



Department
for Environment
Food & Rural Affairs

Water conservation report

**Action taken and planned by government
to encourage the conservation of water**

December 2018

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Presented to Parliament pursuant to Section 81 of the Water
Act 2003



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Foreword from Parliamentary Under Secretary of State for the Environment

In the UK, we take for granted a plentiful supply of clean water. Yet our high population density means the available water per person is actually less than in many Mediterranean countries.

It is clear that the planet and its weather patterns are changing before our eyes. The experience of this summer, where for six weeks daytime temperatures consistently topped 30°C, and crops wilted in parched fields meaning farmers had to dig into their winter silage to feed livestock, reinforces the need to make our water supplies more resilient to a warmer climate in the future.

We know that by the 2050s summer temperatures are likely to increase while summer rainfall decreases, leading to increased risks of short-duration droughts. The population in England is forecast to grow by over 10 million people over the same period, with a large part of this growth occurring in areas where water is already scarce.

We must therefore act now to ensure the resilience that is needed for the future. We are doing this through a twin-track approach to managing water supplies. On the supply side, we need to capture, transfer and store more rainwater. On the demand side, we must reduce leakage, and conserve and use this harvested water more efficiently.

Water companies must lead the way in reducing leakage and encouraging a reduction in consumption. They have significant levers to do this. However, achieving the level of resilience required for the future cannot be met by the water industry alone. Innovation and collaboration across different sectors and government departments will be vital, as will how we all value and use water – we all have a responsibility to use water wisely.

I am pleased to publish this report, which outlines the work that Government has done in recent years to encourage the conservation of water, and what it plans to do now in order to secure resilient water supplies for the future.

Thérèse Coffey MP

Parliamentary Under Secretary of State for the Environment



Introduction

The need for water conservation

Water is essential for life and livelihoods. It is the single most critical resource for the wellbeing of nations and the planet. It has no substitute and we cannot replace it with anything else.

The pressure on our water resources is increasing due to population growth, the impacts of climate change and the need for sufficient water in our watercourses, lakes and wetlands to protect the environment. This means that, unless we act now, in the future there will be less water available per person and a significant likelihood of more frequent, severe droughts.

The 2016 *Water resources long-term planning framework* from Water UK stated that a 'twin-track' approach of increasing supply and reducing demand is needed in order to secure the resilience of water supplies over the next 50 years.

The National Infrastructure Commission's report *Preparing for a drier future: England's water infrastructure needs* supported the need for this approach, stating that to maintain the current level of resilience,¹ at least 3,300 million litres per day² of additional capacity in the water supply system is required by 2050. The report suggested that this should come from one third supply-side measures and two thirds demand management measures. On demand management measures, the report recommends halving leakage by 2050, and enabling companies to implement compulsory metering beyond water stressed areas by the 2030s.

In some parts of the country the volume of water taken from the environment is damaging our ecosystems. The Water Industry National Environment Programme estimates that water company abstraction volumes need to be cut by over 700 million litres per day (Ml/d) to address environmental problems. Reducing the amount of water customers use helps to reduce the amount of water that water companies need to abstract from rivers, lakes and groundwater, thereby helping to mitigate damage to ecosystems.

What can water conservation achieve?

Reducing the amount of water we consume and waste could make a significant difference to water availability for people and the environment. For example, if we were to reduce leakage by 50% and reduce *per capita* consumption to 100 litres per

¹ For PR19, water companies are expected to plan for a 1:200 level of resilience. The NIC report on water recommended that 4,000Ml/d of additional capacity is required in the water supply system by 2050. This corresponds with a 1:500 level of resilience. This higher level of resilience will be explored further for future rounds of water resources planning.

² Under low population growth, medium climate scenario. Under a high population, high climate scenario, this rises to 3,760Ml/d.

person per day we could provide enough water for more than an additional 20 million people by 2050, without taking more from the environment.³

Reducing the amount of water we use can also allow development and housing growth, and sustainable business growth in areas where it would otherwise be restricted because of water supply and environmental pressures. In many cases efficiency can be achieved at little cost to developers. Requiring all developers to build to the lower standard of 110 litres per person per day would only cost a maximum of £9 additional per dwelling.⁴

Managing demand, particularly through metering has been shown to improve resilience of water supplies by reducing demand at peak times. This was particularly noticeable during the dry weather in 2018 for Southern Water following its metering programme. Metering also helps water companies plan effectively and reduce spending on resources that are only needed to manage infrequent peaks.

