



CONSUMER COUNCIL FOR



Water, water everywhere?

Delivering resilient water & waste water services (2017-18)

Overview

- In this report we present water and/or sewerage companies' (referred to as companies) performance in 2017-18 in key service areas related to resilience. The data contained within this report has been supplied directly by companies, unless otherwise stated. All company specific data is included in the appendices of this report for reference.
- Water consumers expect their water to come out the tap without any issues. They also expect their homes to be free from sewer flooding. Across England and Wales, recent changing weather conditions have brought into sharp focus the resilience of water supplies, with many companies falling short of the standards consumers expect.
- Companies need to help consumers see the bigger picture in relation to the pressures on our water resources in particular driven by population growth and climate change. Understanding these pressures helps explain why there is a need to use water wisely and use the sewerage system responsibly. Companies also have a huge role to play, and can lead by example by reducing leakage, investing in infrastructure, and better, long term planning for the future.

• It is therefore disappointing that leakage and the amount of water that consumers use increased in 2017-18, for the second year running.

- Leakage badly affects the reputation of the water companies. It can also impact consumers' willingness to save water and undermines efforts to encourage consumers to value their water supply and services. At a time when we are trying to reduce the impact that water abstraction has on the environment, by reducing overall water demand, leakage reduction becomes an even greater priority. We continue to question whether companies are doing enough to reduce leakage. Whilst companies have been challenged to reduce leakage by 15% by 2025, we want to see more ambition from companies with them beginning to meet this challenge in the current price review period. We question why most appear to be waiting until 2020 to start to make the changes in this area that consumers expect to see.

- Daily water use also increased last year, which could suggest that consumers are either not seeing water efficiency advice and campaigns or companies are not communicating water saving messages or engaging with their consumers in the right way. Metering is seen to be a way to help drive down daily water use, but water use for metered consumers is also on the rise. Water companies need to consider whether metering is having the required impact, and what further engagement with consumers might be necessary to change attitudes and behaviours.

Overview Continued

- Our concerns have been mirrored by the National Infrastructure Commission (NIC), and the Environment Agency, who have also called on the companies to address the challenges from climate change and population growth and, where necessary, to improve resilience by being more ambitious on demand management and by progressing new, more strategic supply options.
- Cold weather in March 2018 had a big impact on the average amount of time that consumers were without a supply of water last year, predominately because the severe cold weather, 'Beast from the East', followed by a rapid thaw, resulted in lots of frozen pipes and bursts. Research undertaken by CCWater revealed that during this significant incident, many consumers did not receive the information that they needed and some suffered with supply problems lasting several days (including loss of supply, low pressure and water discolouration). Lessons need to be learned from this event, in particular, companies need to plan for and be ready to cope with volatile weather events. This includes the need for consumers to get the right information, at the right time, through the right channels.
- Sewer flooding, both internal and external, has seen a decrease, in part due to the drier weather over 2017-18. With the distress it can cause to consumers, companies need to continue with this improvement. However, the industry needs to better plan to mitigate against all types of sewer flooding, regardless of the weather conditions.

- There has been an overall decrease in the number of pollution incidents caused by water companies, but an increase in categories 1 and 2 (serious incidents). This could really put the reputation of the water industry at risk. Companies need to work together with the Environment Agency to lessen their impact on the environment caused by pollution incidents.
- In both England and Wales in 2017, the figure for public water supply compliance with the EU Drinking Water Directive was 99.96%. This is a positive figure, and remains much the same since 2004. It showcases that water quality for consumers is high and that companies are performing well to maintain this compliance with the European Union's Drinking Water Directive.
- There has been mixed performance from the companies across the service areas for 2017-18. Most of this has been affected by the weather, highlighting the increasing need for companies to plan for the future by investing in a resilient service where there is support from consumers. It is clear that not enough progress has been made by the companies from the previous year,

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1. Introduction

Water supply resilience is the ability of the water companies' to continue to provide a consistent supply of water now and for future generations. Consumers expect a reliable supply of water, regardless of the challenges facing the sector. With the recent changing weather conditions, we have seen the resilience of the sector tested. The 'freeze-thaw' in early March left over 200,000 consumers in England and Wales without water for over 4 hours, and has been followed by a near drought situation in June, July and August, which drove a large increase in demand, low pressure problems for many consumers and interruptions to supply for some. This has highlighted the need for companies to maintain and improve their systems, whilst also taking steps to protect the natural water resources we rely on for our water supplies. Companies are now being challenged to uphold their consumers' expectations that they can cope with everything the British weather throws at them.

