Service and delivery – performance of the water companies in England and Wales 2009-10

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About this document

In England and Wales, most customers cannot choose their water and sewerage service supplier. This is why we monitor and compare the performance of monopoly water only companies (WoCs) and water and sewerage companies (WaSCs) in England and Wales. This is to make sure they deliver the services customers are paying for and to check they meet their other legal obligations.

Comparing aspects of the monopoly companies' performance helps drive improvements. Consumers can use these comparisons to find out how well their local company is performing. They can also put pressure on their company to match the best performers.

This report sets out our analysis of how the companies performed relative to each other in 2009-10 in providing services to consumers and managing the assets necessary to deliver them. As 2009-10 was the last year of the five-year period for which we set price limits in 2004, we have also included an overview of the companies' performance between 2005 and 2010.

The report summarises the companies' performance:

- in delivering the broad range of services provided to consumers;
- against minimum service standards;
- in managing water supplies in 2009-10, including dealing with issues such as leakage and flooding.
- in delivering the agreed investment programme; and
- in maintaining their assets for the long term.

It also outlines any action we are taking on behalf of consumers if a company fails to deliver.

The information in this report is taken from data that each company provided us in June on their 2009-10 performance (the 'June return').

We have verified the data with the companies, the Environment Agency and the Drinking Water Inspectorate (DWI).

We have not included the performance of exceptionally small companies, such as Cholderton and Albion. This has no material impact on the information in the report.

Detailed supporting information to this document is available on our website at www.ofwat.gov.uk.

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Protecting consumers and the environment

In England and Wales, most customers receive their water services from one of 22 licensed regional monopoly companies and their sewerage services from one of 10 companies. These companies must provide reliable, high-quality services. They must also manage and maintain their networks of pipes and treatment works so that they continue to deliver a safe, reliable and sustainable supply.

We subject the companies to rigorous scrutiny and challenge. Our independent approach to regulation has delivered real benefits for consumers. For example, since privatisation:

- bills are more than a third lower than they otherwise would have been, as a result of our challenge to companies to be more efficient;
- leakage levels are about 35% lower than they were at their peak in the mid-1990s;
- there is higher environmental compliance, with 98.6% of bathing waters meeting required EU standards (compared with 78% in 1990); and
- consumers have access to excellent water, with 99.95% compliance with tough EU standards.

These improvements are the result of the substantial investment programmes that the companies have carried out – much of it funded by borrowing from financial markets. The sectors have invested more than £90 billion (in today's prices) in maintaining and improving the water and sewerage infrastructure. They will invest another £22 billion over the next five years. This is made possible by the stable and transparent regulatory framework that we provide.

Against this background, we have set the companies challenging efficiency targets, which is how we have kept bills as low as possible. We require the companies to deliver the level of service customers would choose in a competitive market. We monitor and report on a range of key indicators to drive improvement. This allows consumers to see how their monopoly supplier is performing relative to other monopoly water companies.

We can also take action if the companies fail to deliver the services that consumers have the right to expect. Our aim is to secure compliance and change the behaviour of the companies that fail so that consumers' interests are protected.

Regulating for the long term

It is critical, particularly in these difficult economic times, that today's customers receive good value water and sewerage services from their company. However, it is also critical that future customers do as well.

Although the water and sewerage sectors have made significant progress since privatisation, they now face a number of new challenges, including:

- a changing climate;
- population growth; and
- an uncertain economic future.

The scale and complexity of these challenges – and the uncertainties associated with them – will make planning and delivering sustainable water and sewerage services increasingly difficult over the long term. It means we need to consider new regulatory approaches, particularly if we are to maintain the balance between bills, services and investment.

To do this, there may need to be changes, including to the:

- structure of the sectors;
- approaches they use to deliver services; and
- way we regulate.

We are pleased to be playing our part in reviewing these issues. This includes working with the UK Coalition Government's review[1] of our responsibilities. This will make sure the sectors, and our regulation of them, deliver the best results for consumers now and in the long term.

We want to build on the successes of the effective regulatory environment that we have developed since privatisation. Among other things, we want to continue to:

- protect consumers' interests;
- develop long-term approaches to environmental planning; and
- provide the regulatory certainty necessary to enable efficient water companies to attract investment from competitive financial markets.

[1] 'Ofwat review will consider future challenges facing industry', Department for Environment, Food and Rural Affairs, press notice, 26 August 2010.

This is why we are also continuing to deliver our 'future regulation' programme, which we launched as part of our strategy[2] in March 2010. Our aim is to carry out a fundamental review of what we do and why we do it to inform our future approach.

One of the projects within this programme concerns regulatory compliance. The objective is to create a risk-based framework that protects consumers' interests by:

- developing incentives so that the companies take full responsibility for complying with their obligations and meeting their customers' expectations;
- reducing the regulatory burden;
- strengthening the reliability of company reporting;
- focusing on contractual, compliance or performance concerns about the companies; and
- establishing the principles we should use when investigating compliance.

We want the companies to be fully accountable to their customers for their performance and compliance with standards. As part of this work, we are considering the mechanisms that we use to monitor company performance. An implication of this may be that we no longer collect information that would enable us to publish the same comparative reports we have published in the past.

We would welcome your comments on the value of our comparative reports, recognising that these provide comparisons only between the monopoly companies in the sectors. Your views on alternative types of information that may be useful would also be welcome. In addition, we invite you to consider:

- different ways of providing this information if it is considered valuable; and
- the companies' role in keeping their customers informed about their performance.

[2] 'Delivering sustainable water – Ofwat's strategy', March 2010.

Headline issues 2009-10

In general, the companies delivered good levels of reliability and service to most consumers in 2009-10. However, there are still some issues of concern to us, which we discuss in the 'Securing compliance' section below.

Company performance

- The number of complaints across England and Wales fell to its lowest level since 2005-06, and the companies continued to respond thoroughly and quickly to most (99.6%) consumer contacts.
- No water restrictions were imposed during 2009-10, and all the companies achieved their targets for the security of their water supplies. Compliance with drinking water standards remained very high at 99.95%.
- We were encouraged that during the prolonged winter of 2009-10, most companies were able to manage the increase in burst mains effectively and to minimise the interruptions to consumers' water supply.
- Most companies met their leakage targets, in spite of the unusually cold winter conditions. However, six companies (Southern, Northumbrian, Veolia Central, Dee Valley, Cambridge and Yorkshire) failed to meet their targets. We have focused on what these six companies need to do to restore their performance and we have increased their reporting requirements while they do so. We have also accepted an informal undertaking (a written commitment to put things right) from one of them and we are monitoring this carefully.
- The companies need to continue to make sure that they maintain stable serviceability (which is the capability of the system of assets to deliver the right level of service to consumers now and in the future). In the case of three companies (Southern, Northumbrian and Dŵr Cymru), we are requiring them to deliver action plans to restore stable serviceability. We are also considering whether to require three other companies to do the same.
- We are concerned about the number of properties that are flooded as a result of overloaded sewers and other causes. We are also concerned about the lack of consistency in reporting and the poor quality of data. We have told the companies that we expect them to improve this over the next few years.
- We are pleased by the way in which the companies have responded to the challenge of carbon accounting and believe that the quality of the data is improving. The industry has a significant carbon footprint and we are making sure the companies do all they can to improve their carbon management.

We monitor the companies' performance in delivering the investment programme agreed in 2004 for the five years between 2005-10. In this way, we make sure that

customers receive the benefits they have paid for through their bills. For the most part, the companies have delivered their investment programmes. Any variance is the result of schemes no longer being required or schemes being delayed. In these cases we have made financial adjustments through the companies' price limits. This ensures that customers do not pay for something that was not delivered.

This is the last year that we will publish and use the overall performance assessment (OPA). In 2010-11, we will publish the results from the first year of the service incentive mechanism (SIM), which we introduced from April 2010. We think that the SIM will help the companies to focus on:

- identifying and meeting customers' expectations;
- getting things right first time; and
- reducing the number of complaints they receive by improving their services overall.

Further details about the SIM can be found in our focus report 'Putting water consumers first – how can we challenge monopoly companies to improve?', which we published in March 2010.

Securing compliance in 2009-10

We take action if a company fails to deliver the levels of service expected, or if it fails to ensure its assets remain fit for purpose. We make sure the company investigates the root cause of any failures, and has plans to restore service levels and/or serviceability as quickly as possible. We may require the company to report progress and deliver agreed action plans. In more serious cases, we may take formal enforcement action.

Our aim in securing compliance is to protect consumers' interests. We encourage the companies to be accountable to their customers and to take appropriate action if they fail to meet their obligations.

We set out below the compliance issues that we have dealt with during the year.

United Utilities

In September 2008, United Utilities provided a formal undertaking in which it agreed to reduce the risk of sewer flooding for properties in the Penketh area of Warrington by specified dates.

The company failed to meet the terms of the first element of its undertaking, through not delivering the specified output. In January 2010, we made an enforcement order (a written instruction to a company specifying what they need to do to deliver compliance) requiring the company to remove all affected customers in the Penketh area from its register of properties at risk of severe flooding by August 2011. This is the first time that we have used such an enforcement order; the company is making progress and is on track to meet the terms specified.

During our investigation into the problems that customers in the Penketh area experienced, we identified that the company had reported inaccurate data regarding the number of properties at risk of flooding from sewers.

In taking enforcement action, our focus was on pursuing an approach that secured:

- appropriate systems and processes for identifying properties at risk of sewer flooding; and
- help for customers whose properties faced the risk of sewer flooding.

United Utilities has now given a formal undertaking to assess and offer solutions to mitigate the sewer flooding problems at 1,600 properties on its at risk registers (at 31 March 2009) on a prioritised basis by September 2012. It has also put in place new systems to investigate and record sewer flooding incidents, to bring them in line with industry best practice.

As part of the undertaking, an independent review has been carried out on the company's new systems and processes and we are monitoring progress against the undertaking provided.

South West

During the year, South West informed us that it had found weaknesses in its systems and processes for recording written complaints and appointments that led to it misreporting information to us. In March 2010, we accepted a formal undertaking in which the company committed to improve its systems and processes by March 2011.

The company carried out a thorough investigation, compensated customers directly affected and volunteered an undertaking to put right its systems and to provide additional redress to its customers. This includes funding for schemes to deal with sewer flooding and odour problems.

We welcome the constructive approach the company has taken to put right the issues identified and to provide redress. We are seeking to incentivise the

companies to take full responsibility for complying with their obligations to customers. We consider that the actions that South West took in this case demonstrate this type of responsibility.

Consumer contacts

In addition to the investigation at South West, issues were identified at several companies concerning the evolving area of electronic communication channels. These issues include spam filters blocking customers' emails or website pages not being connected to call centres. This meant that in some instances customers who contacted their company did not receive a response.

In light of this, we published RD 05/10, 'Consumer contacts'. Our intention was to alert all the companies to these issues so they could consider the implications for their systems and processes, take any necessary action and provide appropriate redress to affected customers.

- **Severn Trent:** In March 2010, Severn Trent told us it had identified a problem with its web-based leak reporting system. The electronic forms that customers had completed were not relayed to the call centres and so were not being acted on. This affected about 6,700 leak reports over three years. The company has addressed this failure and is considering what redress it might offer to customers. We are actively monitoring the situation.

- **Thames:** In March 2010, Thames told us it had discovered an email inbox containing nearly 4,000 unread customer emails dating back as far as 31 March 2003. Thames has since made Guaranteed Standards Scheme (GSS) payments to all the customers it has been able to identify.

  The company's approach to tackling this issue has been positive and is another example of the constructive steps the companies can take. Thames has taken action to address the root causes of the failure and has put in place measures to prevent it being repeated. It has also taken the opportunity to examine the wider implications for its customer service more generally and develop a sharper focus on delivery for customers. It has proposed a package of measures, including:

  – enhanced online facilities;
  – enhanced training for frontline customer service operatives; and
  – enhancements to the existing company charter standard for installing free meters.

- **Veolia East:** The company informed us in August 2010 about an issue with a web-based contact form used by new customers moving into the area. The electronic forms that customers had completed were not relayed to the customer service staff and so were not being acted on. About 200 customers were affected in a one-year period.

  The company has:

  - corrected the fault;
  - introduced new quality control procedures for testing its web-based systems; and
  - is making compensation payments to affected customers.

Dŵr Cymru

During the year, we carried out an investigation into Dŵr Cymru's understanding and management of its assets, and its management of contractors delivering services on its behalf. As part of this investigation, we engaged an independent third party to review the company's systems and processes.

Dŵr Cymru has brought the operation of its assets (which was previously outsourced) back in house. It is also taking action to strengthen its systems and processes and make sure that it has a full understanding of its assets. The company will be providing us with regular progress updates.

Severn Trent infrastructure charges

In October 2009, we were alerted to a past problem with the way Severn Trent calculated infrastructure charges for new connections. The company has since taken action to identify each of the connections affected and has implemented a plan to review affected connections and make any additional payments required. We are continuing to work with the company on how it deals with new connections.

Summary of the companies' five-year performance (2005-10)

In general, the water and sewerage sectors performed well in delivering services to consumers while protecting the environment during the five-year period between 2005 and 2010. This was despite tough operational conditions caused by extreme weather.

