



*AMP4  
Monitoring Plan  
for 2005-2010*

# Our Overall Strategy for the Period 2005-10

This publication sets out our plans for delivering current and new services to customers whilst providing real value for money. It gives details of the work we plan to carry out to improve drinking water quality, the environment and other services to customers. It also sets out our commitment to keep in good repair our existing water and wastewater systems, which include some of the largest networks of mains and sewers in the country. It shows the impact on customer bills of paying for this work. Our plan is the result of a two-year in-depth review of water charges led by the water industry regulator, Ofwat. Delivering the programme of improvements it contains will be a major challenge, but the benefits it will bring to our customers and the North West environment are significant.

## How we developed our approach

Our plan is the result of a lengthy process known as the Price Review. This determined both the level and cost of improvements in services allowed over the next five years, and the impact on prices for customers. Ofwat, the industry watchdog, which sets price limits and service targets for water companies, took the lead role in conducting the Price Review.

Other bodies also played a key role in helping shape the future agenda for water companies. Throughout the Review we worked closely with the North West WaterVoice Committee, the regional consumer representative. Our work included joint programmes of research with customers using 'business customer' focus groups, opinion surveys, and widespread consultation with other stakeholders to identify views and priorities.

Other key players in the review included:

- **The Government through the Department for Environment, Food and Rural Affairs (Defra)** The Government has given guidance on implementing significant drinking water quality and environmental improvements for the period 2005–2010, supporting proposals put forward by the Drinking Water Inspectorate and the Environment Agency.
- **The Drinking Water Inspectorate (DWI)** enforces the standards for the quality of drinking water we supply. It indicated support for projects to further improve drinking water quality to meet existing standards and to meet the more stringent requirements laid down by new European Union legislation.
- **The Environment Agency (EA)** decides how much water we can draw from the environment, ensures that companies do not cause pollution, and monitors treated wastewater, which we put back into rivers and the sea. It has set out the scope of the environmental programme based on European Union and national legislation. This has been considered by Ministers who approved a programme for inclusion in price limits.
- **Our customers and the community together with WaterVoice** We carried out extensive consultation with customers to determine their views on prices and priorities, including a survey of domestic and business customers.
- **English Nature (EN)** promotes the conservation of England's wildlife. Together with the Environment Agency, it advises Defra Ministers on priorities for environmental improvements.

## Company strategy for the period

Over the five years from 2005/6 our key strategic objectives will be to:

- a) continue to deliver a value for money package of services to our customers, retaining the current high level of customer satisfaction;
- b) maintain, and in some cases improve, the current performance of our assets to deliver existing service levels;
- c) maintain the balance between supply and demand for water and security of supply to all our customers;
- d) deliver the enhancements to environmental and drinking water quality required of us by Government and regulators;
- e) continue to make significant inroads into the problem of sewer flooding at customer premises, and begin a programme of work to tackle the most serious instances of external flooding as a priority;
- f) address the problem of odour at wastewater treatment works where this has given rise to the most significant customer and community concern;
- g) continue to deliver innovation and efficiency in our operations; and
- h) ensure that we maintain investor confidence by delivering acceptable returns to investors through an efficient and sustainable capital structure.

### What is driving the required price limits?

Table 1 of the Monitoring Plan shows that prices will need to increase throughout the period, with the required investment in environmental improvements being the main reason for the increase in bills.

#### Price Limits set by Ofwat

Year	2005-06	2006-07	2007-08	2008-09	2009-10
K Factors- % Change in prices above inflation	5.0	6.4	4.4	3.5	3.0

### Impact of the price limits on customers bills

The process of converting price limits into tariffs and bills is dependent upon a number of factors, including trends in trade and commercial usage, and changes in household numbers and use of water.

Therefore, although the 'K' factors show a cumulative increase of 25%, average household bills will only rise by an average of 20%. In simple terms the impact is lower on water bills than sewerage bills and lower on measured bills than unmeasured bills. More detail of the impact of K factors upon typical household and non-household customers is provided in the final part of this document, 'Our commitment on prices'.

### Why invest more?

Our investment over the past decade has brought real benefits to customers and the environment in the North West. But more is needed.

We face higher standards for our drinking water quality, new requirements emerge all the time to reduce the impact that we have on the environment and customers' expectations are constantly rising. To meet these challenges we will be investing £2.9bn over the next five years and the results will bring real benefits to both our customers and the environment.



## £1.54 billion

#### Delivering reliable and secure water services

- Maintaining our water supply system (£716m) maintaining our network of reservoirs, aqueducts, water treatment works, pipes and pumping stations
- Maintaining our wastewater system (£821m) maintaining our network of sewers, wastewater treatment works and sludge disposal operations

## £0.14 billion

#### Solving the problems customers tell us matter most

- Improving service performance (£139m) investing to address operational issues, including tackling the problem of sewer flooding and managing odour from wastewater treatment works

## £1.19 billion

#### Meeting higher drinking water and environmental quality standards

- Improving drinking water quality (£468m) meeting higher drinking water standards
- Improving wastewater quality (£725m) improving our wastewater quality to protect the region's environment

(at outturn prices - prices based on expected inflation between 2005 and 2010)

# Our commitment on drinking water quality and environmental improvements

## How the scale of the quality and environmental programmes are defined

We have developed our drinking water quality and environmental programmes in association with the DWI and the EA respectively. These programmes are confirmed through Ministerial guidance. The projects required to deliver improvements are defined and costed by water companies, with Ofwat determining which of these projects should be funded through price controls.