In our Water Matters Highlights Report² we outlined that customers views on fairness and value for money can be affected by the operational performance of companies and how they respond to incidents. Companies need to work to get the basics right for consumers when it comes to tackling the challenge of resilience. In the simplest of terms, this means that companies must know their networks, have effective contingency plans in place, and be able to communicate effectively with consumers – especially when things go wrong.

Whilst there is a lot that companies can do to improve resilience, there is also a role for consumers to play in reducing their water use. However, if large amounts of water are being lost in the system through leakage, it will discourage consumers to use water wisely. Consumers need to see that companies are rising to the challenge in tackling leakage and effectively planning for the future. Through our research³, we have found that while consumers may be aware that there are challenges within England and Wales relating to population growth and climate change, they often do not make the connection to how this might impact our water supplies and therefore how their individual water use plays a part in tackling these challenges. Companies need to help consumers see the 'bigger picture' on water resources; the challenges and risks; and, potential solutions and what they can do to help. Companies need to ensure that communication about resilience is not overcomplicated and is focussed and relevant.

Waste water resilience is all about a reliable service, free from sewage flooding and without damaging the environment. Water companies need to think about how they can better protect both their consumers - from the impact sewer flooding can cause, and the environment - from pollution incidents.

A lot has been seen in the media recently about the effect, we as consumers, can have on the sewerage system. Inappropriate items poured down the drain, or flushed down the toilet have a negative impact on the system and can cause blockages and other problems for sewerage companies - these can be costly to address. The companies have an extremely important part to play in making consumers aware of the correct use of the sewerage system. It's also essential that manufacturers clearly label their products to avoid confusion over what is 'flushable'. A resilient sewerage system is important, and relies on people using it responsibly. In doing so, it also helps avoid serious pollution incidents. In this report we look at companies' performance for a range of service areas including, leakage, daily water use, supply interruptions, sewer flooding, drinking water quality and pollution incidents. Where there have been notable increases or decreases by individual companies from previous years we have noted these, and highlighted where we would like to see improvements from the companies.



2. Leakage

When everyone is being encouraged to use water wisely, it's really important for water companies to lead

by example; especially when it comes to reducing leakage levels. Many consumers question what difference they can make to reducing the amount of water they use compared to the comparatively huge amounts of water that companies waste through leakage. Reducing leakage levels helps to ensure our water service is more resilient and can alter consumers' attitudes to water saving.

Shortly after privatisation in 1989 there was a rise in leakage levels⁴, but since 1994-95 the amount of water lost through leakage has reduced by about a third. However, since 2000, the rate of reduction slowed down and has flat-lined over the last 6 years. The total amount of water being lost to leakage is now higher than it was 6 years ago with nine companies missing their leakage targets last year. This raises questions over whether these companies have been sufficiently focussed on leakage reduction, and whether leakage targets and incentives are sufficiently challenging to encourage innovation and more ambition from the companies.

Ofwat are encouraging companies to reduce leakage by 15% by 2025⁵. We're not seeing much evidence of ambition from companies to tackle the problem in the current price review period (2015-2020), with the exception of Affinity Water, who set and are on track to achieve their target of a 14% reduction. For the next price review period (2020-2025), the only company that we have seen ambition from is Yorkshire Water, who announced plans to make a 40% reduction by 2025. However, when companies submit their Business Plans for 2020 – 2025, we may see more evidence of ambitious targets – it will

be disappointing if we see companies only setting their target at 15% and not striving to achieve more than that set by Ofwat. If companies are able to rise to Ofwat's future challenge, we would like to see improvements now, rather than waiting until the next price review period.

2.1 Overall leakage levels

Overall leakage levels rose for the second consecutive year during 2017-18 by 1.5% to 3,170 mega litres per day, with the biggest increases seen by Portsmouth (+8.2%), South Staffs (+3.6%) and United Utilities (+3.3%). Some companies managed to reduce their leakage and the largest reductions were made by Hartlepool (-3.4%), Dee Valley (-3%) and Essex & Suffolk (-2.8%). The 'freeze-thaw' event in March will have contributed to this increase but is not fully responsible for it.

With 9 companies missing their leakage targets for 2017-18 (Bristol, Dee Valley, Cambridge, South Staffs, Essex & Suffolk, Portsmouth, Severn Trent, Thames, Yorkshire), it is clear that water companies still have a long way to go. With the heatwave this summer and the resulting pressure on our available water supplies, we have seen companies doing more to reduce leakage, but we would like to see this as a permanent activity and not a short term response.