- Between 2005-06 and 2006-07, the south-east of England experienced drought conditions as a result of two consecutive dry winters in 2004 and 2005.
- In 2007-08, many parts of England and Wales experienced severe flooding. In part this was because of rainfall volumes in some areas that would currently be expected less than once every 200 years.
- In 2008-09 and 2009-10, most of England and Wales experienced two extremely cold winters. The latter, in particular, was the coldest winter in more than 30 years.

Overall, the companies maintained supplies during this extreme weather, with the exception of one unprecedented incident in 2007 in which 350,000 customers in Gloucestershire lost piped water supplies for up to 16 days.

However, in some areas the companies failed to deliver what was expected of them. In some cases we took formal enforcement action against specific companies to protect consumers' interests.

We explore the companies' performance during 2005-10 in more detail below.

Overall

- The sectors delivered 99% of the National Environment Programme (a list of environmental improvement schemes that ensure the companies meet national and European targets related to environmental water quality). It equated to more than 2,700 individual schemes to:

  - improve sewage treatment facilities;
  - enhance the sewerage system;
  - treat and dispose of the additional sludge created; and
  - investigate the impacts of other assets on habitats, river and coastal water quality.

- Total reported leakage across the sectors fell by more than 300 Ml/d between 2005 and 2010. (One megalitre or Ml equals one million litres.) It is now approximately 35% lower than it was at its peak in the mid-1990s.

- Thames and Severn Trent reduced leakage and improved customers' security of supply as agreed within their formal undertakings. Thames spent £150 million of their shareholders' money as a result of its undertaking. Between 2005 and 2010, these two companies reduced leakage by a combined total of 250 Ml/d.

- The companies relined, renewed or replaced more than 22,000 km of distribution mains, which substantially fulfilled their legal obligations. This has resulted in improved compliance against the drinking water quality iron standard at consumers' taps, and a reduction in customer contacts because of water discolouration in all regions across England and Wales.

- Most companies' performance on serviceability is on track. However, some companies still do not have stable serviceability.

    - Over the past five years, the companies have improved their asset management capabilities to ensure they are delivering stable serviceability. In 2005-06, 19 sub-services were less than stable (ten in the water and nine in the sewerage service), compared with eight in 2009-10 (seven in water and one in sewerage).
    - The most improved serviceability measures include iron compliance, low pressure (water infrastructure) and turbidity (water non-infrastructure). Burst mains showed improvement until the last two years of the period 2005-10, when severe weather led to an increase across the sector.
    - We have seen considerable improvement in sewage treatment works performance (sewerage non-infrastructure) and over the past five years the companies have focused on restoring stable serviceability. In 2005-06, half of the companies were less than stable and all the companies have improved significantly in this sub-service.
    - For sewerage infrastructure, there has been slight reduction in the number of sewer collapses and pollution incidents. Flooding from sewers caused by insufficient capacity was relatively stable between 2005 and 2010. But, there was significant deterioration in the 'flooding (other causes)' indicator over the period. We remain concerned about the lack of consistency in reporting and the poor quality of data, both of which need to be fully understood and improved over the next five years.

- Between 2005 and 2010, 8,744 properties in England and Wales received better protection from sewer flooding. This is equivalent to increasing the protection for every home in a town the size of Newquay.

- The number of properties at risk of internal sewer flooding more than once in ten years reduced by more than 5,000 in the past five years.

- Anglian, Thames[3] and Yorkshire all exceeded their targets for the number of sewer flooding problems solved. Anglian solved 141 more problems (22%) than were funded in the five years between 2005 and 2010, Yorkshire solved an additional 61 problems (15%) and Thames solved an additional 90 problems (3%).

Case study – dealing with sewer flooding

Wessex is one of a number of companies developing more sustainable solutions to sewer flooding problems. The redevelopment of Bourne Valley Park was central to a scheme to alleviate regular occurrences of flooding from surface water sewers for six of the company's customers.

Rather than building larger sewers, the company uncovered part of a culverted stream and managed surface water above the ground. An area in the park containing a fishing lake, ponds and wetland areas was developed to retain excess water flows. This diverted surface water away from the sewers.

Working with various agencies and Poole Borough Council, Wessex was able to:

- save customers money;
- work in an environmentally responsible way; and
- improve amenities in the local community.

[3] Our assessment is based on the information provided by Thames. We have requested further information from the company to confirm that they have solved the required number of problems over the five-year period.

Protecting consumers' interests during 2005-10

- We imposed financial penalties totalling almost £75 million. This included fining:

  - United Utilities, for breaching rules governing trading arrangements with associate companies;
  - Southern, for deliberately misreporting information about its customer service performance and for providing poor service to customers;
  - Thames, for misreporting information about its customer service performance and for providing poor service to customers;
  - Severn Trent, for deliberately misreporting information about its customer service performance and for providing poor service to customers; and
  - Veolia East, for misreporting financial information.

- We also secured formal undertakings from:

  - Thames and Severn Trent, to address leakage performance following leakage target failures in 2005-06 and 2006-07 respectively, which resulted in them spending about £195 million (combined) in extra investment at their own expense;
  - United Utilities, to address non-compliant trading arrangements with associated companies;
  - United Utilities, to reduce the risk of sewer flooding for properties in the Penketh area of Warrington (we subsequently imposed an enforcement order when the company failed to meet the terms of the undertaking);
  - United Utilities, to assess and offer solutions to mitigate sewer flooding problems at 1,600 properties on its at risk registers at the end of March 2009 and put in place new systems to investigate and record sewer flooding incidents to bring them in line with industry best practice; and
  - South West, to address problems with its customer service systems and to provide additional redress to its customers.

- We secured redress and further compensation for customers of Veolia Central. This was after the company deliberately misreported information to us on the proportion of its customers' bills that were based on actual meter readings (DG8). This was despite us being unable to consider a financial penalty because of statutory time restrictions.

- In total, during 2005-10 we also secured redress for customers of more than £100 million.

- In total, when we set price limits for all companies for the five years between 2010 and 2015 at the 2009 price review, we returned more than £100 million to customers following underperformance by the companies on sewer flooding.

  - We reduced the price limits ('shortfalled') Northumbrian for not reducing the number of properties at risk sufficiently. However, we did allow them funding to complete additional solutions.
  - Similarly, we shortfalled United Utilities for not sufficiently reducing the number of properties at risk. This was in part because the company added more properties to its registers than it had originally reported, following additional investigations and improvements to the way it recorded the number of incidents.
  - We also shortfalled Dŵr Cymru for not sufficiently reducing the number of properties at higher risk of flooding.

- We applied a financial shortfall at the 2009 price review to Dŵr Cymru and Veolia Central for less than stable serviceability assessments for water non-infrastructure and water infrastructure respectively. In total, we returned about £25 million to customers.

- Overall, as a result of the companies' underperformance across a range of specific services measures as outlined in our overall performance assessment (OPA), we reduced the amount of revenue that the companies can collect from their customers during 2010-15 by about £75 million.

Maintaining supplies during extreme events

The 2007 and 2009 floods

In June and July 2007, record rainfall led to widespread flooding that resulted in large-scale national disruption. The event claimed 13 lives and many thousands of people had to leave their homes. The total impact to the UK economy has been calculated to be £3.2 billion. The water and sewerage companies felt the impact in many locations. We highlight two significant events where the service that water consumers received was significantly affected and led to widespread suffering and inconvenience for the affected communities.

- Severn Trent's Mythe water treatment works in Tewkesbury was inundated by the river Severn. This disabled the works for the first time since its construction in 1870. The result was that 350,000 consumers in the

Gloucester area were left without piped drinking water supplies for up to 16 days. The company managed to satisfy their minimum emergency obligations under the Security and Emergency Measures Direction (SEMD) by distributing bottled water and using bowsers. This proved to be a huge logistical task, which required assistance from the wider sector and co-ordination at a national level.

This event acted as a driver for many companies (including Severn Trent) to improve resilience so that consumers can continue to receive something close to their usual service even in extreme circumstances. Significant investment is expected in this area during 2010-15.

- There was also widespread flooding in Hull. This was different to events in Gloucestershire, because the flooding was caused by surface water rather than from rivers.

  Because of the topography of Hull, the drainage system (for which Yorkshire is in part responsible) relies on pumping to sewage works (for foul water) and local watercourses (surface water). The inundation of the system by record rainfall, coupled with failures to some pumping assets, meant that it could not cope. This resulted in 8,300 properties being flooded, leaving long-term disruption for many households.

  Following the event, Yorkshire committed to investment that would deliver an appreciable improvement in the level of service against flooding in Hull at no additional cost to its customers.

In 2009, another significant flooding event took place in Cumbria. On this occasion, no water or sewerage services were lost for any length of time. United Utilities was able to quickly and proactively reroute supplies when several bridges over the river Derwent collapsed.

The drought in south-east England

South-east England experienced two consecutive dry winters in 2004 and 2005. In 2006, this led to one of the worst droughts in the region for nearly 100 years, directly affecting 15 million people. Because of the lack of rainfall, a number of companies in the area took the following measures to conserve their remaining water supplies.

- They used media and advertising campaigns to pass on the message about the need for greater water efficiency to consumers.

- They increased investment to reduce water lost through leakage, develop new sources of water, improve water treatment works, and improve the transfer capacity of the networks.
- They imposed restrictions on use[4], such as hosepipe and sprinkler bans. Between 2004 and 2007, six companies in the south-east (Sutton & East Surrey, Southern, South East, Veolia Southeast, Veolia Central and Thames) imposed a hosepipe or sprinkler ban. Sutton & East Surrey also introduced further restrictions, such as banning the filling of privately-owned swimming pools, under the powers of its non-essential use drought order.
- Sutton & East Surrey and Southern were granted additional powers under drought permits and orders[5] to increase resources by abstracting more water from the environment.

The wet winter of 2006-07 replenished groundwater stores and river flows to average levels and the affected companies began to lift their restrictions on use. The last restriction was lifted on 28 February 2007.

The combination of formal restrictions and the actions of both the companies and consumers had the effect of reducing demand during the drought. Per capita consumption for both unmetered and metered customers fell over the period.

Drought in the north-west of England

While it falls outside the reporting year to which this report relates, in summer 2010 the north-west of England had the driest start to the year since 1929.

As a result, on 9 July United Utilities imposed a hosepipe and sprinkler ban for the first time since 1996, reducing the demand for water. The company also applied to the Environment Agency for drought permits to allow it to maintain supplies.

Heavy rainfall in the region during July and August restored key reservoirs in the Lake District to normal levels for the time of year, and the company lifted its hosepipe ban on 19 August.

[4] The Water Industry Act 1991 (WIA91) allows the companies to ban the use of hosepipes, or similar apparatus, for watering private gardens or washing cars during times of water shortage. If a company wants to extend the ban to other activities, it must apply to Defra for a non-essential use drought order.

[5] A water company can apply to the Environment Agency for a drought permit (section 71, WRA91) or to Defra for a drought order (section 74, WIA91). A drought permit or order allows a company to increase its resources by abstracting more water than normal.

Improving resilience

Although it is difficult to attribute single extreme events, such as drought and floods, to climate change, they do give us a clear indication of the challenges ahead.

Water and sewerage services have demonstrated a high level of resilience in the current climate. For example, there have been only two major long-term outages of water supply caused by extreme flood events since 1995. But climate change, coupled with the other major challenges faced by the sectors, means that we cannot be complacent.

Since the floods of 2007, we have improved our policies on and understanding of resilience.

Our approach at the 2009 price review will lead to significant improvements for consumers. For example, we included more than £400 million of investment in the companies' price limits to increase the resilience of supplies for almost ten million people.

Our flexible approach at the 2009 price review also allows the companies that can demonstrate a need to invest now to meet the supply/demand balance because of the impacts of climate change to seek a change in their price limits before the next price review (an 'interim determination').

In addition, we are continuing to develop our approach and will shortly publish a focus report on resilience to promote discussion and engagement in this area. We are also working, through our sustainable drainage project, to address the key issue of future drainage provision.

Prices, services and investment 2010-15

Further details of the prices, services and investment package that the companies will deliver between 2010 and 2015 can be found in our 'Future water and sewerage charges 2010-15: final determinations' document, which we published in November 2009.

After a referral, the Competition Commission redetermined Bristol Water's price limit on 4 August 2010. This price limit will be applied to bills starting in April 2011. Further details of the redetermination can be found on the Competition Commission's website.

1. Service – levels of service, overall performance assessment and service incentive mechanism

1.1 Levels of service

Water companies must report their achieved performance every year on several measures of performance ('levels of service' indicators).

As a result of our regulation and the actions of the companies themselves, the companies' levels of service to consumers have improved significantly since privatisation – although performance has stabilised at a high level in recent years.

Table 1 shows the total industry performance against levels of service indicators since 1990.