Ministers set out their principal guidance in March 2004 following which UU worked with the DWI and the EA to translate these requirements into a list of schemes for inclusion in our final business plan, which was submitted in May 2004.

Ofwat made their draft determination on our final business plan in August 2004, following which UU and the quality regulators provided more supporting information to both Ofwat and Ministers. Defra also finalised a regulatory impact assessment on projects in five policy areas that were not required by national or European legislation. This allowed Ministers to finalise their guidance for the period and for several projects to be funded which had been excluded from Ofwat's draft determination.

## UU's strategy for the quality programmes

Our strategy for the AMP4 quality programme will enable us to comply with the legal obligations placed upon us. We have tried to minimise the impact of these programmes of work on customer bills. The quality enhancements that we have agreed to undertake within the period are strictly targeted to those sites and assets where the work is essential and supported by the quality regulators. This does not include potential additional outputs, which may arise during the period, or outputs from the continuation of the AMP3 programmes.

All elements of the work programme have been through a detailed internal and external technical review process. Opportunities to combine solutions for more than one issue at a site and/or to centralise treatment for more than one site have been considered and adopted where it is cost effective to do so.

Wherever possible, we will adopt a long-term view and will aim to deliver a programme that will cater for foreseeable future eventualities. For example, in dealing with customer acceptability issues associated with discolouration, work on treated water aqueducts and downstream Water Supply Zones will be undertaken in strict 'source to tap' order.

Potentially significant areas of uncertainty could impact in the period post 2005, in particular the scope for additional improvements to address the Habitats and Nature Conservation Directives, identified during the EA and English Nature review of discharge consents.

Considerable uncertainty still remains regarding the overall impact that the EA and English Nature review of abstraction licences will have upon the volume of water that can be abstracted from the region's water sources. The majority of the improvements likely to be required are located in environmentally sensitive areas, such as the Lake District National Park and subject to extensive planning, consultation and environmental assessment of options prior to the implementation of solutions. We are therefore concerned that delays in completing these reviews could seriously affect our ability to deliver any additional requirements by the required end date of March 2010.

## Drinking Water Quality Programmes

All elements of our drinking water programme received the support of the DWI and were included in Ministerial Guidance. We will also deliver the programme of work supported to address the Security and Emergency Measures Direction (SEMD).

The outputs that will be delivered for the water service are summarised in the table below. This table does not include potential additional outputs, which may arise during the period, or output from the continuation of the AMP3 programmes.

<b>Outputs for the Water Service Quality Programme</b>		
<b>Element</b>	<b>Unit</b>	<b>AMP4</b>
<i>Mains Renewal (including re-lining)</i>	<i>Km</i>	<i>2,555</i>
<i>Mains Cleaning</i>	<i>Km</i>	<i>153</i>
<i>Lead pipe replacement (quality only)</i>	<i>N<sup>o</sup></i>	<i>40,000</i>
<i>Water Treatment Works</i>	<i>N<sup>o</sup></i>	<i>51</i>
<i>SEMD</i>	<i>N<sup>o</sup></i>	<i>1</i>
<i>Environmental investigations</i>	<i>N<sup>o</sup></i>	<i>17</i>
<i>Environmental improvements</i>	<i>N<sup>o</sup></i>	<i>8</i>

Since the Final Determination, UU has been in discussion with the DWI to agree the detail of the Quality Programme. These discussions continue and the legal instruments needed to formalise this programme have still to be finally agreed.

## Environmental Quality Programmes

Our environmental programme is based almost exclusively on the contents of the EA/EN/CCW AMP4 database. The exclusions have been driven by cost benefit considerations with 43 of the EA AMP4 Unsatisfactory Intermittent Discharge (UID) outputs being excluded from our final business plan proposals and a further 36 outputs being excluded by Ofwat in their final determination, also on cost benefit grounds. None of these excluded outputs have been shown in the Monitoring Plan tables, although it is likely that some of this work will need to be undertaken within the period and we will seek funding accordingly.

There are also still a number of areas where requirements have not yet been adequately defined, for example the work required by the Habitats Directive. This work is also excluded from the Monitoring Plan, although additional work may be required during AMP4.

Our sludge strategy for the period is a continuation of the current strategy, but also takes into account the additional sludge resulting from the AMP4 sewage treatment works projects, and particularly the impact of the Nitrate Directive together with the increased risks of cessation of sludge recycling to land.

During the period we will continue to examine all applications for first-time sewerage that are submitted to us under S101A of the Water Industry Act and expect to implement a significant programme of work.

To meet these legal obligations, we will need to invest at some of our sewage treatment works, sludge treatment centres, combined sewer overflows, pumping stations and landholdings.

The environmental outputs and activities that will be delivered for the sewerage service are summarised in the table below. This table does not include potential additional outputs, which may arise during the period, or outputs from the continuation of the AMP3 programmes.

<b>FD Outputs from the Sewerage Service Quality Programme</b>		
<b>Element</b>	<b>Unit</b>	<b>AMP4</b>
<i>Sewage treatment works improved</i>	<i>N<sup>o</sup></i>	<i>64</i>
<i>Unsatisfactory intermittent discharges dealt with</i>	<i>N<sup>o</sup></i>	<i>143</i>
<i>Environmental investigations</i>	<i>N<sup>o</sup></i>	<i>7</i>
<i>UU Biodiversity &amp; SSSIs projects, Sustainable Catchment Management Plans (SCaMP)</i>	<i>N<sup>o</sup></i>	<i>2</i>
<i>First Time Sewerage Schemes</i>	<i>props</i>	<i>2573</i>

## Benefits of the Quality Programmes

The benefits from the quality programmes are often difficult to quantify and in many instances are dependent upon third party activities. Tables 4 and 6 of the Monitoring Plan show the current and anticipated performance levels for drinking water quality and environmental compliance. The table below summarises the key values from these tables.

