

Supporting information

1. The security of supply index

The index allows us to assess each company's compliance with its duty to ensure the security of its water supplies. It does this by assessing the extent to which a company is able to guarantee its planned level of service at the end of the report year.

It also enables us to assess water resource, leakage and demand management issues in a wider context, and to track changes in the service offered to consumers over time.

A company with the maximum security of supply index score should not need to impose restrictions on use more frequently, on average, than its planned level of service. Lower scores mean that restrictions on use will be needed more frequently, on average, than the planned level of service for some of the company's consumers.

The concept of 'headroom' is important to the index. We define headroom as the difference between the amount of water a company has available to supply (water available for use) and the volume of water it expects to introduce into its network (distribution input) to meet demand. Target headroom is the minimum amount of headroom that a company needs in order to meet demand, taking account of supply and demand uncertainties, such as the temporary loss of a water resource.

Where headroom is greater than target headroom a company can provide its planned level of service.

At a company level, index scores reflect:

- the size of any deficit against the company's estimate of target headroom in each of its resource zones; and
- the proportion of consumers in each resource zone that are exposed to headroom deficits.

When calculating their index scores, companies take account of the levels of service that they expect to provide to their consumers. Each company has its own assumptions on the level of service that it plans to provide to its consumers.

Different assumptions affect the calculation of reliable yield from surface water resources. A level of service with a lower frequency of restrictions on use results in less water available for use. This affects the amount of headroom that is available,

and therefore the index score. So, the index scores of two companies with differing levels of service are not directly comparable.

Whilst each company assesses its security of supply index on the basis of average daily conditions during a dry year, some companies also consider that critical period conditions drive their water resource and investment planning.

Companies report a critical period scenario index score when they think that peaks in demand and/or short-term restrictions on the water they have available for supply are factors that affect security of supply. This could occur where, for example:

- a company abstracts only from groundwater sources, or rivers with limited storage;
- security of supply is particularly sensitive to peak demands (the peak week during the summer in a dry year when demand is at its highest for example);
- resource management rather than operational measures are needed to meet peak demand; or
- there is insufficient capacity or connectivity in the network.

The timing and length of critical periods varies between companies, reflecting the individual characteristics of the different supply systems. A summer or autumn critical peak is typical.

2. Calculating and banding the security of supply index scores

We band the security of supply index scores rather than present absolute values to emphasise that the index is an estimate of the company’s security of supply based on a number of variables. Improvements in the accuracy of the index score will be dependent, to some extent, on wider improvements in water resource planning best practice.

We define the bands as shown in the table below.

Band	Description	Index score
A	No deficit against target headroom in any resource zone	100
B	Marginal deficit against target headroom	90 to 99
C	Significant deficit against target headroom	50 to 89
D	Large deficit against target headroom	Below 50

Index calculation

To derive the index score the companies follow a series of steps. These are set out below, along with an illustrative example.

Step 1

Take the distribution input, available headroom and target headroom figures for each water resource zone as reported in the annual water resource plan updates (WRPU). Water available for use (WAFU) as reported in the WRPU does not include bulk imports and exports. In order to meet our definition of WAFU, add in the contractually available bulk imports and deduct the bulk exports for each zone.

Bulk imports and exports should be based on a dry year and be consistent with those assumed in water resource plans. These should be the maximum amounts that may be requested under contract or be obliged to supply.

Available headroom is the sum of column (2) and column (3), minus column (4) and minus column (5), set out below.

Step 2

Company Name

Security of supply Index – Planned levels of service

1	2	3	4	5	6	7	8	9
Water resource zone	WAFU: EA definition (MI/d)	Bulk imports (MI/d)	Bulk exports (MI/d)	Dry year distribution input (MI/d)	Reporting year distribution input (MI/d)	Available headroom (MI/d)	Target headroom (MI/d)	Surplus/deficit (MI/d)
Zone A	300.00	70.00	50.00	325.00	309.00	-5.00	40.00	-45.00
Zone B	200.00	40.00	50.00	180.00	171.00	10.00	15.00	-5.00
Zone C	70.00	1.00	5.00	50.00	47.50	16.00	10.00	6.00
Company total	570.00	111.00	105.00	555.00	527.5			

The index is based on the difference between the available headroom [column (7)] and the target headroom [column (8)] in each zone. This 'surplus/deficit' [column (9)] is expressed in column (10) as a percentage of the sum of dry year distribution input and target headroom.