2.2 Leakage per property, per day

We report leakage on a per property, per day basis, as this provides a better basis for comparing companies relative leakage performance. There is a huge range in the levels of leakage per property. Southern is currently the best performer on this basis reporting 79.6 litres, followed by Essex and Suffolk with 81.2 litres – these were the same two best performing companies as 2016-17. Conversely, Thames reported losses of 181.6 litres – which is over twice the amount reported by Southern. Thames has incurred £55m in automatic penalties, and will also return a further £65m to customers for missing its leakage target for 2016-17. Thames Water has committed to getting its leakage performance back in line with what it has promised it will deliver for its consumers in 2019-20, and is publishing monthly reports on the progress with its recovery plan on its website⁶.

United Utilities were the second worst performer, with 136.9 litres being lost per property per day. Considering that this company were close to implementing a hosepipe ban this summer, consumers will expect improvements to be made to their leakage performance.

Yet again, we are disappointed that companies no longer seem to be making progress in significantly reducing leakage. We are concerned that if performance has ground to a halt now, how will companies meet the challenge to reduce leakage by 15% by 2025? For a number of years we have stressed that leakage is important to consumers and must reduce significantly, particularly for the worst performers. Consumers need to see that companies are tackling leakage to be persuaded to make water savings and help improve their perceptions of their water company.

⁴https://www.nao.org.uk/wp-content/uploads/2000/12/9900971.pdf ⁵https://www.ofwat.gov.uk/publication/delivering-water-2020-final-methodology-2019-price-review/

2. Leakage Continued





The industry needs to work to make improvements to the pace that they are delivering improvements to their leakage levels, and not become complacent because there were significant reductions 20 years ago.

Leakage

overall leakage levels for the past 5 years (megalitres per day)



3. Daily water use

The heatwave this summer and pressures on our water supplies made water a hot topic. In particular, the amount of water we use and the ways that we use it drew a lot of media attention. By 2050, demand for water could be up to 22% higher than the amount of water that will be available⁷. Companies should be helping consumers to save water, not blaming them for the amount of water being used. Many consumers are not aware of the water resource situation, and companies clearly aren't doing enough to make this message stick. Research conducted by CCWater in 2017⁸, shows that consumers need to see the 'bigger picture' on saving water in order to change their behaviours and bring water usage down.

Water consumption since the 1960's had almost doubled from around 85 litres per person, per day, to its peak in 2004, at 155 litres. Over the last 14 years this has slowly decreased, with the current average water use per person being 141 litres per day⁹. The water companies have targets for reducing their consumers' average daily water use which tend to reflect their local water resources situation. The Environment Agency has said that they will be working with Defra to set an aspirational target which will encourage companies to be more ambitious in their demand management activities and give us all a benchmark to judge our own water use against. This will help to support efforts to encourage us to use water more wisely.

2017-18 saw a slight increase in the amount of water that each person uses each day (+0.23%), an increase of +1.14% over two years. The biggest increases were seen by South West (+4.14%) and Dŵr Cymru (+3.96%) and Cambridge (+3.46%).

Additionally, 2017-18 has seen a slight increase in water

consumption for unmetered (+1.17%) consumers and a more significant increase for metered (+1.59%) consumers. Both of these increases highlight the need for the industry to engage with consumers on water usage.

The increase in average consumption for unmeasured consumers is likely to be driven where there are no metering programmes in place and so more low use consumers have opted to move onto a water meter. For companies that have a metering programme in place, more higher-use consumers will be moved to metered billing, increasing the average consumption of metered consumers in the area. However, it is clear that the overall impact has been an increase in water use across both metered and unmetered consumers. This increase suggests that further engagement is needed with consumers about why and how to save water.

With metered consumers in particular, the increase poses the question of what more can be done to encourage households to reduce their water use. Companies have reported that the metering programmes have reduced overall demand but a proportion of this is due to household leaks being detected quicker and fixed. The challenge to change how consumers view water continues and the industry needs to find new ways to encourage households and businesses to become more water efficient. The companies with ongoing metering programmes offer water use visits/audits and will fit water efficient fittings. The success of these more tailored programmes will need to be thoroughly assessed to understand what works best. Additionally, companies will need to use the information that they have available to improve the evidence base so that the impact of metering and related water efficiency programmes can be fully understood.

A different perspective to water saving performance

How companies account for the total amount of water that is taken from the environment and put into their treatment works is known as the distribution input. This is another way to assess the performance of the companies. Rather than looking at the companies' per capita consumption and leakage figures separately, the industry needs to consider the total water balance. Distribution input is one way of doing this.

Over the last three years, the amount of water being put into the system has increased. Although these are by small percentages, there is a need for companies to be thinking about ways to use less water, whether through improved water efficiency or reducing leakage. This is especially important given the heightened chance of drought and the need for companies to reduce their negative impact on the environment in the long term, which will help adapt to climate change.