<b>Proposed Drinking Water and Environmental Quality Compliance</b>				
<b>Proposed AMP4 Quality &amp; Environmental Performance</b>	<b>Units</b>	<b>Performance</b>		
		<b>2003/4</b>	<b>2007/8</b>	<b>2009/10</b>
<b>Water Service</b>				
<i>Distribution input covered by s19 at Water Treatment Works</i>	%	10.6	26.5	7.7
<i>Distribution input not affected by s19 or temporary relaxations</i>	%	89.4	73.5	92.3
<i>Properties in Water Supply Zone's affected by s19s in distribution</i>	%	79.1	35.4	0
<i>Compliance with Water Quality Regulations at the tap</i>	%	99.8	99.8	99.9
<i>Compliance with Permissible Consent Value for iron at the tap</i>	%	99.1	99.6	99.8
<b>Sewerage Service</b>				
<i>Intermittent discharges satisfactory</i>	%	82.5	91.0	91.9
<i>Sewage Treatment Works non-compliant (Water Resources Act (WRA) numeric consents)</i>	%	2.7	2.0	2.0
<i>Sewage Treatment Works non-compliant (Urban Waste Water Treatment Directive (UWWTD) consents)</i>	%	1.0	1.0	1.0
<i>Population equivalent served by Sewage Treatment Works in breach of WRA consent</i>	%	0.3	0.6	0.6
<i>Population equivalent served by Sewage Treatment Works in breach of UWWTD consent</i>	%	0.0	0.2	0.2

The key movements in this table reflect the significant improvement in drinking water quality as a result of the completion of the mains replacement and water treatment works quality programmes.

In addition to these measures we expect the following major quality improvements:

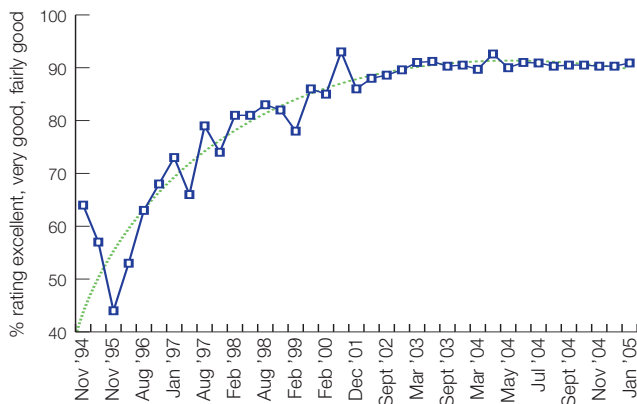
- We will undertake major cleaning work on 153Km of our treated water aqueducts.
- The long-term standard for the maximum amount of lead in drinking water is to be achieved by 2013. We will move towards that standard by removing some 40,000 lead communication pipes from our water system by 2010.
- We will carry out significant further work to reduce cryptosporidium risk at our water treatment works.
- We will carry out work on at least 64 of our wastewater treatment works, which treat the wastewater from the equivalent of over five million people and at 143 sewer overflows to help improve the quality of the water environment in the North West. This work will improve the ability to support fish life of some 1900km of rivers in the north west, including such important watercourses as the Douglas, Irwell, Croal, Bollin and Mersey. It will also reduce the impact of our discharges on sensitive habitats and help deliver the Government's requirements under the Countryside Rights of Way Act and Biodiversity Action Plan.

# Our commitments on service to Customers

The quality of service our customers receive is measured in a number of ways varying from the reliability and quality of the water they receive through to the speed with which we answer correspondence.

UU is committed to delivering excellent customer service and will continue to seek new and innovative ways of improving service. We continue to promote our services and offer support in the community through information on bills, the website, the billing leaflets and specialised customer information leaflets. We seek to understand and use our customers' views to inform our strategy. The figure below shows the improving trend in customer satisfaction over the past ten years.

## Customer satisfaction (perception survey)



## Understanding our customers views

For the Price Review, we carried out extensive customer research and consultation, which revealed the priorities for customers over the next five-year period are:

- reducing sewage flooding (51%),
- improving the environment (48%),
- water abstraction (44%), and
- water aesthetics (43%).

Our investment programme will address these, and other customer priorities.

## Levels of service

We believe that our programme of capital maintenance and enhanced service investment will deliver the customer service levels shown in the table below.

### AMP4 Level of service commitments

AMP4 Level of service commitments	Units	Average AMP3 Performance 2001/02 to 2003/04	Target for 2007/08 & 2009/10
DG2 Properties at risk of receiving low pressure	%	0.06	0.03
DG3 supply interruptions - overall performance score	%	0.19	0.11
DG5 property subject to internal flooding (>1 in 10 years) due to overloaded sewers and operational failures (other causes)	%	0.03	0.02
DG6 % Billing contacts dealt with within 5 days	%	99.1	99.1
DG7 % Written complaints dealt with within 10 days	%	99.9	99.9
DG8 % Metered customer bills based on a meter reading	%	99.8	99.8
DG9 % Calls abandoned	%	New measure for AMP4	3.1
DG9% calls receiving the engaged tone	%	New measure for AMP4	0

## Service to customers - Water

### Water quality

We expect water quality compliance at the customer's tap to improve from the current performance of 99.82% to 99.9% by 2009-10. This improvement will be as a result of the quality compliance programme to meet existing standards, new EU standards, and to reduce the risk posed by cryptosporidium.