The government's commitment to water conservation

The government is committed to water conservation. In *A Green Future: Our 25 Year Plan to Improve the Environment*⁵, we commit to incentivising greater water efficiency and less personal use as part of our overall goal of ensuring 'clean and plentiful water'. The government's vision is a water industry that works for everyone; providing reliable, robust services now and in the future, without compromising the needs of the environment. The government set out how it expects this vision to be achieved in the strategic policy statement to Ofwat in 2017⁶. The priorities are securing long-term resilience and protecting customers. The statement sets out government's expectation that companies take a long-term approach to balance supply and demand.

The scope of this report

This report looks at the demand-side measures that have been undertaken by government in the years since the previous water conservation report to Parliament – 2014 to 2018. It also sets out our current plans for water conservation and what we aim to do in the future.

³ Analysis by EA and Defra. Reducing leakage and PCC to these figure could result in an additional 770,877 m³/d of water available for use by 2050. This equates to 2110.5 Ml/day. If PCC was 100 l/p/d, and assuming a 5% uplift for dry weather, this would provide water for over 20 million people.

⁴ The most recent costs available are from the 2014 Housing Standard Review Cost Impacts report produced for the then Department for Communities and Local Government.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/353387/021c_Cost_Report_11th_Sept_2014_FINAL.pdf

⁵https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

⁶https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/661803/sps-ofwat-2017.pdf

The government is also preparing a National Policy Statement on water resources infrastructure⁷, which will streamline the planning process for large supply infrastructure, addressing the supply side aspects of securing water resilience in the long term.

⁷ https://consult.defra.gov.uk/water/draft-national-policy-statement/supporting_documents/draftnpswaterresourcesinfrastructure.pdf

Key metrics: Summary of progress

There are two factors that tend to affect demand on the public water supply: efficiency of use and leakage control. This section shows the progress that has been made in these areas over recent years, measured through water company data.⁸

Leakage

Water Company	14/15	15/16	16/17	17/18
Affinity Water	125	121	116	116
Anglian Water Services	90	86	86	85
Bournemouth Water	101	96	93	92
Bristol Water	86	84	88	87
Cambridge Water	100	96	103	101
Essex & Suffolk Water	77	77	84	82
Northumbrian Water	115	113	112	113
Portsmouth Water Ltd	93	89	96	103
Severn Trent Water Ltd	126	122	119	123
South East Water	102	97	96	94
South Staffordshire Water Plc	119	119	119	123
South West Water Ltd	105	103	103	106
Southern Water	75	77	80	80
Sutton & East Surrey Water	85	86	84	83
Thames Water	177	173	171	172
United Utilities	140	138	134	137
Wessex Water	114	113	112	110
Yorkshire Water	128	126	129	131
Average	124	121	121	123

Table 1 – Water company leakage in average litres per property per day.⁹

⁸ Source for all tables and graphs in this section – observed from annual review data. This data does not include Wales.

⁹ Average is total leakage divided by number of properties.

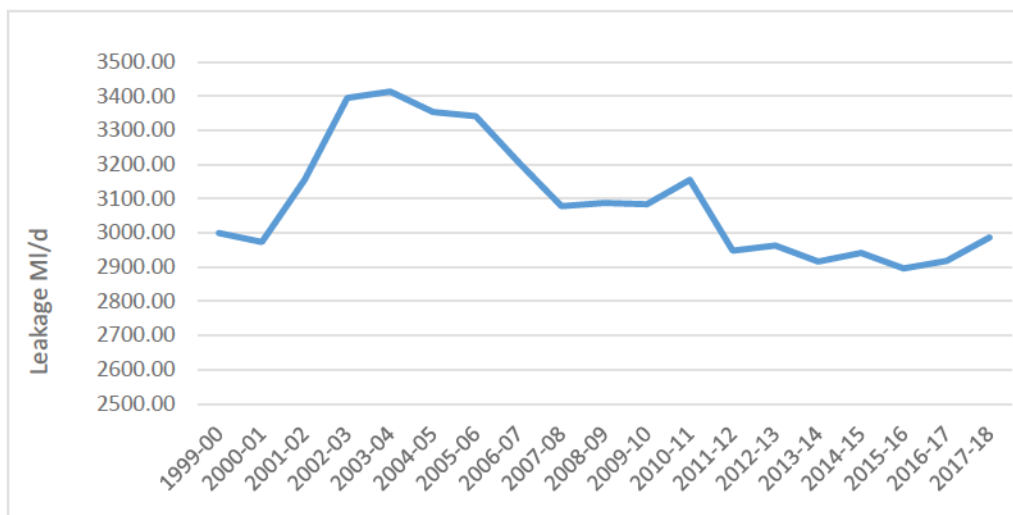


Figure 1 – Leakage over time

Around 22% of water currently put into supply is lost through leakage; this equates to approximately 3 billion litres of water per day (see Figure 1). Besides the loss of water (and the cost of energy and chemicals used to treat it), leakage affects customer attitudes to reducing their own consumption and makes supplies less reliable. Customers expect the government and water companies to take decisive action to tackle leakage. While leakage had fallen by a third since privatisation, since 2014 water companies have made little progress in reducing leakage.