Table 1 Total industry performance 1990-91 to 2009-10

Description	1990-95 %	1995-00 %	2000-05 %	2005-06 %	2006-07 %	2007-08 %	2008-09 %	2009-10 %
DG2: Properties at risk of low pressure	1.33	0.35	0.07	0.03	0.02	0.02	0.03	0.01
DG3: Properties subject to unplanned supply interruptions of 12 hours or more	0.33	0.21	0.09	0.08	0.15	0.69	0.08	0.06
DG4: Population subject to hosepipe bans	14	15	0	7	30	0	0	0
DG5: Properties subject to sewer flooding incidents (overloaded sewers and other causes)	0.03	0.03	0.02	0.02	0.02	0.03[2]	0.02	0.03
DG5: Properties at risk of sewer flooding incidents (once in ten years)	–	0.07	0.05	0.02	0.02	0.02	0.01	0.01
DG5: Properties at risk of sewer flooding incidents (twice in ten years)[1]	0.08	0.05	0.02	0.01	0.01	0.01	0.01	0.01
DG6: Billing contacts not responded to (within five working days)	21.78	5.39	0.71	4.44	5.08	2.71[2]	1.08	0.44
DG7: Written complaints not responded to (within ten working days)	21.42	3.22	0.34	3.15[2]	3.71[2]	6.82[2]	0.38	0.62
DG8: Bills not based on meter readings	–	1.51	0.39	0.52	0.86	0.32	0.21	0.21
DG9: Received telephone calls not answered within 30 seconds[3]	–	16.16	7.01	–	–	–	–	–
DG9: Telephone call handling:								
Calls abandoned		5.40	2.27	6.69	9.76	7.63	7.03	4.96
All lines busy[4]			5.17	3.91	5.66	3.23	0.45	0.49
Call handling satisfaction[5]				4.50	4.47	4.58	4.60	4.60

Notes:

It is not appropriate simply to add up the totals for each indicator to determine the overall number of consumers receiving poor service. Some may be included in more than one row. For example, a consumer at risk of low pressure (DG2) may also have written to the company to complain (DG7). Where information was not collected, it is shown as a dash.

1. Data collected from 1992-93.
2. Data for some companies has been revised, which has changed performance since last year.
3. Data collected from 1996-97 to 2004-05.
4. Data collected from 2002-03.
5. This is on a scale of 1 to 5, where 5 is 'very satisfied'.

1.2 Overall performance assessment (OPA)

We have used the OPA since 1999 to measure and incentivise good service to consumers. As well as allowing us to compare the quality of the overall service the companies provide, it also tells consumers how their local water company is performing when compared with others across a range of specific measures.

We use the OPA to take account of relative performance when setting limits on the prices the companies charge customers through their water bills. We used the OPA scores from 2004-05 to 2008-09 to adjust the price limits that apply for each year between 2010 and 2015.

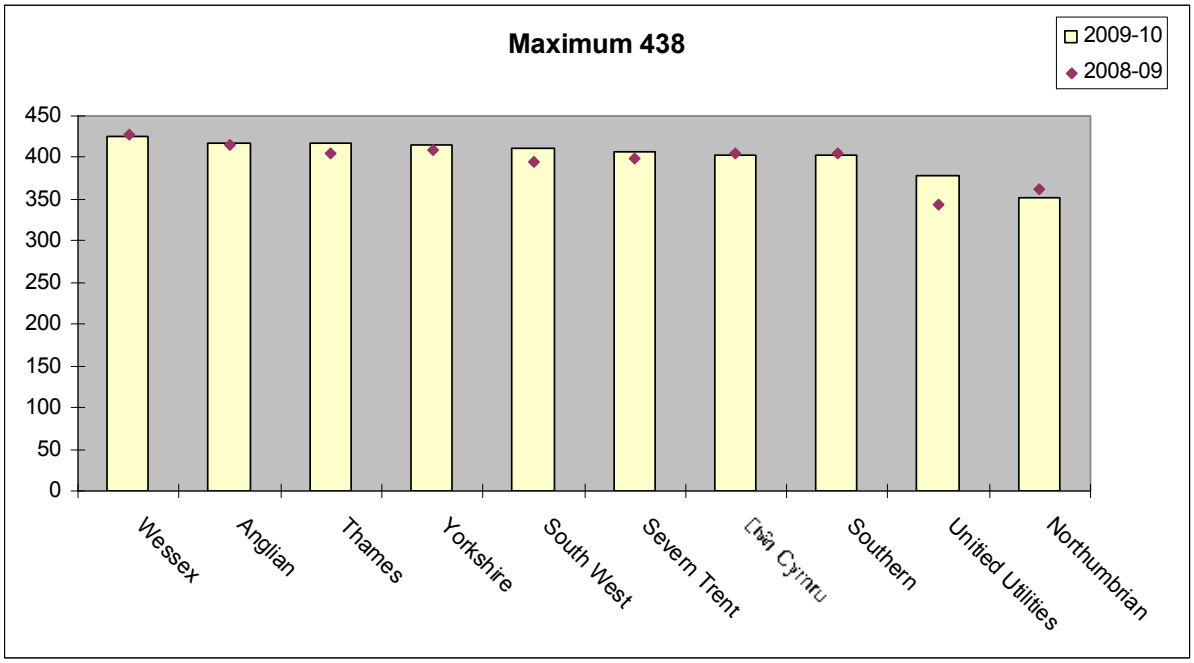
The key areas and contributing measures included are:

- **water supply** (low water pressure, unplanned interruptions to supply, and drinking water quality);
- **security of supply** (hosepipe restrictions, leakage, and performance against our security of supply index);
- **sewerage service** (sewer flooding incidents and risk of sewer flooding);
- **consumer service** (written complaints, billing contacts, billing metered consumers, telephone answering, telephone access, services to consumers with special needs, supply pipe repair policies, debt and revenue policies, complaint handling, compensation, and provision of information to consumers); and
- **environmental impact** (sewage treatment works, pollution incidents from water and sewerage activities, and sludge disposal).

Figure 1 shows the results of our assessment for the water and sewerage companies for 2009-10, compared with 2008-09. Figure 2 shows the results for all companies. The best performing companies have the highest scores.

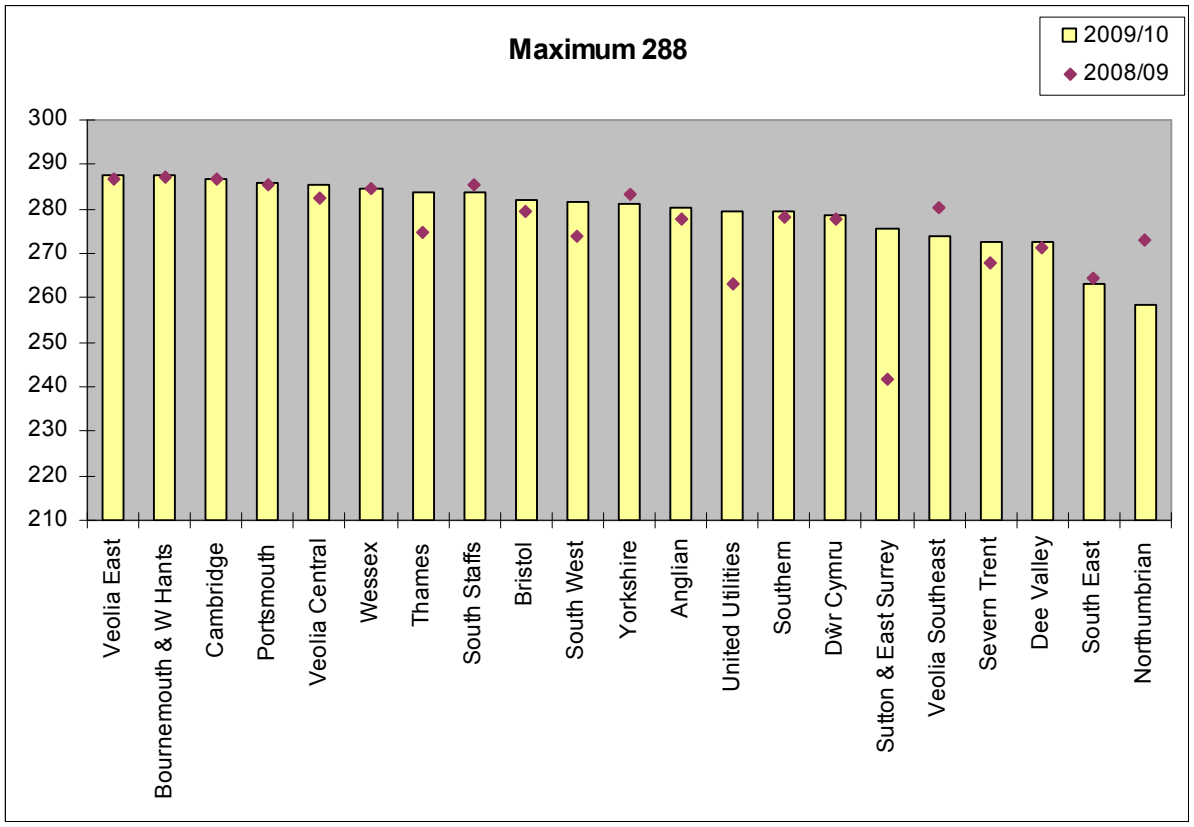
Tables 2 and 3 show the breakdown of the companies' total OPA scores into their component parts. This makes it possible to compare the performance of one company against another for each measure. The maximum achievable score for each measure is shown in the second column of the tables.

Figure 1 Overall performance assessment – water supply, sewerage service and consumer service for water and sewerage companies 2008-09 and 2009-10



Note:
Includes any revised data since last year's report was published.

Figure 2 Overall performance assessment – water supply and consumer service for all companies 2008-09 and 2009-10



Note:
Includes any revised data since last year's report was published.

Table 2 Overall performance assessment – water supply, sewerage service and consumer service for water and sewerage companies 2009-10

Output	Maximum score	Anglian	Dŵr Cymru	North-umbrian	Severn Trent	South West	Southern	Thames	United Utilities	Wessex	Yorkshire
Water supply, levels of service											
Properties at risk of low pressure (DG2)	38	35	37	36	37	35	36	37	37	35	37
Properties with unplanned interruptions (DG3)	38	33	38	29	27	35	34	36	38	37	35
Water quality failing DWI standards	50	49	44	44	49	49	47	49	45	49	49
Sewerage service, levels of service											
Sewer flooding incidents (capacity)	25	25	22	3	24	23	24	22	18	25	25
Sewer flooding incidents (other causes)	38	30	23	5	26	26	20	25	4	31	21
Properties at risk of sewer flooding	13	12	11	10	12	12	12	10	10	11	13
Security of supply											
Population with hosepipe restrictions	13	13	13	13	13	13	13	13	13	13	13
Leakage – performance against target	13	13	13	13	13	13	13	13	13	13	11
Security of supply index – absolute performance	13	13	11	13	11	13	13	13	13	13	13
Security of supply index – performance against target	13	13	13	5	13	13	13	13	13	13	13
Customer service											
Company contact score (DG6, 7, 8 and 9 combined)	38	38	38	38	37	38	38	37	35	38	37
Other customer service	38	38	38	38	38	38	38	38	38	38	38
Environmental performance											
Category 1 and 2 pollution incidents – sewage	25	24	24	23	25	24	20	25	25	25	25
Category 3 pollution incidents – sewage	13	10	8	11	11	10	8	13	13	12	12
Category 1 and 2 pollution incidents – water	13	13	13	11	13	13	13	13	13	13	13
Sewage treatment works in breach of their consent	50	50	48	50	47	47	50	50	50	50	50
Sludge disposal – percentage of sewage sludge disposed of unsatisfactorily	13	13	13	13	13	13	13	13	5	13	13
Total score	**438**	**418**	**403**	**352**	**407**	**411**	**402**	**416**	**379**	**426**	**415**
Rank		2	7	10	6	5	8	3	9	1	4

Table 3 Overall performance assessment – water supply and consumer service for all companies 2009-10

Output	Maximum score	Anglian	Dŵr Cymru	North-umbrian	Severn Trent	South West	Southern	Thames	United Utilities	Wessex	Yorkshire
Water supply, levels of service											
Properties at risk of low pressure (DG2)	38	35	37	36	37	35	36	37	37	35	37
Properties with unplanned interruptions (DG3)	38	33	38	29	27	35	34	36	38	37	35
Water quality failing DWI standards	50	49	44	44	49	49	47	49	45	49	49
Security of supply											
Population with hosepipe restrictions	19	19	19	19	19	19	19	19	19	19	19
Leakage – performance against target	19	19	19	19	19	19	19	19	19	19	17
Security of supply index – absolute performance	19	19	17	19	17	19	19	19	19	19	19
Security of supply index – performance against target	19	19	19	8	19	19	19	19	19	19	19
Customer service											
Customer contact score (DG6, 7, 8 and 9 combined)	38	38	38	38	37	38	38	37	35	38	37
Other customer service	38	38	38	38	38	38	38	38	38	38	38
Environmental impact											
Category 1 and 2 – water	13	13	13	11	13	13	13	13	13	13	13
Total score	**288**	**280**	**279**	**259**	**273**	**281**	**279**	**284**	**280**	**284**	**281**
Rank		12	15	21	18	10	14	7	13	6	11

Table 3 Overall performance assessment – water supply and consumer service for all companies 2009-10 (continued)

Output	Maximum score	Bourne-mouth & W Hamp-shire	Bristol	Cambridge	Dee Valley	Ports-mouth	South East	South Staffs	Sutton & East Surrey	Veolia Central	Veolia East	Veolia South-east
Water supply, levels of service												
Properties at risk of low pressure (DG2)	38	38	37	37	35	36	37	38	37	37	38	37
Properties with unplanned interruptions (DG3)	38	38	35	38	35	38	30	34	37	37	38	38
Water quality failing DWI standards	50	50	48	50	49	50	49	50	48	49	50	49
Security of supply19												
Population with hosepipe restrictions	19	19	19	19	19	19	19	19	19	19	19	19
Leakage – performance against target	19	19	19	19	19	19	19	19	19	19	19	19
Security of supply index – absolute performance	19	19	19	19	19	19	19	19	19	19	19	19
Security of supply index – performance against target	19	19	19	19	19	19	19	19	19	19	19	19
Customer service												
Customer contact score (DG6, 7, 8 and 9 combined)	38	38	38	38	38	38	23	38	38	37	38	25
Other customer service	38	38	38	38	29	38	38	38	29	38	38	38
Environmental impact												
Category 1 and 2 – water	13	13	13	13	13	13	13	13	13	13	13	13
Total score	**288**	**288**	**282**	**287**	**273**	**286**	**263**	**284**	**275**	**285**	**288**	**274**
Rank		1	9	3	19	4	20	8	16	5	1	17

1.3 Service incentive mechanism (SIM)

This is the last year that we will publish the results for the OPA. In 2010-11, we will publish the results from the first year of the SIM, which we have been using since April this year.