### Low water pressure (DG2)

We have made significant improvements in reducing the number of customers affected by low pressure, improving performance from over 8,000 affected properties in 1997/98 to below 1,000 affected properties in 2003/04. Our performance in this area ranks among the best in the water industry. We intend to maintain this high standard of service and continue to reduce the number of properties at risk of receiving low water pressure to 850 from 2005/06.

### Supply interruptions (DG3)

We have made considerable improvements in the control and management of supply interruptions whilst carrying out one of the largest mains refurbishment programmes in the country. During the next five years as the refurbishment programme comes to an end, we intend to maintain our current high performance level on supply interruptions, achieving a level of 0.11% from 2005/06.

### Customer service performance (DG6-9)

We aim to maintain our current high levels of performance for the customer service performance elements DG6 to DG9. We will move to the new DG9 telephone contact measure in 2005/06, which aims to capture the qualitative aspects of companies call handling service to customers. This will be achieved through customer research conducted across the industry by Ofwat.

### Supply demand balance

Our supply demand balance was achieved throughout the region during the final year of AMP3 by the eradication of the modest supply deficit in our smaller Cumbrian supply zones. During AMP4 we intend to maintain the water supply demand balance at this current level of service by sustaining a Security of Supply Index of a maximum of 100 throughout the period to 2010.

### Leakage

Our revised forecasts for the economic level of leakage (ELL) during 2005-10 have been accepted by Ofwat. Total leakage is to be reduced to 465 Ml/d by 2009/10. We have prepared a detailed leakage action plan to achieve our 2005/06 ELL of 470 Ml/d as a spot target by March 2006. The action plan was submitted to Ofwat in December 2004 and was approved by Ofwat on 10th January 2005.

### Optional meters

We forecast that demand for free meters will run at around the levels we have observed in the latter years of AMP3. This will result in a total installation of over 200,000 free meters over the five years, raising meter penetration to around 28% by 2009/10. However, we realise that the price rises entailed by this plan could result in higher levels of take-up of the free meter option.

## Service to customers - Wastewater

### Sewer flooding DG5

UU maintains a network of over 40,000km sewers and these are prone to blockages and collapses from time to time. These defects most often show up as flooding when triggered by rainfall, causing considerable distress to the customers who are affected. We will commit considerable resources to maintaining our sewers to help ensure that performance in this area is maintained throughout the period 2005-2010.

We have identified as high priority further reductions in the problem of flooding from overloaded sewers. We will address this issue for the vast majority of those properties that currently face the risk of sewer flooding. We will continue to tackle problems of sewer flooding in people's homes as they arise. We expect this to require us to address flooding at over 900 properties. During AMP4 we will begin a programme of work to tackle the most serious cases of external flooding, addressing problems affecting around 450 locations. Where we are not able to offer permanent solutions in a reasonable time we will endeavour to find effective temporary measures to reduce the impact of flooding.

### Supply and demand

Our sewerage service plan is driven by localised increases in the demand placed on sewerage assets as a result of demographic movement and new development within our region. We will invest in additional storage to deal with flooding associated with increased impermeable areas requiring drainage and to deal with new development. Our plan involves managing growth in:

- **Sewerage network**  
Providing the works required to meet demand for sewerage services arising from housing growth and increased drainage demands. In particular, we forecast the need to invest in additional sewage storage facilities to address the pressures placed on our sewerage assets by this expected increase in demand.
- **Sewage treatment**  
Changes in population densities and increased rural development have given rise to the need to expand some of our wastewater treatment works. As a result, we will carry out improvements at 28 sites to provide extra treatment capacity to accommodate this local increase in growth and development. This programme includes a major project at Fleetwood, which is one of the 14 'commuter belt' works requiring improvement. The remaining 14 works lie in more rural areas and are affected by tourism and rural redevelopment.

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*Footnote: Table 5 line 3 of the Monitoring Plan shows "properties at risk of internal flooding: 1 in 20 years". This new requirement is expected to show an increasing profile throughout the period as the company identifies the properties which fall into this new category. It is important to understand that these properties are at a much reduced risk of flooding, and the majority of cases will not experience a second incident of sewer flooding and will eventually be removed from the DG5 at risk register entirely. Therefore, to ensure funding is appropriately directed at the most serious incidents of sewer flooding no funding has been allocated by the regulator for the removal of properties from this band.*



## Our commitments on maintaining serviceability to customers

UU has generally improved the serviceability, and maintained the condition of the assets under its stewardship since privatisation in 1989. These improvements have been delivered by a combination of maintenance and quality enhancement programmes funded through price limits, supplemented by discretionary expenditure.

UU started from a disadvantageous position at privatisation. The assets we inherited were the oldest and poorest quality in the industry - a function of the large and complex industrial base of the North West region and years of past under-funding. Despite the improvements made, many of the underlying asset problems persist, requiring one of the higher levels of capital maintenance. For example, UU has over 23% of the national stock of poor condition critical sewers.

### How we intend to maintain serviceability during the AMP4 period

We have undertaken a thorough review of the future maintenance requirements of our assets, underpinned by the common framework approach that has been agreed between the industry and regulators, and endorsed by the Government.