1	7	8	9	10
Water resource zone	Available headroom (MI/d)	Target headroom (MI/d)	Surplus/deficit (MI/d)	Percentage surplus/deficit
Zone A	-5.00	40.00	-45.00	-12%
Zone B	10.00	15.00	-5.00	-3%
Zone C	16.00	10.00	6.00	10%
Company total				

This gives a measure of the size of the deficit/surplus in relation to the demand that is expected to be met during a dry year plus the headroom each company believes is necessary.

Step 3

Take the population figures for each zone [column (11)]. The population in each zone with a headroom deficit is expressed in column (12) as a percentage of the company's total population. Where the zone is not in deficit, zero is entered in column (12).

1	11	12
Water resource zone	Zonal population (000)	Percentage of total population with headroom deficit
Zone A	2,100	58%
Zone B	1,150	32%
Zone C	350	0
Company total	3,600	

Step 4

Zonal scores are derived in column (13) by multiplying column (12) by the square of the deficit in column (10) for each zone. This means that the index is a function of the square of the deficit, so that large deficits affecting small zones weigh in the overall index. Then multiply the product for each zone by 100, and sum to produce the overall company score.

1	13
Water resource zone	Zonal index (% deficit ² x % population affected x 100)
Zone A	0.89
Zone B	0.02
Zone C	0.00
Company total	0.91

Step 5

The final company wide security of supply index is then calculated as:

(1 – overall total company score in column 12) x 100

The resulting score should be **rounded down** to the nearest whole number.

1	14
Water resource zone	Security of supply index
Zone A	
Zone B	
Zone C	
Company total	9

3. Companies' levels of service – water supply restrictions

The security of supply index allows us to assess the extent to which a company is able to guarantee its planned level of service.

We have set out each company's planned level of service in table 1 below. They express their levels of service in terms of their expectations about how frequently, on average, they will need to impose restrictions.

The companies plan on the basis that they will have to impose restrictions during times of drought because it would not be economically or environmentally feasible for them to seek to meet unrestrained consumer demand in all possible circumstances. Consumers' bills would have to be far higher than they are now if water companies planned never to restrict the use of water, and there would also be serious environmental consequences, for example the harming of aquatic species.

From time to time consumers are surveyed to check their satisfaction with the levels of service companies offer. Consumers, and other stakeholders, will be able to express their views on the companies' proposed levels of service in the lead up to the next price review in 2009. We are currently carrying out the first phase of our research into consumers' views on, and priorities for, the industry and we will conduct further research in autumn 2008. And in spring 2008 the companies are consulting on their draft water resource plans. We will watch closely to see whether there is a consensus amongst consumers that the companies should reduce the risk of water restrictions. Companies should then take this into account in their investment planning for the price review.

Companies' planned levels of service – water supply restrictions

Company	Hosepipe ban	Drought order/permit	Rota cuts/standpipes
Anglian	Not more than once in 10 years	Not more than once in 40 years	Not more than once in 100 years
Dŵr Cymru	Once every 20 years	Once every 40 years	Unacceptable
Northumbrian – North East	Never	Never	Never
Northumbrian – Essex & Suffolk	Once in 25 years	Once in 50 years	Never
Severn Trent	Average 3 in 100 years	Average 3 in 100 years	Unacceptable
South West	Not more than once in every 20 years on average	Not more than once in every 40 years on average	Unacceptable
Southern	Once every 10 years	Once every 20 years	Only in civil emergency
Thames	Once every 20 years	Once every 20 years	Never
United Utilities	Not more than once in every 20 years	Not more than once in every 20 (permit) or 35 years (order)	Unacceptable and not planned
Wessex	To survive a 1975-76 drought without restrictions		
Yorkshire	Once in 25 years	Once in 80 years	Once in >500 years
Bournemouth & W Hampshire	Once in 20 years	Once in 20 years	Unacceptable
Bristol	Once in 15 years	3 times in 100 years (once in 33 years)	Less than once in 100 years
Cambridge	Once in 20 years	Once in 50 years	Less than once in 100 years
Dee Valley	To just survive a 1995 drought without restrictions – same as hosepipe ban for one month once in 71 years of records		
Folkestone & Dover	Once in 10 years	Once in 40 years	Unacceptable
Mid Kent	Once in 10 years	Once in 20 years	Unacceptable ¹
Portsmouth	Once in 50 years ²		
South East	Once in 10 years	Once in 40 years	Once in 100 years
South Staffordshire	Once in 40 years	Once in 40 years	Unacceptable
Sutton & East Surrey	Once in 10 years	Once in 20 years	Once in 100 years
Tendring Hundred	No restrictions on usage		
Three Valleys	Once in 10 years	Once in 40 years	Unacceptable

Notes:

1. Under normal planning conditions
2. Portsmouth does not plan additional restrictions more frequently than the stated level for a hosepipe ban. The company's dependence on groundwater sources means that it cannot assess its system yield in terms of defined levels of service beyond that stated in the table.