The SIM comprises:

- a quantitative indicator that measures complaints and unwanted contacts; and
- a qualitative indicator that measures how satisfied customers are with the quality of service they receive, based on a survey of consumers who have had direct contact with their water company.

The quantitative measure combines existing elements of the OPA with ones specifically developed for the SIM. Each element is weighted to reflect the increasing impact on consumers and the cost to the company. Table 4 shows how the quantitative measure is made up, and the weighting of the individual elements.

Table 4 Weighting of individual elements

Element	Weighting
All lines busy	1
Calls abandoned	1
Unwanted telephone contacts	1
Written complaints	5
Escalated written complaints	100
Consumer Council for Water (CCWater) investigations	1,000

We will produce the overall SIM score by combining the two measures, with both having equal weighting.

The companies have been piloting the new measures over the past year. Several have invested in new technology to help them gain a better understanding of their consumer service.

We will publish league tables setting out information about performance against the new measures. This will allow consumers and other stakeholders to identify those companies that offer the best and worst levels of service. In this way, it places a reputational incentive on the companies to do well.

2. Service – consumer issues

2.1 What consumers experienced

Every year, we check that each of the companies has maintained its service to consumers at the required standards. We do this by checking that they respond thoroughly and quickly to consumer contacts, and that customers receive bills based on actual and not estimated readings. If a company fails to do this, the affected consumers may be entitled to a payment under the GSS regulations, or the company's own customer charter.

During 2009-10, the companies responded to 99.6% of billing contacts within five working days. This compares to 98.9% in 2008-09. Performance in response to written complaints was similar to last year, with 99.4% responded to within ten working days (99.6% last year), and the number of complaints fell to 6.4 for every 1,000 connections. This is the lowest level since 2005-06. The number of bills based on at least one meter reading during the year also remained high, at 99.8%.

However, two companies – South East and Veolia Southeast – reported significantly poorer performance than the rest of the sectors in responding to billing contacts. We have assessed their performance as 'acceptable' against our absolute performance standards.

Similarly, two companies – Severn Trent and South East – reported significantly poorer performance than the rest of the sectors in responding to written complaints. We have assessed both as 'needs improvement' against our absolute performance standards.

The poorer performance that Veolia Southeast reported was because it could not cope with an increase in written communications, compared with previous years. The company has since improved its processes and reports a considerable improvement in performance in the year.

Severn Trent's failure was the result of the company failing to monitor an email contact line for part of the year. This single issue led to an increase in the number of occasions it failed to respond to some customer complaints within the required timeframe. The company has taken steps to resolve this issue so that it does not happen again.

South East has had ongoing problems in responding to customer contacts in a timely and effective manner. The company reports that it has resolved the problems at its

contact centre that were the cause of its poor performance. It also reports that 99.8% of written complaints were answered within ten days between April and June this year, while 99.6% of billing contacts were responded to within five days during the same period.

South West also informed us that it had identified weaknesses in its systems and processes. This resulted in the company misreporting written email complaints and appointment data. The company volunteered a formal undertaking to improve its systems and training, and will report to us on its progress every three months. The company's first report to us showed that it is making good progress in meeting its commitment to improve its service to consumers.

The GSS regulations set out standards for how each company must respond to written contacts by consumers. These are similar to our DG6 and DG7 indicators. In 2009-10, the companies reported that they failed to meet the standard required under the GSS regulations, or their own more onerous enhanced standards, more than 4,600 times. This is an increase on the number of events last year (almost 3,400).

The regulations also set out standards for how each company deals with consumers it needs to visit. We monitor this to make sure that appointments are made properly and attended on time. In 2009-10, the companies made 19,000 payments to consumers in recognition of appointments where company representatives gave short notice of cancellation, turned up late or missed the appointment. This is an improvement in reported performance compared to last year, when the companies made 24,000 payments.

We also check how easy it is for consumers to deal with the companies by phone. We monitor whether consumers can get through when they call and how satisfied they are with the way in which their call was handled.

Overall performance for the sectors in 2009-10 was good. The percentage of calls abandoned dropped for the third year in a row, from 7.6% in 2007-08 to 5% in 2009-10.

During the course of the year, several companies removed their interactive voice response systems in response to consumer feedback.

Dee Valley experienced a sharp rise in the reported numbers of calls abandoned and calls receiving the engaged tone. This was because a major system reorganisation has led to more detailed data on telephone traffic. United Utilities experienced some ongoing issues with its overseas call centre. These have now been resolved.

2.2 How does this compare with the companies' commitments?

We have again used the OPA to incentivise good service to consumers by reflecting each company's performance in the prices they can charge. A company that performed well relative to others is allowed to charge its customers slightly more. A company that performed comparatively poorly can charge slightly less than would otherwise have been the case.

We took account of the OPA scores for the five years from 2004-05 to 2008-09 when we set price limits for the period 2010-15. These adjustments had an impact on all but one company, where an adjustment to price limits was not applied.

We made a positive adjustment for 11 companies of between 0.1% and 0.5%, and nine companies suffered a penalty of between -0.1% and -0.5%. The best performing companies were Veolia East and Cambridge; the poorest were United Utilities and Northumbrian.

3. Delivery – water service

3.1 What consumers experienced

During 2009-10, no water restrictions were imposed on consumers – the hosepipe ban that occurred in the north-west of England during summer 2010 fell outside the reporting period. Drinking water standards in 2009 also remained very high at 99.95%.

The DWI has adopted a new, risk-based approach to classifying and assessing water quality events. So, the figures cannot be compared directly with the number of incidents reported in previous years. Events are now classified as:

- not significant;
- minor;
- significant;
- serious; and
- major.

In total, there were 422 events across the sectors in 2009. About one-third (146) of all events needed detailed investigation by an inspector, but only five were serious and just one necessitated a major investigation.

More than 24.5 million properties are connected to the water distribution system in England and Wales. At the end of the reporting year, 3,120 of these were at risk of receiving low pressure, compared with 6,620 last year and 6,127 in 2005-06.

The main reason for this reduction is the improved information that Severn Trent provided this year. In 2008-09, the company reported a significant increase in the number of properties at risk, but told us that it would continue to improve its knowledge of network pressures. The company has told us this year that, because of faulty pressure loggers, the information provided last year was incorrect. This led to it reporting a greater number of properties at risk than there actually were. In addition, this year the company has resolved several problems through small capital and operating expenditure solutions.

About 3,150 customers received payments from their water company under the GSS regulations or company charter schemes in recognition that they had suffered from low pressure at their properties.

The number of properties affected by unplanned interruptions to water supply of more than six hours fell in 2009-10 (87,000), compared with 2008-09 (93,000). However, the number of properties affected by unplanned interruptions lasting longer than 24 hours increased from 958 in 2008-09 to 1,766 in 2009-10.

About 25,000 customers received a payment from their water company in recognition that their water supplies either had been interrupted for an extended period in an emergency, or because planned work had overrun. This compares favourably with the 30,000 payments made in 2008-09.

More than 9,500 customers also received a payment from their water company because they were not given sufficient notice of a planned interruption to their water supply. This compares favourably with the 19,000 customers who received payments last year.

3.2 How does this compare with companies' commitments?

Each company has a duty to ensure the security of its water supplies. We use a security of supply index (SoSI) to assess whether the companies are complying with this duty. The SoSI also enables us to assess leakage, water resource and demand management issues in a wider context. It helps us to track changes in the service the companies offer to consumers over time.

When we set price limits in 2004, we expected all the companies, with the exception of Essex & Suffolk[6] and Dŵr Cymru[7], to achieve or maintain a SoSI score of 100 by 2009-10 (assuming average daily conditions during a dry year). After we set these targets, we amended the projected scores for Thames[8] and Severn Trent[9] to reflect

[6] Essex & Suffolk's security of supply depends on increasing the capacity of the Abberton reservoir. This is a long-term scheme that will deliver improvements to the company's security of supply in the period 2010-15. As such, we agreed a target SoSI score of 81 for 2010.

[7] Dŵr Cymru's proposed investment programme to restore security of supply during the period 2005-10 included a number of schemes that, while completed during the period, would only fully impact on improving the security of supply in subsequent years. We agreed a target SoSI score of 99 for 2010.

[8] In 2006, after two successive years of leakage reduction target failures, we secured a legally binding commitment from Thames to meet future leakage targets and replace an additional 368 km of leaking mains at shareholders' expense. In 2008, we agreed that it would be efficient for the company to bring forward investment to replace a further 300 km of leaking mains that the company had planned for the longer term. We reflected this additional work in the company's target SoSI score, while also recognising new information about the amount of water that the company could reliably supply, which resulted in a revised target SoSI score of 85 for 2009-10.

[9] In 2007, after failing its leakage reduction targets for two successive years, we secured a legally binding commitment from Severn Trent to achieve future leakage targets. In arriving at this

a change in their circumstances. All the companies have achieved the SoSI targets expected of them in 2009-10.

3.2.1 Security of supply performance

Table 5 sets out the SoSI results, expressed in terms of broad categories of performance, for each company for 2009-10. The results are presented for both:

- the dry year annual average conditions (which reflect the average daily conditions throughout a dry year); and
- critical period conditions (which reflect 'peak' conditions, for example between 7 am and 9 am when households prepare for work and school and demand is higher than the average against which the companies plan their capacity).

The results reflect each company's resource position for its planned level of service as at 31 March 2010. They are not directly comparable because different companies plan for different levels of service. These are set out in section 5.10 of the supporting information to this document.

In 2009-10, 17 of the 22 companies were in band A for security of supply. This means that they have no deficits in any water resource zone in either dry year annual average or critical period conditions. But deficits still exist in some zones for five companies.

- **Dŵr Cymru** has marginal deficits in two of its water resource zones under dry year annual average conditions and in one zone under critical period conditions. The company will improve the situation and eventually remove these deficits by 2013-14, mainly by reducing leakage.

- **Severn Trent** has marginal deficits in two of its water resource zones under dry year annual average conditions. The company plans to remove these deficits by 2010-11.

- **Thames** has a marginal deficit in one of its water resource zones under critical period conditions. The company's investment plans will improve the

agreement, we recognised that the company faced delays outside of its control in completing some of the schemes it had proposed in the period 2005-10 to help achieve its target SoSI of band A. (The company returned to customers the finance associated with these delays by reducing its charges for 2008-09.) To reflect these delays, we revised the company's target SoSI score to 97 by 2009-10.

situation and remove the deficit by 2012-13, through a combination of measures to increase resources and manage demand.

- **Essex & Suffolk** has a significant deficit in one of its water resource zones under dry year annual average conditions. The company plans to remove this in 2014-15, when a scheme to increase capacity at its Abberton reservoir is complete.

- **Sutton & East Surrey** has significant deficits in both of its water resource zones under critical period conditions. It plans to remove these deficits by 2012-13 with the demand savings from its metering programme.

In the next five years, the companies will invest to maintain the improvements in security of supply that they have achieved so far, as well as improving the situation where deficits remain. We have projected that all the companies will be band A for security of supply by 2014-15 under both dry year annual average and critical period conditions.

The companies' investment plans to maintain and improve their security of supply reflect their recently updated water resource management plans. These forecast available water supplies and changes in demand over the next 25 years. They set out how the companies will meet these demands, in line with their stated levels of service for restrictions on supply.

In updating these plans, the companies used best practice techniques and the latest available data to review:

- their assessments of resources;
- demand and its components; and
- the allowances made for planning uncertainty, including the impact of climate change.