During AMP3 UU spent considerably more on capital maintenance than was forecast when prices were set in 1999. The main area of increased activity has been at our wastewater treatment works. It has been evident from the number of compliance problems occurring since 2000 that historic maintenance levels had fallen to an unsustainable level. Having already taken action to increase activity during AMP3 we see the need to sustain an increased level of activity compared to the historic trend at least until 2010.

Likewise, during AMP3 expenditure on water non-infrastructure assets ran well ahead of expectation. We forecast that expenditure above the historic trend will continue during AMP4.

During AMP4 we will carry out capital maintenance activities to ensure that the safety and performance of our assets is maintained at current levels. We will follow the common framework and initiate a risk-based intervention approach to maintaining our assets, which will ensure that investment and operational activities are correctly targeted, prioritised and carried out. We will invest in improving IT systems and operating procedures and reassess design standards. This

will allow a further focus on serviceability, reliability, criticality and the consequences of failure as drivers for capital maintenance.

### Water service activities

The annual profile of activities on the water treatment and supply network is shown in Table 7 of the Monitoring Plan. The table below shows the proposed AMP4 activity levels.

#### Proposed activity projections for water treatment and supply network

Proposed AMP4 Key Activity Projections	Units	Overall activity in AMP4 period
Length of mains renewed	Km	3042
Length of mains relined	Km	84
Length of new mains	Km	570
Number of new or refurbished Water Treatment Works	N <sup>o</sup> .	57
Number of new or refurbished pumping stations	N <sup>o</sup> .	10
Number of new or refurbished service reservoirs	N <sup>o</sup> .	39

### Sewerage service activities

The annual profile of activities on the wastewater collection and treatment system is shown in Table 8 of the Monitoring Plan. The table below shows proposed AMP4 activity levels.

#### Proposed activity projections for wastewater collection and treatment

Proposed AMP4 Key Activity Projections	Units	Overall activity in AMP4 period
Length of sewers replaced	Km	27.2
Length of sewer renovated	Km	1067.6
New Sewers	Km	244.3
Intermittent discharges improved or refurbished	N <sup>o</sup> .	143
Number of new or refurbished treatment works	N <sup>o</sup> .	114
Pop equivalent of new or refurbished treatment works	000's	6060
Number of new or refurbished sludge treatment works	N <sup>o</sup> .	8
Number of new or refurbished pumping stations	N <sup>o</sup> .	56
Number of new or refurbished sea outfalls	N <sup>o</sup> .	5

## Our commitments on prices

Over the next five years we will be investing £2.9 billion to improve services for customers and the environment. This investment will need to be funded by customers, shareholders and through borrowing.

### Overall price limits

The framework of price limits for UU for the period 2005–2010, and the indicative split between water and sewerage, is set out below:

Year	Overall Price Limit % K Factor	Indicative Water Price Limit %	Indicative Sewerage Price Limit %
2005-06	5.0	-0.3	9.4
2006-07	6.4	6.1	6.8
2007-08	4.4	3.6	5.0
2008-09	3.5	2.5	4.2
2009-10	3.0	1.9	3.7

The charge for the sewerage service includes domestic effluent, trade effluent and surface water/highway drainage. Actual bills can vary from the average, depending on factors such as the rateable value of the customer's property, the volume of water used if the supply is metered and whether one or both services are supplied by UU.

### The impact on bills

From 2005 to 2010, the average household bill will rise to help to pay for the investment programme. This will mean that average household bills will be £322 in 2010 – still only 88 pence per day.

### Annual average household bill for 2009/10

Company	Average household bill (£) <sup>1</sup> (at 2004/05 prices)
South West	444
Dwr Cymru	352
Wessex	347
Southern	324
United Utilities	322
Anglian	313
Yorkshire	288
Severn Trent	265
Thames	261
Northumbrian	260

<sup>1</sup> The actual impact on customers' household bills will also be governed by companies' approved charges schemes.

### What is driving the changes in bills?

A number of factors contribute towards the change in bills. Some of these, such as passing on past efficiencies, reduce customers' bills, whilst others, such as the impact of the environmental programme, cause bills to rise. The table below identifies the elements, which have contributed to the change in bills and quantifies the impacts of these elements for average water and sewerage bills.

### What is driving the changes in bills? (at 2004-2005 prices)

Average household bill in 2004/05		£269
Savings	Past and future efficiency savings	-£16
Increases	Maintaining services	£9
	Improvements in drinking water quality	£18
	Environmental improvements	£34
	Improvements in service	£3
	Maintaining security of supply	£5
Average household bill in 2009/10		£322

### Helping vulnerable customers

We know that price rises are never popular with our customers and we have worked hard with the Government, our regulators and others to ensure that bills rise no more than is absolutely necessary. We know that some of our customers already have difficulty paying their water bill and they will have difficulty paying the higher bills needed to help fund this investment programme.

We already operate a scheme to help customers in serious financial hardship and we administer the Government scheme that helps customers on benefits who use larger amounts of water than is usual for medical reasons or because they have

a large family. We also offer customers a wide range of payment options to help them budget for their water charges. In addition to this we support the Government's water direct promotion scheme and provide funding for Money Advice advisors.

We are going further to help those customers who have genuine difficulty paying their water bills. We have created an independent charitable trust to which we intend to donate £15 million over the next five years. This trust will help customers by clearing outstanding water arrears and other bills. In addition, it will offer advice on financial matters and financial literacy work in our region. We are working with other bodies, including WaterVoice, as part of the Government's review of how to help lower income households to meet their water and sewerage charges. While seeking to help those customers who we know have difficulty paying, we are also focusing our efforts on ensuring payments by those customers who appear to have the means to pay but refuse to do so. We now have a more sophisticated customer management system to assist in tracking these non-paying customers. We believe that it is only fair that we take this action in the interest of the majority of our customers who pay in full and on time.