Section 76 of the Water Industry Act 1991 (WIA91) allows water companies to ban the use of hosepipes, or similar apparatus, for watering private gardens or washing cars during times of water shortage.

If a water company wants to extend the ban to other activities, it must apply to Defra for a non-essential use drought order under section 74 of the Water Resources Act 1991 (WRA91). Further activities include, for example, banning the filling of privately owned swimming pools. You can find more information on drought orders and permits, and how companies apply for them, on [Defra's website](#).

4. The water balance and estimating leakage

When estimating leakage levels we use the following definitions.

- Leakage can be defined as ‘the loss of water from the supply network, which escapes other than through a controlled action’.
- Distribution losses include all losses of potable water between the treatment works and the highway boundary.
- Supply pipe losses is leakage from consumers’ pipes between the highway boundary and the consumer’s stop tap.
- The sum of these components is total leakage. It does not include leaks on internal plumbing or losses of untreated water.

While companies can measure some elements of leakage accurately and directly (for example, service reservoir leakage can sometimes be measured by a reservoir level drop test), it is generally difficult to calculate accurately. As a result, a number of techniques have been developed for estimating leakage. The two most common are the minimum night flow and the total integrated flow method.

The minimum night flow measures flows at night into districts of 1,000-3,000 properties. In the early hours of the morning consumption is at a minimum and the principal component of the measured flow will be leakage. After deducting an allowance for legitimate use, the remainder is classified as leakage.

The integrated flow method estimates all the components of the water balance except leakage and assumes that the residual, the difference between distribution input and water used, is leakage. It is important that companies using this technique have robust monitors in place for estimating the other components of the water balance, particularly unmetered household consumption.

We look to companies to use the integrated flow/water balance method, and ask them to reconcile the results with those obtained from using minimum night flows. Where companies find a difference between leakage calculated by the minimum night flow method and the integrated flow method of more than around 5%, the latter approach to calculating leakage should be used.

Of the 22 million billed domestic consumers in England and Wales less than one third have a meter to record how much water they use. Along with the water used by unmetered consumers, other components of the water distribution system are also not measured. This includes:

- water taken illegally;
- companies' own operational use; and
- water taken legally but not billed for.

These components have to be estimated and added to measured components for reconciliation with measured distribution input. The result is called the 'water balance'.

Because such a large proportion of the water balance is made up from estimates we ask the companies to derive an independent figure for leakage by using the minimum night flow (after adjustments for use). We are concerned about estimates being accurate because, for example, if the estimate of unmetered household demand is too high then it could mean that total leakage is underestimated.

Each year because of the uncertainty of using estimated components we expect that there will not be a balance first time because of uncertainty of using estimated components. For example, it is likely that the sum of the estimated components will not equal measured distribution input. In this instance, our guidance to the companies allows the use of a statistical technique called maximum likelihood estimation (MLE). This distributes the imbalance (up to a maximum of 5% of distribution input) across all the water balance components by reference to the size and the uncertainty surrounding each component. Not all companies adopt MLE, but instead allocate the imbalance to leakage using the minimum night flow estimate of leakage to check the accuracy of the leakage level reported.

We challenge those companies where the gap is widest what they are doing to improve estimates. The detailed use of the MLE technique varies across the companies. However, our main concern is that the companies apply their methodologies consistently over time. Where we see inconsistent practices between years we investigate the reasons why and establish the true trend in the water balance components as if the same methodology had been employed consistently. This helps us in establishing the companies' performance against leakage targets and also in other areas of our work where this data is important.

The water balance reported in each company's June return is very important to us. We challenge companies on the assumptions made and have, in the past, commissioned investigations where we have had major concerns. We will continue this close scrutiny and investigate when we feel it is necessary.

Reporting leakage

We report figures in terms of megalitres per day (Ml/d), litres per property per day (l/prop/day), and cubic metres per kilometre of main per day (m³/km/d). We do not

use leakage figures in terms of a percentage of distribution input, as this is misleading. An increase in consumption, for example because of a sustained hot, dry period, will appear to lead to an improvement in leakage levels while there has not been any reduction in the volume of water lost. Likewise, a successful water efficiency campaign will reduce the amount of water used and leakage will appear to increase.