The Secretary of State for the Environment, Food and Rural Affairs gave most companies permission to finalise and publish their water resource management plans. They should now be available on the companies' websites. The Secretary of State called for a public inquiry into three of the companies' plans. Inquiries for Thames and South East took place in the summer of 2010. The Secretary of State will announce the outcomes in due course. The inquiry into Portsmouth's plan has been cancelled so the company can carry out a fresh public consultation. This began in September this year and will conclude in November.

Table 5 Security of supply index banding 2009-10

Company	Security of supply index for planned levels of service	Security of supply index for critical/ peak conditions	Rank[1,2]	Change in banding since 2008-09[2]
Anglian	A	A	1	+
Bournemouth & West Hampshire	A	A	1	=
Bristol	A	n/a	1	=
Cambridge	A	n/a	1	=
Dee Valley	A	n/a	1	=
Northumbrian (North East)	A	A	1	+
Portsmouth	A	A	1	=
South East	A	A	1	+
South Staffs	A	A	1	=
South West	A	n/a	1	=
Southern	A	A	1	=
Sutton & East Surrey	A	C	1	=
Thames	A	B	1	=
United Utilities	A	A	1	=
Veolia Central	A	A	1	=
Veolia East	A	n/a	1	+
Veolia Southeast	A	A	1	=
Wessex	A	A	1	=
Yorkshire	A	A	1	=
Dŵr Cymru	B	B	20	=
Severn Trent	B	n/a	21	=
Northumbrian (Essex & Suffolk)	C	n/a	22	=

Key:		
	A	No deficit in any zone
	B	Marginal deficit
	C	Significant deficit
	D	Large deficit

Notes:
1. Rank is based on planned levels of service.
2. Rank and change in banding is based on dry year annual average conditions.

Leakage performance

We have been monitoring leakage performance across the sector since 1997. We require each company to maintain leakage at a level that provides the best value for consumers and for the environment.

Table 6 shows company estimates of total leakage over the period 2005-06 to 2009-10, in megalitres per day (Ml/d).

Table 6 Company estimates of total leakage (Ml/d)

	Performance					Target
	2005-06	2006-07	2007-08	2008-09	2009-10	2009-10
Water and sewerage companies						
Anglian	215	200	210	210	210	210
Dŵr Cymru	225	210	205	195	195	195
Northumbrian (North East)	155	145	135	150	155	150
Northumbrian (Essex & Suffolk)	67	68	68	67	67	66
Severn Trent	540	525	490	490	495	500
South West	84	83	84	84	82	84
Southern	93	82	82	87	95	92
Thames	860	790	715	700	670	685
United Utilities	475	470	460	460	460	465
Wessex	73	72	72	72	74	74
Yorkshire[3]	295	295	295	295	295	275
Water only companies						
Bournemouth & W Hampshire	22	22	22	22	22	22
Bristol	53	54	53	54	53	54
Cambridge	13.9	13.4	13.9	14.0	14.2	14.0
Dee Valley	11.3	10.6	10.3	10.3	10.4	10.2
Mid Kent	28	-	-	-	-	-
Portsmouth	30	29	30	30	29	30
South East	69	96	96	96	96	96
South Staffs	73	73	72	74	74	75
Sutton & East Surrey	24	24	24	24	24	25
Veolia Central	150	145	140	140	145	140
Veolia East	5.1	5.1	5.0	5.1	5.0	5.1
Veolia Southeast	8.0	7.8	7.9	7.7	7.8	8.0
Industry	**3,575**	**3,420**	**3,290**	**3,290**	**3,280**	**3,275**

Notes:

Numbers may not add because of rounding.

1. Twelve-month rolling averages.
2. We have applied the following rules when rounding up the numbers: performance and targets less than 20 Ml/d are given to one decimal place; less than 100 Ml/d are given to 0 places; and greater than 100 Ml/d are rounded to the nearest 5 Ml/d.
3. We have revised Yorkshire's 2009-10 target provisionally to make it consistent with the company's updated assumptions for reported leakage. This revised target is subject to ongoing work with the company.

According to the Met Office, the winter of 2009-10 was the coldest in England and Wales since 1978-79. Just as this cold weather increased the number and size of potholes across the country's roads, it also affected the companies' infrastructure. All the companies reported high numbers of burst pipes over this period because of ground movement caused by freezes and thaws. Also, the fact that there was snow cover for longer than normal made it more difficult for the companies to find and repair their leaking pipes.

In spite of the unusually cold winter, all but six companies have met their annual 2009-10 leakage targets. Several have even reported lower leakage this year than in 2008-09, as a result of work to reduce leakage ahead of the cold winter.

We take any failure to meet leakage targets very seriously. Where companies have not achieved their leakage target, we have followed a consistent process to determine what action is appropriate. In all of these cases, we have considered the following two questions.

1. Is there is a satisfactory explanation for the failure to meet the leakage target?
2. Did the failure have a material impact on consumers?

This explains why we have not taken the same action for all the companies. We have decided that the following steps are appropriate.

- **Southern** has entered into an informal undertaking with us, setting out its strategy for reducing leakage levels to enable it to meet its targets for 2010-11. The company will also provide us with quarterly leakage reports so that we can monitor how it manages leakage in 2010-11. The water resources position in 2009-10 for this company was healthy because of above-average groundwater levels. However, we were concerned that Southern's leakage position had deteriorated quite quickly at a time when it needed to prepare to meet some challenging targets over the next few years.

- **Northumbrian** will provide us with quarterly leakage reports for its southern operating area. The company provided us with all of the information we required and this demonstrated that there were some company-specific mitigating factors affecting leakage management. However, taking into account the relatively tight water resource position in the southern operating area, we judged it appropriate to request quarterly reporting.

- **Veolia Central** will provide us with an interim leakage report. The company is moving to a more robust and accurate methodology for reporting leakage during the 2010-15 investment period. The company demonstrated that its performance on leakage had not caused a material risk to customers' supply.

- **Dee Valley** will provide us with an interim leakage report. The company was able to assure us that the threat to security of supply was low.

- **Cambridge** offered to provide us with a pre-winter leakage update. The company exceeded its target by a small amount and this had no material

impact on customers' supply. This is the first year that the company has entirely based its reported leakage on a new District Meter Area methodology.

These monitoring arrangements will allow us to take appropriate action swiftly should the affected companies fail their leakage targets in the future.

These five companies reported in their June returns that their 2009-10 leakage was higher than their targets for the year. They also notified us before they submitted their June returns that there was a risk of failing their targets.

Yorkshire reported that it had met its 2009-10 leakage target. However, it made some significant changes to the assumptions that underpin its reported leakage. Without those changes, the company would have failed both its annual and three-year rolling average targets. We explain the three-year rolling average leakage target in the supporting information to this report.

We accept that the revised assumptions result in a more robust estimate of total leakage, but we consider that companies should calculate leakage using assumptions that are consistent with those underpinning their leakage targets. We have provisionally revised Yorkshire's leakage target for 2009-10 to make it consistent with its revised assumptions.

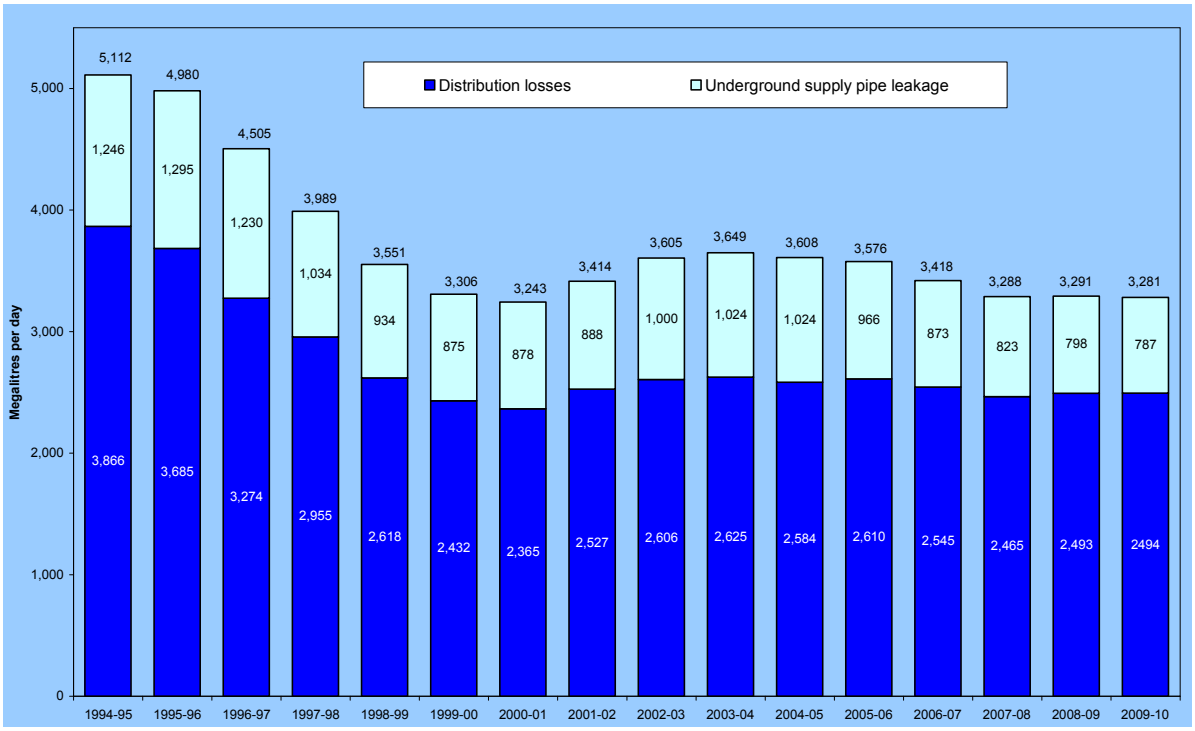
We have asked Yorkshire to provide us with all the information we need to determine what action is appropriate in response to its target failure. Consequently, we are still investigating this case.

Overall, total leakage across the sectors is 10 Ml/d lower than in 2008-09. Leakage has fallen by about 35% since its peak in the mid-1990s – and in the past five years alone, it has fallen by more than 300 Ml/d. Between now and 2015, target leakage in England and Wales is expected to fall by a further 97 Ml/d[10].

Figure 3 shows annual leakage estimates from 1994-95 and the targets until 2009-10 across the sectors. Each bar represents total leakage split between leakage on company pipes (distribution losses) and leakage on consumers' pipes (underground supply pipe leakage).

[10] We calculated this value of 97 Ml/d by excluding the effect of a change in leakage target of 45 Ml/d for Veolia Central. The company has made significant improvements to the way it calculates reported leakage. It explained this change to us during 2005-10 and we agreed that it should report on the old methodology until the start of the new five-year period. The effect of this is a change in leakage target of 45 Ml/d for the company. This approach means that in both five-year periods the company will report its leakage in a manner consistent with the way its leakage targets were set.

Figure 3 Total industry leakage 1994-95 to 2009-10



Note:
The apparent rise in leakage levels after 2001-02 is largely attributable to a change in how Severn Trent and Thames assess their water balance data. Both companies were previously under-reporting leakage levels. This means that actual leakage levels in 2009-10 are lower than a decade ago.

Water efficiency performance

Each company has a legal duty to promote the efficient use of water by consumers. Since 2005, this duty has applied to all licensed water suppliers. We are responsible for enforcing this duty, which we do by analysing the companies' individual June return submissions each year.

In November 2008, we introduced water efficiency targets for each company. These targets come into effect in the 2010-11 reporting year, but the companies reported their activity against these targets on a trial basis in 2009-10. We set out the targets in PR09/20, 'Water supply and demand policy'.

There are two elements to the targets:

- base service; and
- the sustainable economic level of water efficiency (SELWE).

Base service comprises:

- an annual target to deliver water efficiency activity equivalent to an assumed saving of 1 litre of water per property a day;
- contributing to improvements to the evidence base; and
- providing information to consumers on how to use water more wisely.

Beyond the base level, we expect the companies to undertake additional water efficiency activity, if it forms part of a sustainable economic approach to balancing supply and demand. When we set price limits in 2009, we made an allowance for six companies (Anglian, Thames, South West, United Utilities, Dŵr Cymru and Bristol) to carry out water efficiency activity in addition to their base targets.

In 2009-10, the companies reported that they had saved an estimated 14 million litres per day (Ml/d) of water from water efficiency activity. This compares with a total industry target for 2010-11 of 23 Ml/d. Reported expenditure on activity in 2009-10 was £5.62 million. However, we have noticed inconsistencies in the way the companies report their water efficiency costs. We have provided them with additional guidance on this.

The savings and expenditure reported in 2009-10 are not comparable with those reported in previous years. This is because we have standardised assumptions, and have not included savings from repairs and replacements to supply pipes. Last year, this accounted for 33 Ml/d of reported savings. We have excluded this activity from water efficiency reporting because it has little to do with engaging consumers about saving water. It also contributes towards the companies' leakage targets.

Table 7 shows the assumed water savings associated with the companies' water efficiency activity.