#### What this means for customers

Examples of the effect of the price limit and inflation on customers' bills for 2005/06 are shown below. Please note that these examples relate to customers who receive both water and wastewater services.

#### Unmeasured household customers

Examples for customers whose bills are based on the rateable value (RV) of their property are shown in the table below.



#### Typical annualized impact on unmeasured household customers for the five year period

	RV £300	4.5%
	RV £200	4.2%
	RV £100	3.5%

#### Measured household customers

Examples for customers with meters whose bills are based on the amount of water used at their property (m<sup>3</sup>) are shown in the table below.







#### Typical annualized impact on measured household customers for the five year period

	160m <sup>3</sup>	5.1%
	100m <sup>3</sup>	4.3%
	60m <sup>3</sup>	3.4%

#### Non-household customers (business and commercial customers)

The effect on business and commercial customers will vary depending on the characteristics of the customer. For example, a customer who receives only a water service will see a smaller increase than one that receive both the water and the sewerage service. Typical examples are shown in the table below.

#### Typical annualized impact on non household customers for the five year period

	Shop	7.5%
	Public House	7.3%
	Launderette	7.3%
	Hotel	8.9%
	Supermarket	8.9%
	Manufacturer	7.7%

**Table 1 - United Utilities - A summary of our monitoring plan for 2005-10**

**OVERALL STRATEGY FOR 2005-10 PERIOD AND TOP 5 STRATEGIC OBJECTIVES**

United Utilities' strategy for the period 2005 to 2010 and beyond reflects our customers' priorities and the desire of Government and regulators to see a water industry characterised by sustainable, efficient and securely financed companies.

Over the five years from 2005/6 our key strategic objectives will be to:

- a) continue to deliver a value for money package of services to our customers, retaining the current high level of customer satisfaction;
- b) maintain, and in some cases improve, the current performance of our assets to deliver existing service levels;
- c) maintain the balance between supply and demand for water and security of supplies to all our customers;
- d) deliver the enhancements to environmental and drinking water quality required of us by Government and regulators;
- e) continue to make significant inroads into the problem of sewer flooding at customer premises, and begin a programme of work to tackle the most serious instances of external flooding as a priority;
- f) address the problem of odour at wastewater treatment works where this has given rise to the most significant customer and community concern;
- g) continue to deliver innovation and efficiency in our operations; and
- h) ensure that we maintain investor confidence by delivering acceptable returns to investors through an efficient and sustainable capital structure.

**TOP 5 QUALITY AND SERVICE IMPROVEMENTS IN 2005-10 PERIOD**

- 1. To improve the quality of drinking water we supply to our customers we propose to renew or reline over 2,500km of water distribution mains. We also plan major cleaning work on 153km of our large diameter trunk mains.
  - 2. We will tackle problems of sewer flooding at people's homes. We expect this to require us to address internal flooding by solving internal hydraulic capacity flooding problems at 1113 properties. We will also begin a programme of work to tackle the most serious cases of external flooding, addressing problems affecting around 384 locations.
  - 3. We propose to improve the quality of drinking water at tap by carrying out quality improvements at over 50 of our water treatment works across the region.
  - 4. New wastewater treatment requirements will increase the volume of sewage sludge as a result of the Nitrates Directive and reductions in the land bank will require a significant expansion of alternative disposal routes.
  - 5. We expect to have to carry out work at least 64 of our wastewater treatment works and at 143 sewer overflows to help improve the quality of the water environment in the North West.
- These works treat the wastewater from the equivalent of over 5 million people. This work will improve the ability to support fish life of some 1900km of rivers in the north west, including such important watercourses as the Douglas, Irwell, Croal, Bollin and Mersey.

**WHAT IS DRIVING THE CHANGES IN BILLS? (2004/05 prices)**

Average household bill in 2004-05		Water	Sewerage
<b>Less</b>	(1) ... past efficiency savings and outperformance.....	133	136
	(2) ... scope for reduction through future efficiency improvements	-7	-8
	(3) ... maintaining base services of which	1	8
	a) changes in revenue		-12
	b) changes in operating costs	-2	10
<b>Plus</b>	c) changes in capital maintenance	-3	1
	d) impact of taxation	5	7
	e) financing	1	2
	(4) ... maintaining security of supplies to all customers	2	3
	(5) ... the impact of improvements in drinking water quality	18	
	(6) ... the impact of environmental improvements		34
	(7) ... improvements in service performance		3
Average household bill in 2009-10		<b>147</b>	<b>175</b>

**ESTIMATE OF EXPENDITURE NEEDS (2002-03 prices)**

Average household bill in 2009-10		Annual average for the 2005-2010 period (£/property/annum)	
1	Total operating expenditure	135.0	
2	Total capital maintenance expenditure	86.5	
3	Total capital enhancement expenditure	83.5	
4	Average annual number of properties used as the denominator in the above calculation	2.95 Million	