The measures used for leakage, litres per property per day and cubic metres per kilometre of main per day, are not perfect measures of leakage for direct comparisons between companies. However, we do believe they provide some of the explanatory factors, such as rurality or urbanisation, for differences in performance. Allowing for variables such as average system pressure can explain even more of the variance between companies' performance, but our focus is not to normalise performance. Our main aim is that companies meet their economic targets. We accept that the economics for each company will be different and this will lead to legitimate and deliberate variations in attained performance.

Setting targets

The water companies in England and Wales manage water distribution networks with a total length of approximately 335,000 km. In addition, there are almost 24 million connections to properties and associated consumer supply pipes, which all have the capacity to leak. Eliminating leakage would be virtually impossible and enormously expensive. Therefore, target levels for leakage have to balance the needs of consumers and the environment.

We believe that companies should compare the cost of reducing leakage and the value of the water saved, including any associated environmental and social costs and benefits. The level of leakage at which it would cost more to make further reductions than to produce the water from another source is known as the economic level of leakage (ELL). Operating at ELL means that the total cost of supplying water is minimised and companies are operating efficiently. Setting leakage targets at an economic level ensures best value for consumers and the environment.

We expect all companies to calculate leakage targets as an integral part of their long-term water resource plans. This ensures the most efficient range of options is selected to balance the supply and demand for water. The companies' next water resource plans will be consulted upon publicly.

5. Assessing performance against targets and taking action

We use the June return information companies submit to us to assess their success in delivering against two key price review outputs, security of supply index (SoSI) targets and leakage targets. We report on their performance in the 'Security of supply' report, which covers a 12-month period from April to March.

When we assess a company's performance against these targets we take into account any decisive external events, and their timing, and the performance of the company's management. We have a duty to be reasonable when assessing the impact of exceptional events on a company's performance.

2000-01 is a good example of when we accepted external factors as having had an impact on a company's performance beyond its reasonable control. In this year, to varying degrees, foot and mouth, fuel supply problems, severe flooding and freeze/thaw weather combined to cause a number of companies to miss their leakage targets. We accepted these explanatory factors for three out of five companies where they were able to show that their failure was not due to poor management.

However, continuing with the leakage example, we would not consider the normal variations that occur throughout the seasons in England and Wales as an acceptable reason for failing a leakage target. We think it is normal to have sudden cold snaps during the winter followed by periods of rapid thaw that lead to higher leakage. In general, leakage will be higher during the winter and lower during the summer, but we expect companies to manage this variation to meet their targets on both leakage and SoSI.

Our current policy for assessing a leakage target failure takes account of a company's performance over a three-year period. Therefore, we do not automatically take regulatory action after a single year failure. Nor do we expect a company to maintain leakage at a lower rate after a single year's outperformance. However, we will continue to assess leakage annually and it will be for the companies to demonstrate how external events have driven their performance. We will continue to monitor the companies' comparative leakage performance on an annual basis through the June returns.

Our approach to security of supply performance is similar. We expect companies to deliver a target SoSI score by the end of 2009-10. So whilst we will not necessarily take action against a company that misses its interim projected score for a report year, we will take regulatory action if a company looks as if it will underperform over the whole five-year period and miss its 2009-10 target.

We have a range of options to deal with SoSI and leakage failures. These range from increasingly frequent reporting outside the usual regulatory returns, to detailed investigations into performance and data quality, and the use of enforcement orders within the WIA91.

In April 2005 we also gained a new power to fine a company for poor performance. This power is not specific to security of supply and leakage; it covers a wide range of company underachievement. We set out our general approach to the use of fines for very poor company performance in our policy statement on financial penalties on 17 March 2005.

While the power to fine will have a part to play in the way in which we regulate security of supply and leakage, so far the hierarchy of actions we have in place has allowed us to address failures in a way that is both proportional and effective in delivering the necessary improvements for consumers and the environment.

We have used our powers under the WIA91 to secure legally binding undertakings from two companies. On 4 July 2006 we used our powers, for the first time, to secure an undertaking from Thames in response to the company's failure to meet its targets. Thames has met the undertaking outputs in 2006-07 but it remains in force until 2009-10. And on 8 August 2007 we secured a similar undertaking from Severn Trent for failing to deliver its price review commitments.