The extreme weather earlier in 2018 – the ‘Beast from the East’ and the consequent ‘freeze/thaw’ – meant that leakage levels on the whole rose and companies struggled to meet their leakage targets. However, some companies continued to perform well throughout the extreme weather. Companies’ failings were due to a lack of preparation and coordination between companies, limited data and poor communications with customers.

Per capita consumption

Water Company	2013-14	2014-15	2015-16	2016-17	2017-18
Affinity Water	154	148	152	155	155
Anglian Water	135	133	135	136	137
Bournemouth Water	144	136	134	144	141
Bristol Water	144	143	141	144	146
Cambridge Water	133	131	133	140	145
Essex & Suffolk Water	152	151	151	152	153
Northumbrian Water	142	142	145	141	144
Portsmouth Water	148	146	143	145	148
Severn Trent Water	129	126	130	131	133
South East Water	156	157	161	151	150
South Staffordshire Water	131	129	129	128	130

South West Water	137	135	137	136	142
Southern Water	141	135	130	131	129
Sutton & East Surrey Water	167	161	161	158	160
Thames Water	156	150	149	146	145
United Utilities	129	130	130	139	142
Wessex Water	138	138	137	141	143
Yorkshire Water	136	133	133	135	133
England average	141	139	139	140	141

Table 2 – Water company *per capita* consumption in average litres per person per day (l/p/d) in recent years¹⁰

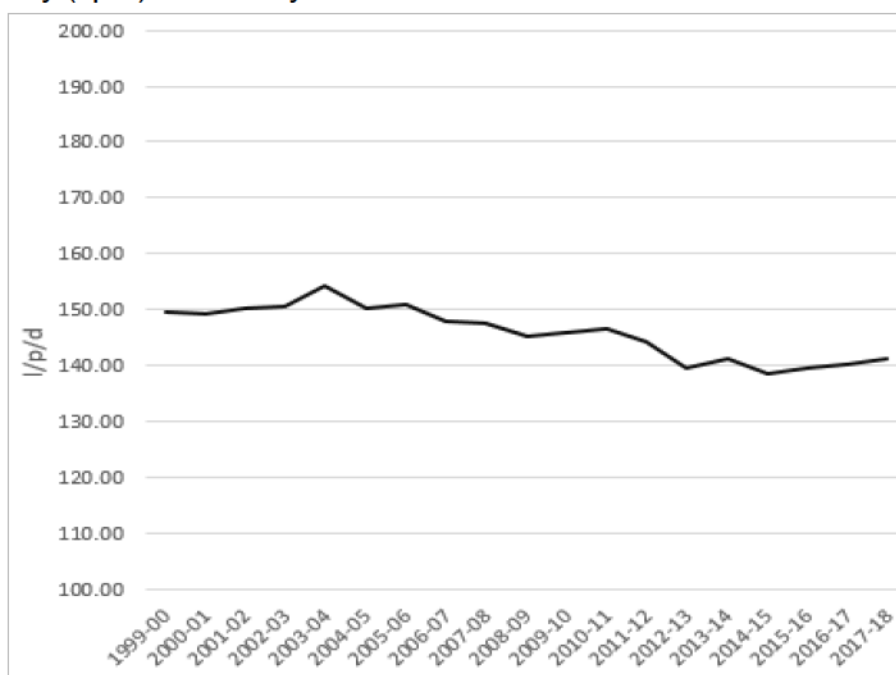


Figure 2: *Per capita* consumption over time in litres per person per day

Per capita consumption is a key measure for how efficiently we are using water. In 2017/18 England each person used 141 litres of water per day on average. Table 2 and Figure 2 shows that *per capita* consumption has fallen since 1999, however in recent years progress has flatlined.

Metering

Water Company	14/15	15/16	16/17	17/18
Affinity Water	47%	47%	47%	50%
Anglian Water Services	74%	75%	80%	90%
Bournemouth Water	65%	67%	69%	71%
Bristol Water	44%	47%	50%	53%

¹⁰ The weighted average PCC is more accurate calculation that better reflects regional variation and how water company customers use water. This is not the arithmetic mean PCC taken across all companies.