Table 7 Companies' water efficiency performance 2009-10

Device	Assumed savings (Ml/d)
Cistern displacement devices	4.27
Retrofit	0.04
Outdoors	0.05
Household audits	2.38
Non-household audits	2.47
Additional activity	4.77
Total	14.05

In total, the companies distributed 465,509 cistern devices and 18,519 water butts during 2009-10. They fitted 1,884 toilets with dual flush devices, and carried out 13,780 household and 9,697 non-household water audits.

As well as providing consumers with water efficient products, the companies also give consumers information about how to waste less water. They do this through initiatives such as school programmes, interactive websites and promotions.

Alongside targets, we have introduced a new methodology for valuing the contribution that providing information to consumers makes to reducing consumption. We worked with the companies and other stakeholders to develop this methodology. Each company is required to provide a minimum level of information to consumers on how to use water more wisely. Where the level of activity exceeds this minimum level, the additional activity can contribute towards a company's 1 litre per property per day target.

The result of this additional information and education will be to raise awareness of broader environmental issues, the value of water and the importance of long-term water resource planning.

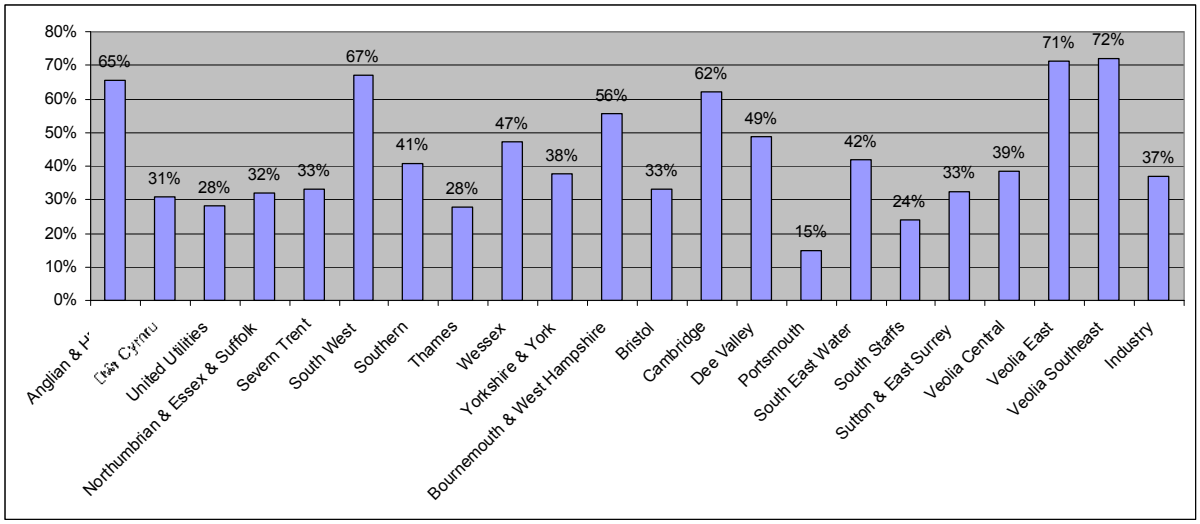
Trends in metering

In 2009-10, the companies installed 330,000 water meters in existing household properties. Of these, 305,000 households asked for meters to be installed, while the companies selectively metered the remaining 25,000. Thirty-seven per cent of household properties in England and Wales now have a meter. This is an increase of 2% since last year.

Between 2005 and 2010, the companies installed 1.8 million meters in existing household properties. This is 570,000 more meters than we assumed when we set price limits at the 2004 price review.

Figure 4 shows the percentage of households with a water meter for each company.

Figure 4 Household meter penetration 2009-10



3.2.2 Managing the assets

Every year, we publish serviceability assessments for each company. The assessment is our measure of the capability of a company's system of assets to deliver the right level of service to consumers now and in the future. The assessments show how well each company is maintaining its assets. They are a key part of our work to safeguard the long-term sustainability of services.

Our yearly assessments are informed by trends in service and asset performance from information accumulated from successive June returns. We make separate assessments for above-ground and underground asset systems.

Serviceability is ranked (from best to worst) as:

- improving;
- stable;
- marginal; or
- deteriorating.

As a minimum, we require the companies to maintain (or achieve and maintain) stable serviceability. If a company's serviceability is assessed as deteriorating, we will intervene and require it to produce a corrective action plan to recover performance and deliver stable serviceability. There is a detailed explanation of serviceability in the supporting information to this report.

Table 8 shows the serviceability assessments at company level, by sub-service for 2009-10. We have subjected our serviceability assessments to quality control

checks, including an overview by independent experts. A summary of the findings from the independent review is included in the supporting information to this report. Across the water service, serviceability is stable in both the underground ('infrastructure') and above-ground ('non-infrastructure') systems. Each company needs to continue to make sure that stable serviceability is maintained. We will continue to take action against any company that fails to deliver or demonstrate stable serviceability.

Table 8 Water service serviceability assessments for 2009-10

	Water infrastructure	Water non-infrastructure
Water and sewerage companies		
Anglian	Stable	Stable
Dŵr Cymru	Stable	Marginal
Northumbrian	Marginal	Stable
Severn Trent	Marginal	Stable
South West	Stable	Stable
Southern	Stable	Deteriorating
Thames	Stable	Stable
United Utilities	Stable	Stable
Wessex	Stable	Stable
Yorkshire	Marginal	Stable
WaSC assessment	**Stable**	**Stable**
Water only companies		
Bournemouth & W Hampshire	Stable	Stable
Bristol	Stable	Stable
Cambridge	Stable	Stable
Dee Valley	Stable	Stable
Portsmouth	Stable	Stable
South East	Stable	Stable
South Staffs	Stable	Stable
Sutton & East Surrey	Stable	Stable
Veolia Central	Marginal	Marginal
Veolia East	Stable	Stable
Veolia Southeast	Stable	Stable
WoC assessment	**Stable**	**Stable**
Industry assessment	**Stable**	**Stable**

In MD212, 'Asset management planning to maintain serviceability', we signalled our intention that if a company could not demonstrate stable serviceability at the 2009 price review, our starting presumption would be a shortfall in service delivery. In PR09/06, 'Setting price limits – logging down and shortfalling', we set out our approach to shortfalling where the companies fail to deliver the required level of service. Most companies responded to the incentives and focused on ensuring that they deliver stable service to consumers. However, in our 2009 final determinations

we applied a shortfall to two companies for failing to deliver stable serviceability (Dŵr Cymru for water non-infrastructure and Veolia Central for water infrastructure).

We have now set the outputs for the period 2010-15 and will continue to ensure that customers receive the level of service that they have paid for. In PR09/38, 'Serviceability outputs for PR09 final determinations', we said that a company should assume it is at risk of shortfall adjustment at the next price review if we assess serviceability as less than stable in any year from the 2012 June return (or equivalent) onwards. Any company whose serviceability we assess as less than stable in 2014 should assume a shortfall at the next price review.

This approach should act as an incentive to the companies to continue to focus on this critical area. The success we are seeing in the companies' ability to deliver stable serviceability builds a suitable foundation for capital maintenance needs in the future.

Having completed our analysis of the water service, we found that most water sub-services are stable. However, there has been an increase in the number of companies assessed as less than stable. The six companies in this category are:

- Dŵr Cymru and Southern (water non-infrastructure);
- Veolia Central (water infrastructure and non-infrastructure); and
- Northumbrian, Severn Trent and Yorkshire (water infrastructure).

We are disappointed to see the continued poor performance of Southern for water non-infrastructure. Its assessment has moved from marginal to deteriorating this year. The company now has an action plan and a substantial improvement programme in place to restore its water treatment works to stable serviceability.

We are pleased to see that Veolia Central and Dŵr Cymru have improved performance this year for water non-infrastructure (specifically on coliform compliance at water treatment works). Both companies are continuing to deliver their action plans to bring serviceability back to stable. We require both companies to show continued improved performance to gain a stable assessment in 2010-11.

The prolonged cold winter of 2009-10 provided the companies with a challenge to manage an increase in burst mains and minimise interruptions to consumers. The weather had different impacts on networks across England and Wales. Most companies that experienced an increase in burst water mains were able to demonstrate that the increase was caused by the cold weather rather than an underlying deterioration of the network.

We are also encouraged that most companies were able to manage the increase in burst mains effectively to minimise the number and duration of interruptions to consumers' water supply. We have assessed the following four companies as having marginal serviceability for water infrastructure.

- **Yorkshire** has experienced a further increase in the number of burst mains. We are concerned that this rising trend is not solely driven by weather effects and that the increase in bursts may indicate a deteriorating water network. The company is working to fully understand the contributing factors and we will continue to monitor their performance.

- **Northumbrian** has had an increase in the number of interruptions to supply that last longer than 12 hours. While the adverse weather conditions have contributed to this increase, our assessment reflects the increased frequency of exceptional events, compared with past performance. We expect the company to reduce the number of interruptions to supply.

- **Severn Trent** also reported an increase in interruption events in 2009-10. The number of interruptions to supply has not been restored to the stable level since the exceptional flooding events in 2007. The company has developed, and is implementing, a comprehensive action plan to reduce the number and duration of interruptions to supply.

- **Veolia Central** has had a less than stable assessment for water infrastructure since 2002-03. A financial shortfall was applied at the 2009 final determination. The number of bursts was slightly reduced this year compared with 2008-09, despite the cold winter, but insufficient improvement was made. We will continue to require the company to review and deliver its action plan to restore stable serviceability of its water network.

The companies carry out various activities to maintain serviceability. During 2009-10, they rehabilitated 1,625 km of water mains (approximately 0.5% of the network). Across the sector, this renewals rate is much lower than the average since 1990-91. Most companies' mains rehabilitation rates have decreased since they completed planned programmes of work to address water quality issues.

The amount of capital maintenance activity that the companies carried out in 2009-10 is set out in table 9, while table 10 shows the levels of infrastructure maintenance over the past ten years. Table 11 shows the trends in network activity levels by company since 1990-91.

Table 9 Activity in 2009-10

	Mains renewed and relined (km)	Existing water treatment works refurbished[1]	New or enhanced water treatment works[2]	Pumping stations refurbished	Service reservoirs and water towers refurbished
Water service					
Anglian	53	0	6	0	0
Dŵr Cymru	241	2	3	0	1
Northumbrian	138	1	0	2	1
Severn Trent	126	7	3	7	10
South West	112	4	1	6	2
Southern	3	8	0	0	0
Thames	382	5	0	0	3
United Utilities	234	0	0	5	3
Wessex	28	2	4	1	4
Yorkshire	66	1	5	2	-1
Bournemouth & W Hampshire	8	0	0	1	0
Bristol	22	0	0	0	0
Cambridge	4	1	0	1	0
Dee Valley	12	0	0	0	1
Portsmouth	24	0	2	0	0
South East	10	2	1	0	0
South Staffs	29	0	0	0	0
Sutton & East Surrey	33	2	0	0	2
Veolia Central	93	2	4	1	1
Veolia East	7	0	0	0	0
Veolia Southeast	1	1	0	0	0
Water service total	**1,625**	**38**	**29**	**26**	**27**

	Sewers renovated and replaced (km)	Sewage treatment works refurbished	New or enhanced sewage treatment works[1]	Sludge treatment works refurbished[1]	Pumping stations refurbished
Sewerage service					
Anglian	45	0	29	0	0
Dŵr Cymru	21	1	14	0	0
Northumbrian	16	2	2	1	0
Severn Trent	25	12	19	2	9
South West	17	17	3	6	19
Southern	9	5	3	1	1
Thames	28	6	1	4	8
United Utilities	75	8	12	1	0
Wessex	9	4	17	0	1
Yorkshire	18	2	14	3	1
Sewerage service total	**263**	**57**	**114**	**18**	**39**

Note:

1. Activity shown represents 10% or more of the gross replacement cost of the asset involved (or £100,000 or more).

Table 10 Activity on underground assets – industry

Industry totals	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Water service											
Water mains relined (km)	2,115	1,597	2,275	1,877	1,846	1,660	1,595	1,469	1,120	807	210
Water mains renewed (km)	4,082	2,489	2,799	2,831	2,725	2,362	2,702	3,096	3,074	2,058	1,415
Communication pipes replaced (number)	239,156	157,268	148,180	113,390	123,469	107,527	117,348	148,562	163,389	124,660	104,184
Sewerage service											
Critical sewers renovated (km)	104	132	94	105	68	60	81	144	105	76	27
Critical sewers replaced (km)	85	54	40	77	47	39	53	97	101	54	39
Non-critical sewers renovated (km)		52	71	96	82	72	66	103	106	175	100
Non-critical sewers replaced (km)		53	60	112	82	86	88	99	104	96	97

Table 11 Activity on underground assets by company – 1990-91 to 2009-10

	Water mains relined (km)	Water mains renewed (km)	Communic-ation pipes replaced	Critical sewers renovated (km)	Critical sewers replaced (km) [1]
Water and sewerage companies					
Anglian	446	5,776	144,338	194	123
Dŵr Cymru	2,283	6,045	157,002	75	199
Northumbrian	3,862	4,379	154,664	431	28
Severn Trent	7,119	8,373	178,652	191	416
South West	4,467	1,605	43,521	61	22
Southern	519	864	73,866	58	56
Thames	4,787	2,883	351,363	414	269
United Utilities	187	13,281	362,558	412	319
Wessex	980	1,297	25,932	200	45
Yorkshire	5,682	3,667	23,491	78	49
Water only companies					
Bournemouth & W Hampshire	24	125	19,942		
Bristol	266	541	25,715		
Cambridge	24	245	5,335		
Dee Valley	227	235	15,141		
Portsmouth	14	580	36,692		
South East	2,928	969	23,311		
South Staffs	7	998	45,350		
Sutton & East Surrey	251	608	24,516		
Veolia Central	568	1,576	102,900		
Veolia East	90	159	11,451		
Veolia Southeast	165	55	5,145		

Note:
1. The figures for critical sewers replaced are from 1991-92 only.