Subsequent failures by either company could lead to further enforcement action, including fines if appropriate. More details regarding the undertakings can be found elsewhere on our [website](#).

6. Water efficiency – our approach and companies' duty

Since February 1996, water and sewerage companies in England and Wales have had a duty to promote the efficient use of water by all their consumers. We are responsible for enforcing this duty. While we work with Defra and other stakeholders on wider initiatives to make water use more efficient, we focus mainly on the role of water companies. We approved each company's initial strategy in April 1997. These have since evolved and we monitor each company's progress annually through our June return process.

We look at four criteria when assessing whether companies fulfil this duty.

- Is there an efficient pricing framework, providing metered consumers with appropriate incentives to use water wisely?
- Is there a long-term education programme to sustain consumer awareness of the need for sensible water use?
- Is the level of company activity on efficient use of water economic? (The economics of efficient use of water activity are explained in detail below.)
- Is promotion directed to those consumers who will benefit most?

We expect a basic, minimum level of activity from all companies. This should take the form of providing consumers with information on:

- the sensible use of water in the home and garden;
- how to conduct an audit of their own consumption;

and giving consumers access to:

- cistern and other water saving devices;
- a free supply pipe leak detection and repair service; and
- further information on a website or in billing literature.

However, where water supplies are under pressure a more active approach is necessary and we consider this when assessing companies' progress.

7. Water efficiency initiatives – good practice register

As members of the government-led Water Savings Group we have a commitment to publish a '[Water efficiency initiatives – good practice register](#)'. We published this on our website for the first time last year as an appendix to our 'Security of supply, leakage and efficient use of water' report.

The aim of the register is to recognise and promote examples of best practice within the water industry and encourage water companies to adopt initiatives which have proven successful elsewhere.

The register is a live document which we will periodically update as relevant new information becomes available to us. An updated version of the register, with new information which has become available following the June return submissions from companies, is available on our website.