Cambridge Water	68%	70%	71%	72%
Essex & Suffolk Water	54%	59%	60%	61%
Northumbrian Water	29%	32%	34%	36%
Portsmouth Water Ltd	25%	27%	28%	30%
Severn Trent Water Ltd	39%	40%	41%	44%
South East Water	65%	73%	76%	82%
South Staffordshire Water Plc	32%	35%	36%	37%
South West Water Ltd	76%	77%	79%	80%
Southern Water	77%	83%	84%	84%
Sutton & East Surrey Water	45%	49%	51%	55%
Thames Water	34%	35%	39%	40%
United Utilities	35%	37%	38%	39%
Wessex Water	57%	58%	61%	64%
Yorkshire Water	45%	49%	49%	50%
Average	47%	48%	50%	52%

Table 3 – Water company metering progress in recent years in % penetration. Average takes into account number of properties for each area.

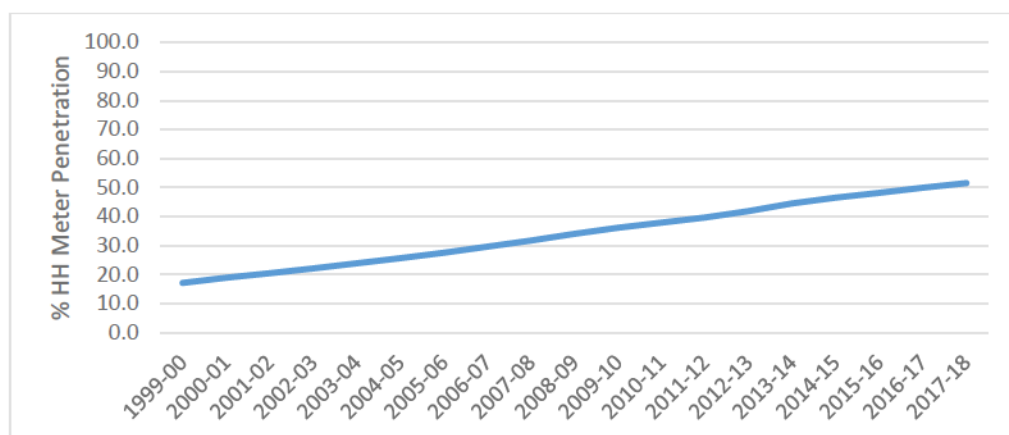


Figure 3 – Percentage metering penetration over time

Metering is an important element in reducing demand on water supplies. It helps to accurately monitor consumption, has been shown to reduce consumption and helps to identify leaks. On average metered customers use around 33 litres less water than unmetered customers.¹¹ Currently just over half of households in England pay for the water they use by metered charging. The past few years show a small increase in metering.

¹¹ <https://discoverwater.co.uk/amount-we-use>

Key metrics: Ambition

The government's strategic policy statement to the water industry was clear that companies need to invest more in demand management and leakage reduction. The government, the Environment Agency and Ofwat have all repeatedly called for companies to be more ambitious on demand in their draft Water Resource Management plans and business plans. For the first time ever Ofwat has introduced a performance commitment for *per capita* consumption for this round of water company business plans (PR19). The government's position that industry needs to develop greater resilience to drought was also reflected in the National Infrastructure Commission's recent report.

Since the publication of water companies' draft water resource management plans, the government and regulators have engaged with the companies to challenge and improve their ambition. This has included individual letters from ministers to each company detailing where more ambition was needed on demand management.

On leakage, the government has fully supported Ofwat's challenge to water companies to reduce leakage by at least 15% by 2025. We welcomed Ofwat's decision to take enforcement action following Thames Water's failure to meet its commitment to reduce leakage in 2016-2017. The government has also given a clear message that companies must do more to reduce leakage in the long term. When eight water companies failed their leakage targets in 2018, the Secretary of State met with their chief executives to reinforce his expectation that leakage would fall.

Water companies have since responded well to these steers on leakage, proposing an average leakage reduction of 16% by 2025 (Table 4). The water industry has also committed to reducing leakage by 50% by 2050 at the latest. This would reduce overall leakage to 10% of supply.¹² In his climate speech on 26 November 2018¹³ the Secretary of State endorsed this commitment.

¹² <https://www.thewaterreport.co.uk/single-post/2018/10/21/Water-UK-pledges-to-halve-leaks-by-2050-but-wants-policy-support-to-cut-demand>

¹³ <https://www.gov.uk/government/speeches/michael-gove-speech-on-uk-climate-change-projections>

Water Company	Total leakage in MI/d in 17/18 (from annual review)	Percentage reduction by 2025 (from Business Plans)
Affinity Water	174	15%
Anglian Water Services	183	17%
Bournemouth Water	19	Included with South West Water
Bristol Water	47	15%
Cambridge Water	14	15%
Essex & Suffolk Water	66	17.5%
Northumbrian Water	137	16%
Portsmouth Water Ltd	33	15%
Severn Trent Water Ltd	446	15%
South East Water	88	14%
South Staffordshire Water Plc	72	23%
South West Water Ltd	88	15%
Southern Water	88	15%
Sutton & East Surrey Water	24	15%
Thames Water	685	15%
United Utilities	454	15%
Wessex Water	68	15%
Yorkshire Water	300	25%
	Total: 2986	Average: 16%