3.2.3 Delivering the water quality enhancement programme

We have no major concerns about the delivery of the water quality enhancement programme for 2005-10. Any differences between the outputs assumed at the 2004 price review and the outputs delivered by 31 March 2010 are accounted for with reasons.

Of the 258 water quality treatment works outputs assumed when we set price limits in 2004, 251 (or 97% of the programme) had been delivered by 31 March 2010. The variance is because the schemes were no longer required by the DWI, or because they have been delayed. We made adjustments when setting price limits at the 2009 price review to ensure that the companies did not gain financially from either changes in requirements or delays to the completion of projects.

Legal obligations for relining or replacing distribution mains were due for completion by 31 March 2010. These programmes of work are now substantially complete, with 79% of the distribution mains renovation outputs delivered. This has resulted in improved compliance against the iron standard and a reduction in customer contacts concerning discolouration in all regions across England and Wales. Following investigations, some companies found that mains renovation work required reduced activity. Financial adjustments were made for these companies to reflect where outputs had not been delivered as a result of this reduced activity.

Between 2005 and 2010, 66% of the assumed SEMD programme was delivered. The variance is the result of projects no longer being required. There was also a delay in eight companies' sub-projects, which are now due for completion in 2010-11. Any material financial implications of this delay will be considered at the next appropriate price setting.

Finally, 162 out of 195 (83%) environmental programme schemes assumed at the 2004 price review were delivered by 31 March 2010. It was concluded that 26 of the schemes not delivered were no longer required. We made financial adjustments to take account of these changes.

3.2.4 Carbon accounting

We have collected information about greenhouse gas emissions for three years. We are pleased with the way the companies have responded to the challenge of carbon accounting and are confident that data quality is improving. But, while the companies are making improvements in carbon management, the sectors will still continue to have a significant carbon footprint. So, carbon management will remain an important economic and environmental consideration for the companies.

We collect carbon accounting information because regulatory scrutiny ensures that the companies remain focused on managing and seeking to reduce their emissions. We will make sure that they do all they can to deliver benefits to consumers by efficiently reducing greenhouse gas emissions where appropriate. This, in turn, has much greater benefits for wider society.

Increasingly, emissions are also a financial issue. Understanding the economics of low-carbon options requires detailed information about current emissions. At the 2009 price review, we required the companies to take account of future emissions when they were considering their future investment needs. We also allowed £57 million for standalone renewable energy projects (and more where the technology was integrated into other business activity) as part of our 2009 final determinations. We are currently developing our understanding of how our regulatory processes

could help water and sewerage companies to reduce carbon emissions further in the future.

For this year's June returns, we overhauled the carbon accounting reporting requirements. The data we receive is now more meaningful and representative of companies' efforts. Emissions are broken down into their source areas. This reveals the main drivers of carbon emissions and provides greater awareness of the robustness and scope of emissions. It is also consistent with the UK Government's 'Guidance on how to measure and report your greenhouse gas emissions', which was published in September 2009.

Table 12 shows the totals for all greenhouse gas emissions across the sectors. (For all data presented here, we have assumed that none of Dŵr Cymru's activity is outsourced.) A breakdown of this information by company is available in the supporting information to this document.

Table 12 Total industry greenhouse gas emissions 2009-10

Emission type		Thousands of tonnes of carbon dioxide equivalent ($kTCO_2e$)
Scope 1	Direct energy use	183.0
	Process emissions	637.7
	Own transport	98.5
Scope 2	Electricity use	3,321.6
Scope 3	Public transport	17.8
	Outsourced activities	68.1
Gross emissions		**4,326.6**
	Exported renewable electricity	-36.2
	Purchased green tariff electricity	-83.6
Net emissions		**4,206.8**

The data shows that the main drivers for emissions in the sectors are the use of grid electricity (75% for water and sewerage companies and 95% for water only companies). This indicates that the greatest potential for reducing company emissions is using less electricity (a scope 2 emission). The size of these emissions will also relate directly to changes in the generation mix of the grid, which is beyond the water companies' control.

The second most significant proportion comes from process emissions (part of the scope 1 emissions). These are only sizeable for the water and sewerage companies because most of the emissions originate from sewerage processes. These emissions predominantly comprise methane and nitrous oxide, so they are less well measured or understood.

The scope 3 data (emissions emitted by others as a result of the activity of the company) reported here do not represent all of the scope 3 emissions that could be attributed to water and sewerage companies. We only collect data where the emissions are the responsibility of each company's regulated business. This includes any core activities that have been outsourced and the use of public transport. Because we have not classified the emissions arising from Dŵr Cymru's operations as 'outsourced', these categories are relatively small.

We have set out issues associated with carbon accounting and management that we think are relevant to the sectors in 'Playing our part – how can we cut greenhouse gas emissions in the water and sewerage sectors' (July 2010). We will be engaging stakeholders in these issues in order to ensure that our regulation is suited for delivering low-carbon sectors and is in line with wider national and international policies.

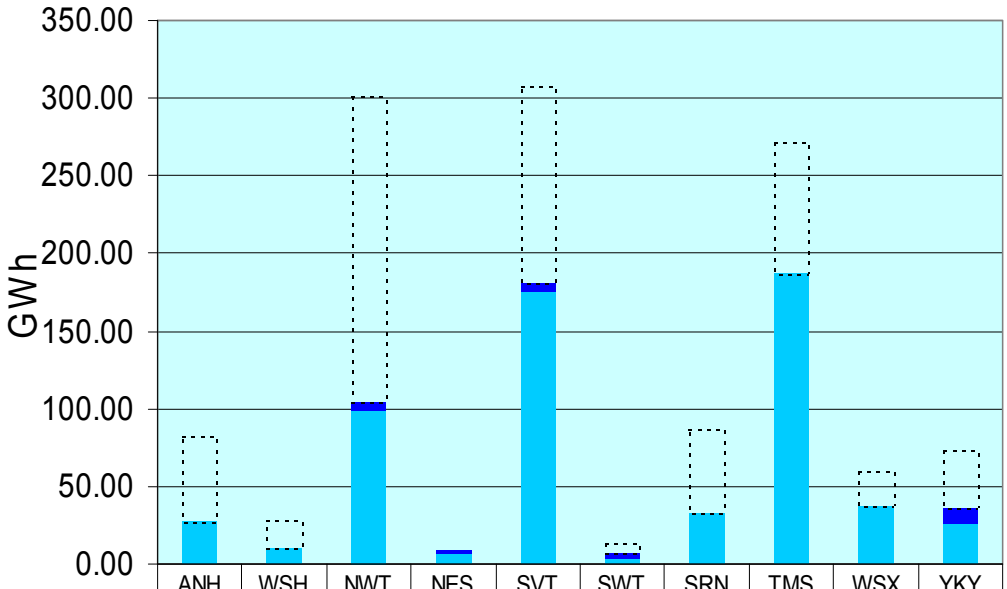
Renewable electricity

Figure 8 shows the energy generated from renewable sources in 2009-10.

Most renewable electricity that the sectors generate comes from the treatment of sludge. This accounts for 599 Gigawatt hours (GWh) of the 626 GWh generated. This value represents more than 2% of the total renewable electricity generated nationally. Between 2005 and 2010, there was a 60% increase in the amount of renewable electricity generated by the companies. By 2015, there is likely to be a further rise of 60%.

We are aware that the sectors also generate and use a significant amount of renewable heat. Use of renewable heat is less well understood than electricity. In most cases, values in figure 5 represent theoretical heat generated rather than useful heat used. We will consider this in greater detail in future June returns.

Figure 5 Energy generated from renewable sources 2009-10



	ANH	WSH	NWT	NES	SVT	SWT	SRN	TMS	WSX	YKY
Heat generated from sludge processing (GWh)	55.38	17.50	197.62	0.00	126.00	6.92	54.60	85.00	22.92	37.20
Electricity generated from other renewables (GWh)	-	0.74	5.41	1.95	5.80	3.15	-	-	-	9.54
Electricity generated from sludge processing (GWh)	27.69	10.00	98.81	7.33	176.00	3.46	32.84	187.00	36.85	26.50

4. Delivery – sewerage service

4.1 What consumers experienced

The companies continued to invest in 2009-10 to reduce the total number of properties considered to be at risk of internal sewer flooding.

- During the year, the companies solved problems at 1,761 properties that were at risk of internal sewer flooding more than once in ten years.
- The number of properties considered to be at risk of sewer flooding once in every ten years fell from 3,644 in 2008-9 to 2,973 in 2009-10.
- Those properties considered to be at risk of flooding twice or more in ten years fell from 1,977 to 1,735.
- The data for 2009-10 suggests that about 60 properties in every 100,000 are at risk of flooding at least once in every 20 years (but less than once in every ten years).

The companies are required to assess the numbers of properties that are at risk of internal flooding because of overloaded sewerage systems. They must provide data on the numbers of properties at risk of flooding once in ten years, and twice or more in every ten years.

Table 13 Properties at risk of flooding from sewers – performance analysis 2007-08 to 2009-10

Twice in ten years				Company	Once in ten years			
2007-08	2008-09	2009-10			2007-08	2008-09	2009-10	
%	%	%	Number		%	%	%	Number
0.011	0.009	0.007	200	Anglian	0.006	0.005	0.004	100
0.009	0.007	0.006	79	Dŵr Cymru	0.018	0.012	0.012	171
0.027	0.031	0.022	267	Northumbrian (inc. Essex & Suffolk)	0.010	0.016	0.011	130
0.003	0.002	0.002	74	Severn Trent	0.014	0.014	0.012	486
0.004	0.004	0.005	32	South West	0.008	0.006	0.002	15
0.004	0.004	0.004	77	Southern	0.009	0.007	0.007	129
0.009	0.009	0.007	402	Thames	0.038	0.029	0.021	1,202
0.015	0.015	0.015	482	United Utilities	0.017	0.016	0.017	546
0.014	0.004	0.005	56	Wessex	0.016	0.011	0.006	68
0.003	0.003	0.003	67	Yorkshire	0.006	0.006	0.006	126
0.009	**0.008**	**0.007**	**1,736**	**Total industry**	**0.018**	**0.015**	**0.012**	**2,973**

Across England and Wales, the companies have completed schemes to reduce the likelihood of 1,761 properties at high risk of experiencing internal flooding from sewers.

4.1.1 Pollution incidents

In the past 12 years, the sector has made good progress in reducing the number of pollution incidents for which it is responsible. But since 2004, the total number of pollution incidents attributed to the sector has reached a plateau of about 2,300 incidents a year.

The companies' performance in 2008 (2,012 incidents) initially appeared to show a further improvement, but this was followed by a deterioration in performance in 2009 that resulted in 2,323 incidents by the water and sewerage companies and an additional 11 category 3 incidents by the water only companies. This increase was mainly the result of a rise in category 3 (minor) incidents. With the exception of United Utilities (which reported a 12% reduction), the number of reported minor incidents increased for every company.

Both South West and Wessex continued their impressive performance on category 1 (major) incidents. South West has had no recorded incidents for the past 11 years, while Wessex has had none for the past seven years. Wessex also managed no recorded category 2 (serious) incidents for the second year in a row.

We have also continued to see an increase in the companies' self-reporting of pollution incidents. The national average is now 58% of all incidents, with two companies, Anglian and Southern, self-reporting more than two-thirds of all incidents.

Table 14 Environmental impact (pollution incidents by category) – company performance 2010

Company	Pollution incidents by category [1, A]						
	Sewage related				Water related [B]		
	Category 1	Category 2	Category 3	Self-reporting [C]	Category 1	Category 2	Category 3
Anglian	2	6	494	70%	0	0	9
Dŵr Cymru	0	8	303	41%	0	0	14
Northumbrian	2	3	92	30%	1	2	14
Severn Trent	4	4	287	60%	0	0	27
South West	0	2	104	41%	0	0	9
Southern	2	7	269	68%	0	0	6
Thames	3	9	200	52%	0	0	34
United Utilities	2	5	152	63%	0	1	18
Wessex	0	0	78	60%	0	0	16
Yorkshire	1	4	103	56%	0	1	25
Water only companies	–	–	–	–	0	0	11
Totals							
2009	16	48	2,082	58%	1	4	183
2008	9	46	1,815	48%	1	5	136
2007	14	68	2,034	45%	1	9	–
2006	15	100	1,980	38%	1	13	–
2005	18	125	1,888	32%	0	9	–
2004	16	109	1,830	28%	0	6	–
2003	20	144	2,249	24%	4	17	–
2002	8	124	2,011	–	1	6	–
2001	17	129	2,241	–	1	4	–
2000	8	87	2,263	–	1	5	–
1999	13	115	1,968	–	–	–	–
1998	10	135	2,259	–	–	–	–
1997	25	229	2,701	–	–	–	–
1996	23	228	2,560	–	–	–	–
1995	37	374	3,061	–	–	–	–

Sources:

1. The Environment Agency Regions reports to Ofwat, 2010.

Notes:

A. Pollution incident categories 1, 2 and 3 are defined on the Environment Agency internet pages on pollution incidents. In broad terms, categories 1, 2 and 3 correspond to major, significant and minor incidents, respectively.