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
<b>Price limit</b>	8.9	5.0	6.4	4.4	3.5	3.0
<b>W Indicative price limit (water service)</b>	10.6	-0.3	6.1	3.6	2.5	1.9
1 Typical measured household bill	120.0	122.9	131.8	135.6	138.0	139.8
2 Typical unmeasured household bill	137.0	135.5	143.0	148.6	153.5	157.8
3 Average household bill	133.0	130.6	136.9	141.3	144.4	146.7
<b>S Indicative price limit (sewerage service)</b>	7.5	9.4	6.8	5.0	4.2	3.7
1 Typical measured household bill	124.0	139.0	150.4	156.6	160.8	165.5
2 Typical unmeasured household bill	141.0	153.2	166.8	175.2	183.4	191.6
3 Average household bill	136.0	148.0	158.3	164.6	169.9	175.2

For further information go to [www.unitedutilities.com/investingforthefuture](http://www.unitedutilities.com/investingforthefuture) or contact our Economic Regulation team on 01925 237000



Monitoring plan

Table 3 - United Utilities - Water service - Current performance & planned outputs

Line description	Units	Current performance		AMP4 profile	Level of performance by				
		2003-04			2005-06	2006-07	2007-08	2008-09	2009-10
<b>A Service performance</b>									
1	nr	940	850	S	850	850	850	850	850
2	nr	0.08	0.11	S	0.11	0.11	0.11	0.11	0.11
3	%	99.1	99.1	S	99.1	99.1	99.1	99.1	99.1
4	%	99.9	99.9	S	99.9	99.9	99.9	99.9	99.9
5	%	99.80	99.80	S	99.80	99.80	99.80	99.80	99.80
6	%	3.1	3.1	S	3.1	3.1	3.1	3.1	3.1
7	%	0.0	0.0	S	0.0	0.0	0.0	0.0	0.0
8		NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
9		NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
<b>B Water sales &amp; supply/demand balance</b>									
10	M/d	1561.08	1500.78	F	1505.65	1500.78	1489.26	1475.15	1464.02
11	M/d	1392.89	1360.61	F	1369.63	1360.61	1350.18	1338.38	1326.81
12	M/d	2078.88	2038.54	S	2038.54	2038.54	2030.24	2030.24	2051.74
13	M/d	2023.41	1973.00	F	1980.77	1973.00	1959.62	1943.66	1931.15
14	nr	99	100	S	100	100	100	100	100
15	nr	99	100	S	100	100	100	100	100
16	M/d	479.19	470.00	F	475.00	470.00	465.00	465.00	465.00
<b>C Serviceability to customers</b>									
17	text	IMPROVING	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
18	text	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
<b>D Defined outputs for maintaining base services</b>									
19		Description	Programme of work						
20		No defined outputs	Targeted investment to maintain serviceability using prioritisation models						
21		No defined outputs	Targeted investment to maintain serviceability using prioritisation models						
22		No defined outputs	Targeted investment to maintain serviceability using prioritisation models						
23		No defined outputs	Targeted investment to maintain serviceability using prioritisation models						
24		No defined outputs	Targeted investment to maintain serviceability using prioritisation models						

Profile codes

S - Stable
R - Rising
F - Falling
P - Peaking in a particular year (* = 1 to 5)
T - Trough in a particular year (* = 1 to 5)

Monitoring plan

Table 4 - United Utilities - Water service - Drinking water quality performance

Line description	Units	Current performance		AMP4 profile	Level of performance by				
		2003-04			2005-06	2006-07	2007-08	2008-09	2009-10
<b>A Quality &amp; environmental compliance</b>									
1	%	10.6		F	33.2	26.7	26.5	19.4	7.7
2	%	89.4		R	66.8	73.3	73.5	80.6	92.3
3	%	79.1		F	63.6	63.6	35.4	35.4	0.0
4	%	99.8		R	99.8	99.8	99.8	99.9	99.9
5	%	99.1		R	99.5	99.5	99.6	99.6	99.8
<b>B Drinking water quality outputs</b>									
6	nr	41		P3	8	16	23	4	0
7	km	887		F	800	814	710	198	33
8	km	0		R	20	20	27	24	62
<b>C Environmental water outputs</b>									
9	nr	0		P5	2	1	2	0	12
10	nr	0		S	0	0	0	0	0
11	nr	0		P5	0	0	2	0	6

**Profile codes**

S - Stable
R - Rising
F - Falling
P - Peaking in a particular year (* = 1 to 5)
T - Trough in a particular year (* = 1 to 5)

Monitoring plan

Table 5 - United Utilities - Sewerage service - Current performance & planned outputs

Line description	Units	Current performance		AMP4 profile	Level of performance by				
		2003-04			2005-06	2006-07	2007-08	2008-09	2009-10
<b>A Service performance</b>									
1	nr	522	522	F	318	250	150	100	50
2	nr	645	645	F	428	411	351	253	179
3	nr	325	325	R	500	600	700	800	900
4	nr	229	229	F	504	479	455	432	411
5	nr	479	479	S	511	511	511	511	511
6	nr	270	270	F	270	270	263	257	250
7	nr	2942	2942	S	2942	2942	2942	2942	2942
<b>B Serviceability to customers</b>									
8		STABLE	STABLE	S	STABLE	STABLE	STABLE	STABLE	STABLE
9		STABLE	STABLE	S	STABLE	STABLE	STABLE	STABLE	STABLE
<b>C Defined outputs for maintaining base services</b>									
10		Description			Programme of work				
11		No defined outputs			Targeted investment to maintain serviceability using prioritisation models				
12		No defined outputs			Undertaking odour abatement work at Bromborough, Birkenhead & Meols STWs & initiating a phased programme of work to address the most substantial odour problems at other high priority sites				
13		ODOUR			Refurbishment to maintain serviceability of sludge treatment & disposal facilities and improvement to facilities on two sites				
14		SLUDGE			Targeted investment to maintain serviceability using prioritisation models				
15		No defined outputs							
<b>Profile codes</b>									
S - Stable									
R - Rising									
F - Falling									
P - Peaking in a particular year (* = 1 to 5)									
T - Trough in a particular year (* = 1 to 5)									



