-term efficiency savings at the potential cost of ensuring that vital infrastructure is maintained and improved to meet future requirements.
- It provides incentives for meeting specific targets and carrying out defined activities, rather than providing best overall outcomes to customers and the environment.
- The price setting process leads to over-estimation of costs by companies in preparing business plans, which are then subject to cut-backs by the regulator with the risk of the regulator "getting it wrong".

- An excessive regulatory burden in terms of the amount of information required by Ofwat.
- It has failed to stimulate increased competition.

We will work with Ofwat to help develop:

- A regulatory regime which takes a long-term approach and facilitates continued investment.
- New approaches to price-setting, encouraging accurate business planning and "menu regulation", to encourage companies to reveal accurate forecasts.
- A new framework for competition to allow for more customers being eligible for competition and a new approach to access pricing.

We would like to move away from the current process of business planning submissions being subject to reductions by Ofwat and to companies putting forward realistic and robust business plans. We consider that we need to look at alternative approaches which can deliver better outcomes for customers while still ensuring that companies deliver efficiently. We have commissioned work in this area to look at alternative approaches, which we have shared openly with Ofwat.

#### → Promoting competition

In December 2005 a new competition framework was introduced, allowing customers who use at least 50 million litres of water per year (approximately 2,200 businesses nationally) to switch to a new water supplier. Competition can potentially take place through a new entrant supplying water through our network but as yet no customers have switched supplier.

The lack of active competition to date reflects a number of factors:

- The lack of a national grid for water.
- The lack of availability of additional water for potential new entrants to the industry.
- The limited number of customers to which competition can apply.
- Applicability of retail competition only to water, and not sewerage.
- The approach to pricing for new entrants, which has led to the margins between access price to network and retail price, and between wholesale price and retail price, being very small.

We consider that the general principle adopted for access pricing is a reasonable one, to ensure that customers to whom competition does not apply will not lose from competition. However, the case-specific approach adopted is cumbersome and tends to lead to very low estimates of costs avoided. The avoided costs principle could be made to work if a broader view of avoided costs were taken, based on the continuing costs of supply (i.e. long-run marginal cost).

In relation to retail competition, the "costs avoided" approach is unnecessary. A regime based on average-cost pricing for the retail part of the business would be more appropriate, and would be even-handed between incumbent and new entrant.

#### We support:

- The extension of retail competition to sewerage services.
- A lowering of the threshold for competition to increase the number of eligible customers.
- A change in the access pricing regime for both retail competition and common carriage.

In the medium term, we will investigate the practicality and efficiency of expanding the capacity of strategic links with neighbouring companies, to facilitate competition between companies. This would also assist in meeting imbalances of supply and demand, potentially reducing water shortages in the south-east of England.

#### → The structure of Severn Trent Water

In electricity and gas, the network, which is inevitably a monopoly, has been separated from the rest of the business. We believe that there are benefits from keeping water resources, treatment and distribution together, in terms of ensuring supplies are maintained at minimum cost. There may be a case for separating retail activities from the rest of the business, either through accounting separation, or splitting the companies. This will need to be reviewed after the pricing regime has been reviewed, retail competition has been extended to sewerage and to a larger number of customers, and when we can observe how successful retail competition has been in Scotland.

#### $\rightarrow$ Environmental regulation

The EA has some innovative proposals which would give companies more flexibility in delivering environmental improvements, enabling benefits to be achieved more efficiently. The EA is planning to introduce more risk-based approaches to regulating discharges from sewage treatment works and to target regulatory effort where it is most needed. We support such changes as ensuring that environmental improvements are achieved in the most cost-effective way. We also support the EA's efforts to encourage innovative solutions through greater regulatory flexibility. "the avoided costs principle could be made to work if a broader view were taken"

### **Overall implications** of our strategy

With the service improvements planned for water, bills would increase only slightly above the rate of inflation. Adding in the sewerage improvements would increase bills by around 1% per year above inflation.

#### **Costs of improvements**

There are significant uncertainties in the level of spending which would be required to deliver the service improvements we have set out in this statement. We have, however, made an indicative assessment, based on a programme which includes:

- An increased rate of mains replacement to control leakage and reduce interruptions.
- Increased spending on preventing sewer flooding.
- A continuing programme to improve drinking water quality standards (but a smaller programme than has been required in the past to meet statutory standards).
- Increased spending to reduce leakage and increase supply capacity, in order to provide for the effects of climate change and a growing population.

"water bills would increase only slightly above the rate of inflation"





Total capital expenditure at 2007/08 prices

- Sewerage improvements
- Water improvements
- Expenditure to maintain current services
- A programme to deliver further river quality improvements (though we believe balancing costs and benefits should result in a smaller environmental programme than in previous years).
- Meter installation for most customers.
- Improved telemetry, sewer cleansing and asset renovation to reduce pollution incidents and flooding.
- The costs associated with adopting private sewers.
- Increased maintenance spend, since the asset base has grown considerably since privatisation and an increasing proportion of these assets will require renewal.

Taken overall, the projected programme results in investment about 10% higher than the levels observed in the last ten years.



Drivers of bill increases (at 2007/08 prices)				
Water £44	Water quality Network resilience Reducing leakage Metering Water efficiency Increased supply capacity Supply pipe adoption	£3 £15 £5 £3 £1 £9 £8		
Waste Water £35	Improved treatment Reducing pollution Reducing sewer flooding Adopting private sewers Reducing odour Dealing with sludge	£14 £4 £5 £10 £1 £1		

#### The impact on customers' bills

If there were no improvements necessary, then our analysis suggests that projected efficiency improvements and lower costs of financing would allow bills to be reduced over the next 25 years (before the impact of inflation), as shown in the indicative "base" projections for bills. With the service improvements planned for water, bills would increase only slightly above the rate of inflation. Adding in the sewerage improvements would increase bills by around 1% per year above inflation.

Potential 2035 impact on bills of all our proposed improvements: +£79					
				→	
£60	£65	£70	£75	£80	

Our research on customer willingness to pay indicates that customers would support the improvements proposed and the associated increase in bills. Although the figures indicate that bills would need to rise in real terms, they would rise less than the expected rise in household incomes, so bills would fall as a proportion of household income.

The bill projections are based on our view of the balance between benefits and costs for service improvements. If we had to make more improvements than we believe are justified, in order for example to meet Water Framework Directive requirements, this could add a further £2 billion to our investment programme, and result in an additional 20% increase in customers' bills.

### Next Steps

We continue to welcome feedback on this document and consider our Strategic Direction Statement to be a living document. Its content will need to be reviewed as new information becomes available. For example, Defra will publish their Strategic Intentions for the next 5 years in 2008 and our Statement will be reviewed in light of this.

We will continue to involve stakeholders as we develop our draft Business Plan for the 2009 price review, to be submitted to Ofwat in August 2008. We welcome any further comments on our strategy.

Comments can be sent to: Jo Dempster-Fowle Severn Trent Water 2297 Coventry Road Birmingham B26 3PU Email: Jo.Dempster-Fowle@severntrent.co.uk





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