B. Water-related pollution incidents include those from the companies' water treatment and supply operations.

C. This is the first year this data has been recorded on this table. Historic industry averages have been provided for comparison.

4.1.2 Compliance

Sewage treatment works operate under the Environmental Permitting Regulations (EPR), which the Environment Agency enforces. This is to ensure the treated sewage effluent does not have an adverse impact on the receiving watercourse. These permits often set numerical limits for parameters ('look-up table' parameters) such as suspended solids, ammonia, biological oxygen demand and nutrients. The companies are required to monitor the chemical quality of sewage effluent and report this to the Environment Agency. Action will be taken where works exceed their permit conditions.

Overall compliance with all numeric permit conditions shows that performance across the sector deteriorated slightly from the record performance in 2008. In 2009 97.7% of all works were compliant. The total number of failures was 96, which is a 20% increase on the previous year (80). Our long-term analysis continues to show an improving trend for sewage effluent quality compliance.

Six companies achieved 100% compliance with the look-up table parameters of their EPR permit conditions. These were Anglian, Wessex, Northumbrian, Thames, Southern and Yorkshire. Both Dŵr Cymru and South West reported ten works failing the look-up table conditions in 2009. For South West, this continues a deteriorating trend in compliance since 2005.

Table 15 Environmental impact – company performance 2009-10

Company	Equivalent population served by sewage treatment works			Unsatisfactory combined sewer overflows [A] %	Bathing waters non-compliant [4, B] %	Successful prose-cutions [B]
	Resident numerical consents [1, A] (millions)	In breach of their WRA consent [2, B*] %	In breach of their UWWT consent [3, C*] %			
Anglian	6.4	0.05	0.00	0.0	0	1
Dŵr Cymru	3.7	0.15	0.00	0.3	0	3
Northumbrian	3.1	0.00	0.00	0.4	0	9
Severn Trent	9.9	0.31	0.00	0.1	0	1
South West	1.6	0.31	0.00	1.5	3	3
Southern	4.2	0.00	0.00	0.1	0	4
Thames	14.2	0.00	0.00	0.0	0	5
United Utilities	8.2	0.01	0.00	6.5	5	7
Wessex	3.0	0.00	0.00	0.1	0	0
Yorkshire	6.0	0.00	0.00	0.2	0	2
Totals						
2009-10		0.1	0.0	1	1	35
2008-09		0.7	0.0	3	3	52
2007-08		0.5	0.0	5	0	46
2006-07		1.0	0.3	9	0	74
2005-06		1.4	0.5	11	0.2	56
2004-05		0.1	0.0	13	0.0	76
2003-04		0.2	0.0	18	0.4	53
2002-03		1.2	1.4	25	0.8	94
2001-02		1.2	1.6	26	3	54
2000-01		1.0		29	4	52
1999-00		1.2		24	8	33
1998-99		1		25	10	28
1997-98		1		26	11	24
1996-97		3		27	11	39
1995-96		3		29	11	39

* The data presented in these two columns is a subset of information on consent compliance provided by the Environment Agency.

Sources:

A. The companies' June returns 2010.
B. Environment Agency Regions reports to Ofwat, 2010
C. Environment Agency report, 'Bathing Water Quality in England and Wales in 2010'.

Notes:

1. Equivalent population relates to both the population served and the non-household load on the sewage treatment service.
2. Only sewage treatment works failing the Water Resources Act condition of their consent for biochemical oxygen demand (BOD), suspended solids (SS) or ammonia (Amm) under the requirements of the look-up table (LUT) or the 99% annual dosage rule for UV disinfection have been included. The LUT requires 95% compliance with the limits specified for BOD, SS or Amm. Reporting is based on a calendar year.
3. Only sewage treatment works failing the Urban Waste Water Regulations condition of their consent for BOD under the requirements of the LUT or phosphorus (P) under the requirement of an annual average concentration have been included. The LUT requires 95% compliance with the limits specified for BOD. Reporting is based on a calendar year.

4. Bathing water compliance data for each bathing season, where sampling is carried out from 1 May to 30 September. These figures do not include inland bathing waters. Where it is known that bathing water non-compliance is in no way attributable to a water company's activities, that non-compliant bathing water is not recorded in the figures.

4.1.3 Bathing waters

For the 2009 bathing season, 98.6% of all operational bathing waters in England and Wales met the mandatory standards of the Bathing Waters Directive. Five bathing waters failed in the Environment Agency's south-west region, while two failed in the north-west region. All failures followed rainfall events and resulted from a combination of point source and diffuse pollution. Investigations are under way to identify which water industry assets may have contributed to these failures.

4.2 How does this compare with the companies' commitments?

4.2.1 Managing the assets

Across the sewerage service, serviceability is stable in both the underground and above-ground systems. Those companies that had action plans to recover stable serviceability are now delivering significant improvements in performance.

Table 16 below shows the serviceability assessments at company level, by sub-service for 2009-10. We have subjected our serviceability assessments to quality control checks, including an overview by independent experts.

Table 16 Sewerage service serviceability assessments for 2009-10

	Sewerage infrastructure	Sewerage non-infrastructure
Water and sewerage companies		
Anglian	Stable	Stable
Dŵr Cymru	Stable	Stable
Northumbrian	Marginal	Stable
Severn Trent	Stable	Stable
South West	Stable	Stable
Southern	Stable	Stable
Thames	Stable	Stable
United Utilities	Stable	Stable
Wessex	Stable	Stable
Yorkshire	Stable	Stable
WaSC assessment	**Stable**	**Stable**

In our final determinations at the 2009 price review, we applied a shortfall to Northumbrian, which was assessed as less than stable in sewerage infrastructure. The company also failed to deliver sufficient outputs in relation to flooding from sewers. We applied a shortfall to combine these sewerage service failures.

Having completed our analysis of the sewerage service, we found that most sewerage sub-services are stable. However, Northumbrian retains a marginal assessment for sewerage infrastructure. This is because an adverse trend in sewer collapses and all flooding indicators (hydraulic overload and other causes) has emerged. We are requiring the company to develop an action plan to address these problems, in conjunction with its plans to address flooding caused by overloaded sewers.

We are pleased to see that United Utilities has showed continued improvement in sewerage non-infrastructure performance. We have upgraded the assessment for this company to stable.

In 2008-09, we began to see signs of adverse trends in the DG5 indicator (properties flooded because of other causes) for Anglian, Dŵr Cymru, Northumbrian and Southern. This trend has continued in 2009-10. We are concerned about the performance of this indicator for all these companies. We expect them to make sure that their performance is line with the agreed level of service during 2010-15, otherwise this could result in several companies gaining a marginal (or worse) assessment for sewerage infrastructure in 2010-11.

The companies carry out various activities to maintain serviceability. During 2009-10, they rehabilitated 263 km of sewers. The amount of activity carried out on the sewerage network has decreased considerably this year. This is a concern, considering the increase in the number of blockages that have affected several companies, and the resulting flooding from sewers.

The amount of capital maintenance activity that the industry carried out in 2009-10 is set out in table 9, while table 10 shows the levels of infrastructure maintenance over the past ten years. Table 11 shows the trends in network activity levels by company since 1990-91.

4.2.2 Delivering the sewerage quality programme

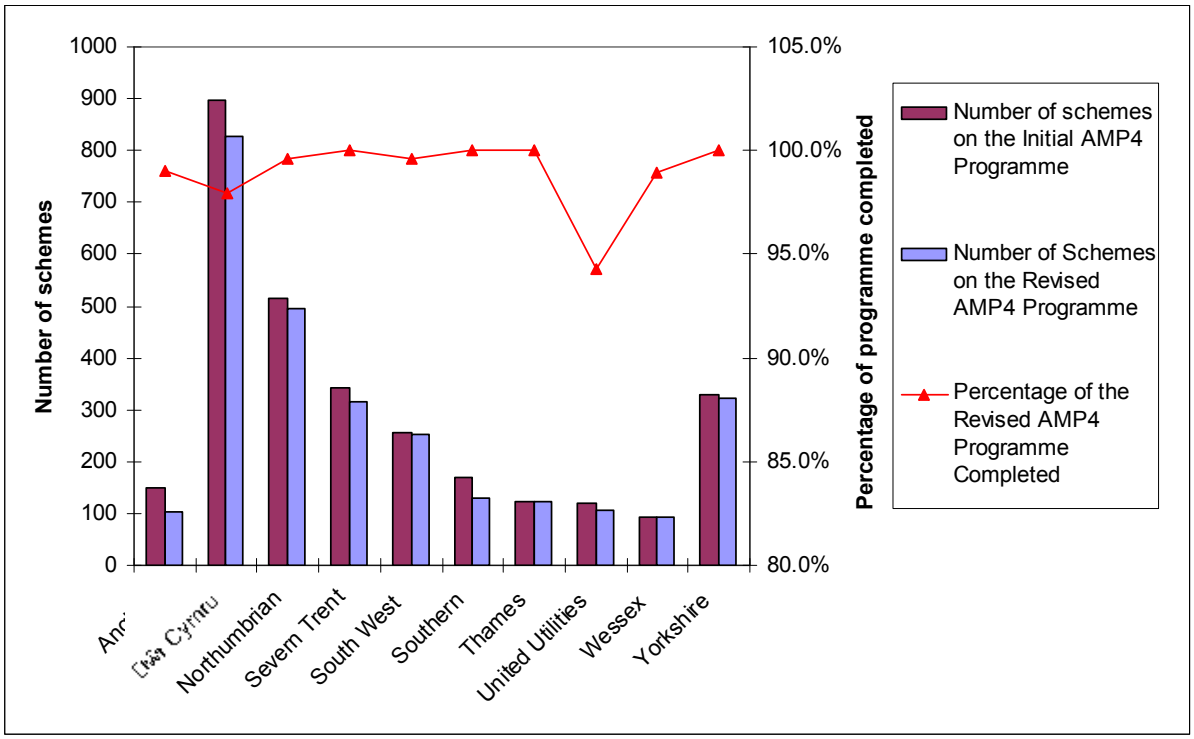
Of the 2,765 schemes in the National Environment Programme for 2005-10, some 2,737 (98.7%) were completed by 31 March 2010. After taking into account any agreed changes to the programme (for example, schemes no longer required or

additional schemes brought in to the programme) four companies (Severn Trent, Southern, Thames and Yorkshire) completed 100% of the planned capital work.

Figure 6 below shows the relative performance of each company. It sets out the:

- number of schemes originally planned;
- number of schemes following any agreed adjustments; and
- percentage of the adjusted programme completed.

Figure 6 Completion rate (%) of the National Environment Programme for the sewerage service in 2005-10



There has been a continued reduction in the number of combined sewer overflows (CSO) that are considered unsatisfactory. Now only 1% of all intermittent discharges across the sector are unsatisfactory. Of the 256 remaining unsatisfactory CSOs, 198 are part of United Utilities' sewerage network. An agreed work programme is in place for the period 2010-15 to implement the required improvements.

United Utilities has reduced the gap between itself and other companies in the sector in terms of the percentage of the programme that has been completed. However, several of the schemes that the company planned to deliver in 2005-10 will now be delivered in the five-year period 2010-15.

We have made adjustments when setting price limits at the 2009 price review to ensure that the company does not gain financially because of these delays. We have also asked the company to submit periodic progress reports on the outstanding intermittent discharge schemes.

This will require United Utilities to report regularly to both us and the Environment Agency on its progress with the programme, highlighting any potential risks that could cause it to miss revised compliance dates. If necessary, we and the Environment Agency will take steps to ensure that there is no further slippage in United Utilities' programme.

Anglian has seen a large proportion of its initial programme of work removed. This is because the Environment Agency's Habitats Directive Review of Consents and the additional modelling that the company has carried out has shown that proposed improvements at 45 sites would not deliver any additional environmental benefit. We made adjustments to Anglian's price limits at the 2009 price review to reflect this reduced activity.

Southern experienced delays in a number of Groundwater Directive schemes, which resulted in them being delayed to the period 2010-15. Also, 33 schemes driven by the Shellfish Water Directive for installing event and duration monitoring at intermittent discharges have been delayed because of planning problems and access to power and communication lines.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We are responsible for making sure that the water and sewerage sectors in England and Wales provide customers with a good quality and efficient service at a fair price.

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