Table 4 – Leakage ambition by water company

In their draft water resource management plans, water companies are forecasting a *per capita* consumption reduction to 123 litres per person per day on average by 2045. A number of water companies are going much further than this with Yorkshire Water aiming for 111 litres per person per day by 2045. Since publishing their draft plan, Southern Water has committed to an even lower target of 100 litres per person per day by 2040. As a result of government engagement to push greater ambition, we have seen an improvement in *per capita* consumption by 2045 between draft and revised draft plans.

However, there is still a large variation across companies. We want to see all companies showing a much greater level of ambition in terms of reducing consumption.

Water company	2017-18 observed average l/p/d (from annual review)	2044/45 l/p/d (from draft WRMPs)	% Reduction
Affinity Water	155	132	17%
Anglian Water	137	122	13%
Bournemouth Water (SWW)	141	129	9%
Bristol Water	146	127	15%
Cambridge Water	154	125	23%
Essex and Suffolk Water	153	135	14%
Northumbrian Water	141	129	9%
Portsmouth Water	148	130	14%
Severn Trent Water	133	121	10%
South East Water	150	138	8%
South Staffs Water	129	120	8%
South West Water	142	127	12%
Southern Water	129	120	7%
SES Water	159	143	11%
Thames Water	145	125	16%
United Utilities	142	113	26%
Wessex Water	143	130	10%
Yorkshire Water	133	112	19%
Weighted PCC	141	123	13%

Table 5 – *Per capita* consumption reduction by company.

Our guiding principles for the 2019 round of company's water resources management plans (WRMPs) state that we expect water companies to increase metering where appropriate. All water companies must evaluate the options they have for increasing metering, and the benefits they can bring for managing demand for water and leakage. Companies in an area designated as an area of serious water stress must consider universal metering, whereby they are able to charge all customers by metered volume, as part of their planning process.

The draft plans show that metering is projected to rise to around 62% by 2020 and 83% by 2045.

Water company	2020-21 (from draft WRMPs)	2044-45 (from draft WRMPs)
Affinity Water	67%	91%
Anglian Water	83%	92%
Bournemouth	74%	88%
Bristol Water	56%	84%
Cambridge Water	75%	90%
Essex and Suffolk	64%	80%
Northumbrian Water	40%	65%
Portsmouth	36%	65%
Severn Trent Water	49%	96%
South East Water	86%	89%
South Staffs	42%	75%
South West Water	82%	88%
Southern Water	85%	90%
Sutton and East Surrey	62%	87%
Thames	47%	82%
United Utilities	44%	71%
Wessex	69%	89%
Yorkshire	57%	81%
Average	62%	83%

Table 6 – Metering penetration ambition by company

Protecting customers from bill rises when metering penetration is increased

The government's 2017 strategic policy statement to Ofwat gave a clear steer that the water sector must go further to identify and meet customer affordability needs, and particularly to improve the availability, quality, promotion and uptake of social tariffs and other support to financially vulnerable and other vulnerable customers. To ensure that water companies are doing enough to protect vulnerable customers Ofwat scrutinises company plans and will not support proposals if they are not backed by strong evidence of customer support, regard to the needs of vulnerable customers and regard to bill volatility. Ofwat also sets charging scheme rules that state that companies must consider appropriate handling strategies for their customers whose bills are set to increase by more than 5% from the previous year.

In 2017/18 customers charged by meter paid over 18% less on their bills than customers not charged by meter. However, for some people (often larger families) bills can increase on a meter. This can put some customers in a vulnerable position and mean they might not be able to afford their bills. This can be a particularly sensitive issue where companies have a universal metering programme in place.

All companies with universal metering programmes offer either a transition period to spread any increase in costs that customers may experience following the

installation of their meters gradually, or a bill comparison period to get used to the new costs before being switched over.

There are also safeguards in place for the most vulnerable customers, such as social tariffs and payment plans.

Water companies are planning to do more to protect vulnerable customers than ever before. Water UK's summary¹⁴ of water companies' draft business plans reveals that by 2025, 1.4 million customers will receive help with their bills, which they estimate is an increase of nearly 90% from today.

¹⁴ <https://www.water.org.uk/news-item/ambitious-new-vision-for-water/>

Action we are taking now

The government's 25 Year Environment Plan commits us to incentivising greater water efficiency and less personal use as part of our overall commitment to ensuring 'clean and plentiful water'.