Monitoring plan

Table 6 - United Utilities - Sewerage service - Environmental programme 2005-10

Line description	Units	Current performance 2003-04	AMP4 profile	Level of performance by				
				2005-06	2006-07	2007-08	2008-09	2009-10
<b>A Quality &amp; environmental compliance</b>								
1	%	2.7	S	2.0	2.0	2.0	2.0	2.0
2	%	1.0	S	1.0	1.0	1.0	1.0	1.0
3	%	0.3	S	0.6	0.6	0.6	0.6	0.6
4	%	0.0	S	0.2	0.2	0.2	0.2	0.2
5	%	82.5	R	90.3	90.9	91.0	91.5	91.9
6	%	100.0	S	100.0	100.0	100.0	100.0	100.0
<b>B Quality and environmental activities and outputs</b>								
7	nr	282	P1	96	18	3	16	10
8	prop	0	T1	285	572	572	572	572
9	nr	22	P4	7	5	8	24	20
10	ttds	0	P5	0	0	0	6	15
11	ttds	218	R	237	237	237	243	258
12	nr	0	P2	2	4	0	1	0

Profile codes

S - Stable
R - Rising
F - Falling
P - Peaking in a particular year (* = 1 to 5)
T - Trough in a particular year (* = 1 to 5)

Monitoring plan

Table 7 - United Utilities - Water service - Key activity projections

Line description	Units	Total activity planned in the period 2005-10		Profile of activity				
		Activity	As a % of current stock	2005-06	2006-07	2007-08	2008-09	2009-10
<b>A Water resources</b>								
1 Length of aqueducts refurbished	km	36.6	3.04	2.0	8.6	8.7	8.7	8.6
2 Work on dams and impounding reservoirs	nr	18	9.38	3	5	4	3	3
<b>B Water treatment</b>								
3 Number of refurbished or new treatment works	nr	57	14.00	7	17	24	4	5
4 Ml/day of refurbished or new treatment works	Ml/d	1,689.30		172.70	955.40	407.80	105.30	48.10
<b>C Water distribution</b>								
5 Length of mains renewed	km	3,042.0	7.49	877.0	877.0	751.0	331.0	206.0
6 Length of mains relined	km	84.0	0.21	0.0	14.0	28.0	28.0	14.0
7 Length of new mains	km	570.1	1.35	110.0	110.0	110.0	110.0	130.1
8 Communication pipes replaced	000s	163,645	5.17	33,379	25,529	29,179	25,829	49,729
9 Number of refurbished or new pumping stations	nr	10	1.62	2	2	2	2	2
10 Number of refurbished or new service reservoirs	nr	39	8.62	6	7	9	9	8
<b>D Metering</b>								
11 Number of household meters renewed	nr	129032	16.81	28728	29208	17428	28320	25348
12 Optional meters: households	nr	200659	42.33	40065	37558	38738	40737	43561
13 Selective meters: households	nr	375	0.08	75	75	75	75	75
14 Percentage of households metered (at the year end)	%	28.0		20.0	22.0	24.0	26.0	28.0

Monitoring plan

Table 8 - United Utilities - Sewerage service - Key activity projections

Line description	Units	Total activity planned in the period 2005-10		Profile of activity				
		Activity	As a % of current stock	2005-06	2006-07	2007-08	2008-09	2009-10
<b>A Sewers</b>								
1 Length of critical sewers replaced	km	8.0	0.06	3.0	2.0	1.5	1.0	0.5
2 Length of critical sewers renovated	km	195.2	1.41	12.2	39.4	43.4	47.7	52.5
3 New critical sewers	km	32.3	0.23	6.4	6.4	6.5	6.5	6.5
4 Length of non critical sewers replaced	km	19.2	0.07	3.9	3.9	3.8	3.8	3.8
5 Length of non critical sewers renovated	km	872.4	3.34	54.5	176.2	193.9	213.2	234.6
6 New non-critical sewers	km	212.0	0.81	79.5	53.0	39.8	26.5	13.2
7 Number of refurbished or new intermittent discharges	nr	143	4.70	96	18	3	16	10
<b>B Sewer flooding</b>								
8 Internal property to be solved by company action	nr	1113		264	172	244	228	205
9 External only problems to be solved by company action	nr	335		35	74	96	78	52
10 External linked problems to be solved by company action	nr	49		19	20	10	0	0
11 Reduction in flooding due to other causes	nr	0		0	0	0	0	0
12 Internal property flooding benefiting from mitigation	nr	12		0	3	3	3	3
13 External property/area flooding benefiting from mitigation	nr	76		0	19	19	19	19
<b>C Sewage treatment &amp; disposal.</b>								
14 Number of refurbished or new treatment works	nr	114	19	7	12	14	33	48
15 Population equivalent of refurbished or new treatment works	000	6060.24		275.83	593.29	693.58	2715.57	1781.97
16 Number of refurbished or new sludge treatment works	nr	8	21	0	2	2	2	2
<b>D Sewerage service</b>								
17 Number of refurbished or new pumping stations	nr	56	3.27	11	12	11	11	11
18 Number of refurbished or new sea outfalls	nr	5	7.14	0	1	1	2	1