8. Company policy on household supply pipe repairs and replacements

Company	Free supply pipe repair policy			Other restrictions on supply pipe repairs
	First leak only	Only owner occupied properties	External leaks only	
Anglian ¹	●		●	Company may use its discretion when considering further leaks. Leak must not be under a building. Non-domestic supplies and supply pipes connected to private mains not included. Pipe length greater than 25m long or 32mm in diameter excluded. Excavation will be safely re-filled but company not responsible for permanent reinstatement. Excludes new properties that have been on the accounts system less than two years or where there has been reckless or deliberate damage to the supply pipe. Leak detection is limited to four hours free detection time.
Dŵr Cymru	●		●	One leak repair undertaken in a three-year period for household consumers. Replacement encouraged if pipework is in poor condition, if leak is on underground supply pipe underneath the house, and for subsequent leaks.
Northumbrian – North East and Essex & Suffolk			●	Pipework should not be larger than 25mm diameter, longer than 50m and the leak must not be under a building or other substantial structure. Applies to household and non-household consumers.
Severn Trent			●	Free repairs on pipework is offered for both domestic and non-domestic consumers conditional on: it prevents leakage; there is ready access; it does not interfere with structures/buildings; pipes of diameter 32mm or less.
South West	●			Once only £100 grant for repair if undertaken within 30 days for privately-owned dwellings. Entitlement to contribution renewed on change of property ownership. For joint supply pipe repairs, only one consumer entitled to £100 per leak event.
Southern	●		●	First repair is free. Up to one hour free leak detection service for domestic consumers. Repairs/replacements to the first structural wall.
Thames	●	●	●	There are two options to the policy – a (1) free repair or (2) subsidised relay. (1) Free repair option available to domestic consumers who are owner-occupiers experiencing their first leak on their external supply pipe. Repairs are covered by a one-year warranty (subsequent repairs charged at £350). (2) The subsidised relay option is broken down into two choices: (a) Replacement of the supply pipe from the boundary to the point of entry of the building covered by five-year warranty or (b) a full relay, replacement of supply pipe from the boundary to the inside stop valve covered by a ten-year warranty.
United Utilities	●		●	External leaks under buildings not covered. One free repair per household per year including common supply pipes. Service only free if total cost of the work does not exceed £500. Only applies to domestic consumers.
Wessex			●	Free repair or replacement up to outside wall of dwelling provided the pipework does not pass under any structure. No restrictions on number of repairs.
Yorkshire ²		●	●	No repair where leak under a building. Free repairs offered to wholly domestic dwellings only. From 1 June 2006, new regional policy to repair supply pipe free of charge once in two years. Consumer is given choice of replacing pipe or taking out insurance (£15 from Homeserve). £100 fee for repair if at consumer's convenience unless repair is made on an emergency basis as determined by the company.
Bournemouth & W Hampshire	●		●	One repair per property provided excavation is no larger than 1.5m by 0.75m; one hour free leak detection. Second repair can be provided at a subsidised cost of £99. Repairs at flats at the company's discretion. Pipework under buildings not covered. If free repair is made to an unmeasured property, a meter is fitted and the consumer pays bills on a measured basis for min one year. Only for domestic properties.
Bristol	●	●	●	Pipe must be less than 1.5m deep. Access to the pipe for repair must be readily available (ie not under walls, sheds, garages, or any permanent structure). Full reinstatement except for specialist materials. Consumer must reply within five days of 'leakage notice' to get free/subsidised repair. Consumers sharing a common supply pipe will each receive the free or subsidised repair subject to leak position. Not available to non-household premises or premises leased to tenants on a commercial basis. If consumer does not take free/subsidised repair, company will provide up to half an hour free leak detection advice.
Cambridge	●		●	Free repair, applies to the first leak only up to the footings of the building. One repair per property in a five-year period. Reinstatement does not include paved areas. Charge may be levied if leak caused by negligence of owner or occupier. Repairs do not include the point of entry up to the internal stop tap. Will charge to repair a leak if supply pipe is less than ten years old or if supply pipe covered by an insurance policy. Will not repair a supply pipe within 600m of a building or where it is under a building. Free leak detection service.
Dee Valley	●	●	●	First two leaks free with only one repair per year. Company will pay up to £220 to repair pipe. Consumer must contact company within seven days of waste letter. There must be reasonable access to the leak and pipe must be less than 1.5m deep. Repair must be external to any building or structure. Property must be over 12 months old and leak repair not covered by insurance. Company must be readily able to identify leak to undertake repair. Two hours' free leak detection service. Company will not carry out subsidised repair if pipework is in someone else's property or if the boundary is unclear.
Folkestone & Dover	●		●	Maximum second repair cost of £75 + VAT if leak occurs within two years of first leak; £150 + VAT for subsequent leaks within two years. Service does not cover leaking taps and pipes within the consumer's house or under outbuildings. One hour free leak detection service.
Mid Kent	●	●	●	One free repair up to external wall of house (up to limit of £150 excl. VAT) during the life of the property; 30 mins free leak detection. Where a consumer wishes to effect a leakage repair themselves, the company will credit the consumer's water account with £150 (subject to a pre and post site inspection). Supply pipe must be solely dedicated to the property.
Portsmouth			●	Pipes under buildings and pipes exceeding 30m in length are not covered. Second leak repair free unless consumer had previously been advised to renew pipe. Two hour free leak detection service for each suspected leak.
South East ³			●	First two leaks repaired free of charge provided location of leak is detected within an hour, location of leak is easily accessible, condition of pipe justifies repair and pipe made of blue polyethylene or copper. A meter is fitted (if not already metered) when the pipe is repaired although the consumer may revert back to unmetered billing within 13 months. Supply pipes made of galvanised iron, PVC, black alkanthene and lead may be repaired at consumer's own cost in which case a meter need not be fitted. Shared supply in a mixed owner-occupied/tenanted domestic or owner-occupied/owner-occupied domestic property are eligible except that a meter will not be fitted on a joint supply.
South Staffordshire	●	●	●	Repair must be arranged within seven days of notifying the company. One repair per property. Pipes under a building or permanent structure are excluded.
Sutton & East Surrey	●	●	●	Free for first four man hours only, £42.50 per man hour more than four hours. One free repair per property. Work guaranteed on property for 12 months. Free repair for underground pipework only up to property building line.
Tendring Hundred			●	Free repair for pipes up to 25m long, and no larger than 25mm diameter. Pipes under buildings not covered. Company may opt to replace rather than repair the pipe. Repairs are no longer restricted to the first repair and if the pipe is found to be in general poor condition all or part of the supply pipe is replaced.
Three Valleys ³			●	At least two free repairs for privately owned domestic users whose pipe does not exceed 25mm diameter. Privately rented properties and joint supplies are included. Consumer responsible for surface restoration work unless they request otherwise in which case a charge is levied on the consumer.

Notes:

1. Anglian's policies also apply in the Hartlepool region.
2. Yorkshire's policies also apply in the York region.
3. New policy for 2006-07.