We are taking action on **leakage**. The government endorses the water industry's commitment to halve leakage by 2050. We will review progress on this target every five years, in line with the regulatory process and the Environment Agency's modelling for its national framework on water resources will also test different levels of leakage ambition and set expectations for regional groups of water companies.

While we are pleased that the water industry has stepped up to the leakage challenge, it is clear that there is more to be done on demand management if we are to secure long term resilience of our water supplies. To support the commitment in the 25 Year Environment Plan, we will launch a **call for evidence** on setting an ambitious target for personal water consumption early in the new year. This will be a national, non-binding target that we will use to judge the effectiveness of our actions and those of the water industry in reducing water use.

The water industry has a critical role to play. Water companies will need to be more ambitious and take action to go further in managing demand and in improving water efficiency. And they will need to work with households to help improve water efficiency and waste less water.

Alongside this, we will hold a **consultation** to examine the policy options required to support the target. This will include exploratory questions around the labelling of water-using products, improving building standards, the future role of metering, and behaviour change including improving information for consumers.

Progress in recent years

This section sets out what the government has done since the date of the previous water conservation report to Parliament to further encourage water conservation.

2015 – Update to the building standards

The government set an additional higher standard for domestic water usage in building regulations, in addition to the existing minimum standard of 125 litres per person per day. The higher standard is set at 110 litres per person per day. Where there is a clear local need, local planning authorities can set out local plan¹⁵ policies requiring new dwellings to meet the tighter building regulations optional requirement of 110 litres per person per day.

In 2017 the Environment Agency estimated that about 80/324 (25%) of local authorities have adopted the tighter standard for water use. The majority of these are in the south east. This means that people that live in newly built homes should typically use about 30 litres less water per day than those in existing housing stock.

2016 – Water UK’s Long Term Planning Framework

The then Water Minister, Rory Stewart, asked the industry to assess the long-term needs of the public water supply. The industry responded by developing the long-term planning framework. Defra, along with the Environment Agency, contributed to Water UK’s Water resources long term planning framework participating in the project steering group, and providing advice, data and information. This report assessed England and Wales’ long-term water needs and the options available for meeting them. It concluded that “a ‘twin track’ approach that includes supply enhancement, with associated transfers, as well as demand management, is the most appropriate strategic mix for the future.”¹⁶

2016 – Water resources management plan guiding principles

Water companies must prepare water resources management plans (WRMPs) every five years. The plans set out how they will balance supply and demand for water from people business and the environment. We issued guiding principles for the 2019 round of plans with specific guidance on water efficiency. We said that plans must demonstrate how companies will promote water efficiency and leakage control and, where appropriate, increase customer metering, continuing the trend of reducing overall demand for water.

We set the expectation for a reduction in leakage including the reputational issue for the industry and the impact on customers’ willingness to use less water. We expected that challenging leakage objectives should be informed by customers’ views and also be based on the potential for innovation in future. Ofwat has built on

¹⁵ <https://www.gov.uk/guidance/local-plans--2>

¹⁶ <https://www.water.org.uk/water-resources-long-term-planning-framework>

these requirements for its price review in 2019 by setting the companies the challenge of reducing leakage by 15%.

Water companies published their draft plans in late 2017. See 'Key Metrics: Ambition' section for more detail.

2017 – Strategic policy statement to Ofwat

This statement set out our expectation that Ofwat should challenge the water sector to plan, invest and operate to secure long-term resilience to drought and other factors and made an expectation of the role of demand management as one of the solutions. We said that we expect companies to cut demand and help customers use water efficiently, including through metering. We said we expect Ofwat to promote ambitious action to reduce leakage and *per capita* consumption, where this represents best value for money over the long term, including exploring setting targets in future.

Ofwat has challenged companies to reduce leakage by 15% by 2025 or to set out why this is not possible. In their draft business plans water companies have proposed an average reduction of 16% by 2025. This would save enough water to supply about 3 million people at the current level of consumption. Ofwat has also required water companies to have performance commitments on leakage and *per capita* consumption so that performance can be compared and rewarded where appropriate. Ofwat is currently reviewing company business plans to ensure that all companies face a stretching performance commitment on leakage.

The statement also set out our expectations of water companies to protect vulnerable customers and that we expect them to provide social tariffs which reach all suitable customers and offer a meaningful discount. We said we expect Ofwat to challenge companies to improve the availability, quality, promotion and uptake of support to low income and other vulnerable household customers.

As a result, Ofwat has set a clear expectation in the methodology for its price review that water companies should identify and support vulnerable customers. It commits to assessing how companies plan to support customers who are in circumstances that make them vulnerable.