Company	Supply pipe replacement policy				
	Some replacements free	Subsidised replacement	Use of waste notices	Reinstatement policy	Other restrictions on supply pipe replacements
Anglian	●	●	b	e	Replacement of supply pipes is free up to 25m. Pipes under buildings are not covered.
Dŵr Cymru	●	●	b	e/f	Free replacement up to 15m. Full reinstatement restricted to black top, standard concrete finish, or bare earth
Northumbrian – North East and Essex & Suffolk	●	●	b	e/f	May replace a supply pipe free if this is cheaper than repairing the leak or will offer an allowance equivalent to the average cost of repair. Pipes under buildings are not covered.
Severn Trent	●		b	e/f	Free relay for domestic consumers (up to 12m) conditional on: it prevents leakage; there is ready access; it does not interfere with structures or buildings.
South West		●	a		Up to £250 towards replacement cost offered once per consumer per property if replacement is undertaken within 30 days.
Southern	●	●	b	e	Subsidised replacement unless pipe is made of lead. Free replacement of supply pipes up to 10m if they are found to be leaking and made of lead.
Thames		●	b	e	For subsidised relays there is a charge for the replacement of £250 for supply pipes between 0-20m and less than 50mm diameter, and £450 for supply pipes between 20-50m and less than 50mm in diameter. If the consumer chooses a full relay there is a further charge of £150 for the breakthrough and internal pipework. Payment plans available. Business properties, domestic properties with supply pipe over 50m in length and/or greater than 50mm diameter are offered a commercial option. Reporter states that those on shared supply often not offered free repair as a further leak is more likely.
United Utilities			b	e	Offers an insurance service, Inter Partner Assistance and Homeserve to provide cover against the risk of damage arising from leaks within the property. If pipe is prone to leaks, policy is for the consumer to replace supply pipe at their own cost.
Wessex			b	f	Replacement at discretion of company. All replacements free. Full reinstatement to surface as near as possible to original.
Yorkshire		●	a	f	If consumer agrees to replace a repaired pipe, company will pay 50% of costs up to £300.
Bournemouth & W Hampshire		●	b	f	£235 subsidy is given on replacement costs.
Bristol			a	f	No contribution given towards costs incurred by the consumer if they choose to replace their supply pipe.
Cambridge			b	e/f	Consumer has to pay if the pipe needs replaced.
Dee Valley	●		a	e/f	Reinstatement does not include specialist finishes. Company may replace up to 5m of supply pipe free using a moling technique if excavation facilitating the moling are already open.
Folkestone & Dover		●	b	e	Subsidised replacement of £15 + VAT per m (minimum charge £150 + VAT).
Mid Kent		●	b	e	Where pipe beyond economic repair or location of leak not readily identifiable, company will contribute up to £200 towards replacement. If a second leak occurs within a year of the first repair, then company may require the consumer to replace the pipe at their own expense.
Portsmouth		●	b	e/f	50% subsidy up to £150 for pipes found in poor condition during mains renewal schemes.
South East		●	b	e/f	£200 rebate offered for complete replacement of the supply pipe and a meter need not be fitted. Only eligible for rebate if no other repairs have been financed by the company at this property (including previous owners). There will be a charge to connect new pipe to water main. Shared supply in a mixed owner-occupied/tenanted domestic, owner-occupied/owner-occupied domestic and mixed owner-occupied domestic/commercial property are eligible for the £200 rebate if they install a new separate supply.
South Staffordshire		●	b	e/f	If pipe is in poor condition, consumer must pay to replace it. If leak is located beneath buildings or similar structure, company will contribute the average cost of a free leak repair to the cost of relaying the supply pipe. This will constitute a free leak repair and no further claim would be permitted.
Sutton & East Surrey		●	b	e/f	Subsidised supply pipe replacement where Company considers pipework is beyond repair. If replacement more economic than repair, will offer to renew pipe – £250 + VAT up to 10m and £20 +VAT for each extra metre. Guaranteed for 12 months.
Tendring Hundred	●	●	b	e/f	Will replace up to 15m free of charge. Full reinstatement restricted to black top. Replacements normally exclude pipes under buildings.
Three Valleys		●	b	e	Provide a fixed contribution of £100 to any consumer replacing their pipe.

Use of waste notices

- a Always
- b If appropriate
- c If a consumer fails to respond within 14 days
- d Not used

Reinstatement policy

- e Backfill to safe condition
- f Full reinstatement
- e/f Full reinstatement restricted to black top or bare earth

9. Specific water efficiency projects 2005-10

At our 2004 price review we allowed for funding for five companies to carry out specific water efficiency projects. We believed that the projects funded represented a genuine service enhancement, realised a potential tangible water saving and went beyond our expectations of what should be carried out under base operating expenditure. Progress with these projects is reported below.

Dŵr Cymru

Funding was allowed to instigate further leakage reduction beyond the short-run ELL in two supply deficit zones, and for water efficiency at major non-household consumers in two water resource zones.

At Vowchurch a comparison of different leakage techniques and the deployment of additional detection resources has been carried out. This has led to a significant reduction in leakage during the year. The improved leakage performance will be maintained in 2007-08 and the trial of acoustic loggers will be extended to other zones to prove their effectiveness.

During 2006-07 a pilot project involving 50 detailed water audits within commercial and school premises was started in the North Eryi/Anglesey area and is due to be completed in 2007-08. The detailed audits are reviewing the potential savings that can be made through domestic, cooling and process water.

United Utilities

Funding was allowed for two projects.

The study into the promotion of water-efficient showers has been completed and the findings will be used to assist in the water industry Market Transformation Programme in influencing water use in showers.

The farms and parks water conservation programme began in 2006-07 and is ongoing. Initial visits have been made to some of the companies farming tenants' properties to assess water usage in dairy businesses and livestock farming operations. Leaflets have been posted to almost 20,000 farms with further leaflet to be posted to managers of parks and gardens in the region.

Severn Trent

Funding was allowed to distribute 'Save-a-flush' devices to be installed in suitable domestic cisterns. The company had intended to distribute 200,000 cistern displacement devices (CDDs) a year. The company has subsequently changed its strategy and intends to distribute 100,000 a year but, at the same, time it will increase its educational activity within schools and undertake domestic trials of alternative water conservation technology (for example, tap inserts, water efficient shower heads, garden water gauges and retrofit toilets). The company distributed over 142,000 cistern devices in 2006-07. It has also developed new classroom based activities, increased online resources and undertaken research to assess the impact of its education programme. It has started three trials:

- investigating household water efficiency options;
- exploring similar aspects in schools; and
- thirdly assessing local government partnership opportunities to promote water efficiency.

Southern

Funding was allowed to retrofit low flush (4.5 litre) toilets in the Sussex North and Coast resource zones. The company has said it will retrofit 60,000 such toilets. Detailed planning for this project started in 2006-07. Delivery of this scheme has now been split into two parts:

- a pilot scheme to recruit 3,000 consumers; and
- the main scheme to recruit the remaining 57,000 consumers.

The pilot scheme started in March 2007 and its purpose is to determine which form of consumer recruitment works best, what the likely uptake rates are and whether there is any preference for the devices being offered.

South East

Funding was allowed to distribute 2,000 cistern displacement devices (Hippos) a year and increase activity regarding educating consumers on water efficiency. This is expected to realise water savings of 0.14 MI/d over the five-year period. The company distributed almost 18,000 cistern devices in 2006-07, with an estimated water saving of 0.10 MI/d, and has carried out a variety of activities aimed at raising consumers' awareness regarding water use and water conservation.

10. Selective metering

The Water industry Act 1999 (WIA99) introduced the right to remain on an unmetered charge. Domestic consumers paying on an unmetered basis have a legally protected right to choose whether or not they are charged for water according to a meter in their current home. The WIA99 also introduced the right for consumers to have a meter installed free of charge where it is practical for the company to do so and does not entail excessive costs. Companies have had discretionary powers to install meters in all new homes since 1990.

However, the WIA99 also gave companies further discretionary powers to install meters in properties when there is a change of occupier and in homes with high discretionary use of water (including those with sprinklers and swimming pools). Metering by these methods is known as selective metering and we assumed that consumers metered in this way will on average reduce their demand for water by around 10%.

At the 2004 price review we allowed funding for the selective metering of more than 350,000 domestic properties. Fourteen water companies have such a selective metering programme, including all companies in the south-east of England.

As described above, consumers may opt for a meter to be installed free of charge. Such consumers are on average expected to reduce their demand for water by around 5%. Over the period 2005-10 we expect the water industry to install almost 1.2 million meters for domestic consumers who opt for a meter. The combined effect of the optant and selective metering programmes is expected to raise the industry's domestic metering penetration from 26% (2004-05) to 35% in 2009-10. It currently stands at 30%.