The draft business plans show that most companies are setting themselves targets to extend the reach of the support they offer to customers. At least two companies have committed to eradicate water poverty in their regions. Water UK's summary suggests that by 2025, 1.4 million customers would be expected to receive help with their bills, which they estimate is an increase of nearly 90% from today. Ofwat is currently scrutinising company business plans to assess these proposals and ensure that companies' proposals are ambitious and robust.

2017 – Digital Economy Act

The government took new powers through the Digital Economy Act 2017 to allow data sharing to improve the targeting of public services to those eligible for support. Under these powers, water companies are able to cross check data with organisations like the Department for Work and Pensions, which will flag receipt of benefits and indicate eligibility for a social tariff. These powers will therefore help companies identify and consequently provide support to vulnerable customers who might need help with their bills.

2017 - 25 year environment plan

The government published 'A Green Future: Our 25 Year Plan to Improve the Environment' in December 2017. The plan sets out our comprehensive and long-term approach to protecting and enhancing natural landscapes and habitats in England. Implementing the measures in the plan means we can become the first generation to leave that environment in a better state than we found it and pass on to the next generation a natural environment protected and enhanced for the future.

Reducing the amount of water people use and reducing leakage are an important part of the goal to achieve clean and plentiful water included in the plan. The actions include:

- Working with the water industry to determine appropriate targets for personal water consumption and the measures needed to achieve them
- Working with the industry and the Waterwise group to improve water efficiency and customer involvement to explore the impact of introducing new water efficiency measures
- Supporting Ofwat's ambitions on leakage, minimising the amount of water lost through leakage year on year, with water companies expected to reduce leakage by at least an average of 15% by 2025.

2017 - Waterwise Water Efficiency Strategy for the UK

Waterwise developed and published its water efficiency strategy during 2017¹⁷. The strategy was developed in consultation with Defra and the water sector. It sets out a blueprint to deliver a vision of a UK in which all people, homes and businesses are water-efficient, and where water is used wisely, every day, everywhere. Working with the Environment Agency, we supported the development of the strategy and the plan to implement the actions.

Defra officials continue to work with Waterwise, water companies, regulators and other stakeholders through the steering group to support delivery of the plan. This collaborative approach is playing an important part in delivery of the commitments in

¹⁷ <https://www.waterwise.org.uk/wp-content/uploads/2018/02/Waterwise-National-water-strategy-report.pdf>

the 25 Year Environment Plan and to make use of the national and international knowledge that the group can bring.

2017 – Retail market for water

In April 2017, the government opened the largest competitive water retail market in the world for business. This new market means 1.2 million businesses, charities and public sector organisations in England are no longer restricted to buying water services from their regional monopoly. Instead, they can shop around, renegotiate, and find the right deal for them. Water efficiency services represent a key benefit from the introduction of retail competition.

Ofwat and the government are monitoring the effects of the retail market, including the impacts on water efficiency. There has been considerable interest from retailers in the new market – customers now have a choice of around 20 nationwide retailers. New entrants have begun to successfully acquire customers, accounting for around a fifth of switches. Five large customers have become self-supply retailers, thereby providing additional competitive pressure in the market.

Retailer rivalry has begun to produce some price savings and a wider variety of services for customers – particularly consolidated billing. The new market has also encouraged retailers to give more attention to better customer service, billing and metering, as well as water efficiency measures.

While approximately 270 to 540 million litres of water (equivalent to 100 to 200 Olympic sized swimming pools) has been saved so far since the opening of the market, value-added services such as water efficiency measures remain underdeveloped.

Anecdotal evidence suggests that in the first year of the market there has not been much of a focus on water efficiency. There has also been some confusion around where the responsibilities lie between wholesalers and retailers for efficiency services.

Complaints have highlighted issues with billing and the timeliness and accuracy of meter readings, which impedes the uptake of water efficiency services which depend upon correct and timely meter and billing data. Where customers have had problems or complaints relating to issues that are the responsibility of the wholesaler – such as leaks – they have not always found it easy to resolve these either directly or via their retailer.

Ofwat always expected efficiency to be something suppliers would be likely to offer, and they are exploring the reasons for this not being the case.

2018 – Proactive approach by the Secretary of State on leakage.

The Secretary of State has taken a proactive approach to managing demand and leakage. In his speech to the water industry on 1 March the Secretary of State called

for the industry to do more to tackle leakage. When eight water companies failed their leakage targets in the summer of 2018, the Secretary of State met with their chief executives to discuss how they would improve their performance.

Water companies responded well, proposing an average leakage reduction of 16% by 2025, going beyond Ofwat's target of 15%. The water industry has also committed to reducing leakage by 50% by 2050 at the latest.

2018 – National policy statement for water resources infrastructure

The national policy statement presents the evidence base and identifies how new strategic infrastructure contributes towards meeting government objectives. When developing the statement, the government was clear we must take ambitious action to reduce demand for water by being more water efficient. At the same time, new water resources will also be needed meaning that new large infrastructure such as reservoirs or water transfers will be part of the solution.

Consultation on the statement opened last month with publication of the final statement expected in the autumn of 2019. The need to manage demand will form an important part of the twin-track approach to improve resilience of water supplies to extreme events.

Ongoing – Contributions to research

Defra continues to support research into managing demand, both financially and in-kind. Recent examples include a rapid evidence review of behavioural change¹⁸ in relation to water use, and the options for a water label which, in a similar way to the energy label, could help customers choose water efficient appliances and fittings and support compliance with building standards in future. Our officials have also supported projects led by the water industry to consider the variations in water consumption across the country and the impacts of hot, dry weather on demand for water in 2018 alongside the impacts of communications about saving water during droughts.

Ongoing – Actions in drought

The Environment Agency and government has set out its expectations that water companies must take action such as temporary use bans (hosepipe bans) to reduce demand before drought permits and orders are granted to allow companies to take more water from the environment than is permitted under licence conditions.

¹⁸<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=19382&FromSearch=Y&Publisher=1&SearchText=wt1562&SortString=ProjectCode&SortOrder=Asc&Page=10#Description>

Forward look

This section sets out policy options that we are considering for the future.

Water efficiency labelling

This year Defra, alongside a collaborative fund of water companies and the environmental NGO Waterwise, part-funded research carried out by the Energy Saving Trust (EST) into the costs and benefits of water labelling options.

Water efficiency labelling refers to programmes that assess the amount of water used by fittings, fixtures and appliances and either provide a rating or an indication of whether this is efficient. The aim is to empower consumers to make choices favouring more water efficient appliances and labelling schemes are often integrated with wider programmes such as building regulations or incentive programmes (e.g. rebates). International experience suggests a well-developed labelling scheme is a key part of any water efficiency policy and links to building regulations, behaviour change and water company programmes.

The purpose of the project was to assess and evaluate the impact that a water labelling scheme could have on domestic water consumption across the UK. The project aimed to evaluate different water labelling approaches, including government versus industry led schemes and mandatory versus voluntary schemes, in order to identify the most effective and cost effective option and make recommendations for implementation.

Building regulations for water efficiency

The building regulations for water efficiency are intrinsically linked to reducing *per capita* consumption. Currently the building regulations state that new homes must be built to a standard of 125 litres per person per day, with an optional standard of 110 litres per person per day in water stressed areas. Building new homes to 105 litres per person per day was a key element of demand scenarios in the Water UK report.

Existing homes built to a Part G building regulations standard of 125 litres per person per day could be using less than this in practice. Research from Thames Water on homes in London built to 105 l/p/d under the Code for Sustainable Homes shows a range of between 110lpd and 125.77 l/p/d depending on occupancy.

Supply pipes and customer-side leakage

Currently around 25% of all leakage is from customers' supply pipes. Supply pipes are the pipes that carry water from company pipework into a property. Supply pipes run from the boundary of the property (where there may be a company stop-tap) up until the first water fitting or stop-tap inside the property. The maintenance and upkeep of these pipes, including leak detection, is currently the responsibility of homeowners.

Customer supply pipe leakage is included in the overall leakage calculation. This has driven companies to investigate how they can support customers to reduce their own leakage. Metering, particularly smart metering, is a significant tool for companies to use to get customers to take action themselves as metering allows leaks to be detected and fixed. There is arguably a strong economic incentive for property owners (or tenants) themselves to ensure that the leak is fixed, as this will impact directly on their bills.

Another tool to reduce supply pipe leakage could be the adoption of supply pipes by water companies. This was investigated in 2012 but the government decided not to pursue legislation to require water companies to adopt customer supply pipes at that time.¹⁹

Retail market – non household and business

One of the aims of the retail market is to encourage retailers to anticipate customer needs and innovate in meeting them – for example through improved billing, more streamlined administration, or take-up of water efficiency services. As a result, customers should be able to save money, water and time.

Customer benefits and outcomes should also promote wider environmental benefits, as lower consumption and increased water efficiency and leak detection reduce pressure on ecosystems for abstraction, greenhouse gas emissions associated with transport and treatment and future need for investment in new infrastructure.

For the second year of the market we want to see greater ambition in terms of water efficiency. We want to see a better working partnership between wholesalers and retailers that delivers significant water savings as well as financial savings for customers. We will work with Ofwat and the Market Operator (MOSL) to look at ways to address these issues to see improved customer outcomes over the next year and beyond.

¹⁹ <https://www.gov.uk/government/consultations/future-management-of-private-water-supply-pipes>