⁷<u>https://www.water.org.uk/water-resources-long-term-planning-framework</u> ⁸<u>CCWater - Saving Water: Helping consumers see the bigger picture</u>

4. Supply interruptions

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With the ever-changing weather in the UK, the 'Beast from the East' followed by a prolonged heatwave, you could be forgiven for thinking that interruptions to supply are becoming a common and unwelcome problem for consumers. Having no water can be extremely inconvenient, especially when you are a vulnerable consumer; have livestock to keep hydrated; or your business depends on a water supply.

Supply interruptions can really affect a consumer's perception of their water company, but this is all dependent on how the company reacts to the interruption. If it is quick to communicate with the consumers, providing clear, timely and accurate updates in the way that consumers want to receive them and provides alternative water supplies, then this is less likely to have a negative impact on the consumer's view of the incident.



Companies' response to the 'Freeze-Thaw'

Towards the end of February and early March 2018, the 'Beast from the East' brought sub-zero temperatures to much of the UK, this was followed by Storm Emma that brought heavy snow and a rapid thaw. This caused water supply interruptions and low pressure problems for water consumers in many parts of England and Wales, with consumers of Affinity, South East, Southern, Thames, South West, Severn Trent and Dŵr Cymru most severely affected. However, some companies worked hard to avoid interruptions for consumers by being well prepared and having plans in place to react to incidents such as this.

Our research¹⁰ showed that the overall experience for consumers of those companies was a negative one; too many companies were not prepared and consumers felt let down.

The key messages to the companies were that consumers wanted:

- To hear from their company through a variety of channels and see them on the ground in the local area
- To know where emergency water was and that it was fairly distributed
- Reliable updates on when the water would be back on
- Extra help when they are vulnerable, and just for those on the priority services register

As a business, they wanted:

- Larger supplies of emergency water
- Compensation that considers business loss

Ofwat launched a review of the response to the event¹¹, and have written to each company individually highlighting the issues; responses are due back to Ofwat by the 28th September. Even where the company coped well with the event, there are lessons to be learnt. All companies must publish a plan of what changes they will make to improve their planning and responsiveness, should a similar event occur again.

4. Supply interruptions Continued

In 2017-18, the average amount of time that consumers were without a supply of water increased from 10 minutes and 45 seconds, to 22 minutes – an increase of 105%. This has been mainly driven by the 'freeze-thaw' in early March, but highlights that companies need to be better prepared to prevent these spikes. The companies that reported the largest increases were generally those severely affected by the 'freeze-thaw' - Dŵr Cymru (+256%), South East (+245%) and Severn Trent (+238%).

However, the largest increase was for Bristol, who had a significant increase of 549% to their supply interruptions. Although they encountered few supply issues during the 'freeze-thaw' in March, Bristol had a number of significant incidents affecting their performance. This included a burst in May 2017 causing an interruption to 35,000 consumers and adding 54 minutes and 44 seconds to their performance figure.

The industry's focus on resilience has increased over the past few years. Whilst the increase in supply interruptions can be explained, it is disappointing that some companies were unable to cope with this one off event – a resilient service was not offered. Severe cold snaps during the winter are not unexpected; better planning and drawing on lessons learnt from the Northern Ireland 'freeze-thaw' incident in 2010, could have eased the inconvenience caused to consumers.

Supply interruptions

the weighted industry average over the last 5 years

Hours / Minutes / Seconds



5. Drinking water quality

It is imperative that consumers trust the quality of their drinking water, which is regulated by the Drinking Water Inspectorate (DWI) and has consistently been of a high standard across England and Wales.

Each year the DWI publish a report¹² which reviews whether water companies and local authorities have taken the appropriate action to maintain confidence in drinking water quality and to safeguard public health.

In both England and Wales in 2017, the figure for public water supply compliance with the EU Drinking Water Directive was 99.96%. This is a positive figure, and remains much the same since 2004. It showcases that water quality for consumers is high and that companies are performing well to maintain this compliance with the European Union's Drinking Water Directive.

Our research¹³ shows 92% of customers in 2017-18 are satisfied with the safety of their drinking water, which is a small increase from 2016-17. This needs to remain this way, as being able to take water out the tap without having to think about the quality is a fundamental expectation for the majority of customers. However, companies should work to understand what is driving the views of those customers that are not satisfied with the safety of their drinking water.



6. Sewer Flooding

Sewer flooding can be an extremely traumatic event for any consumer to experience, and is an unacceptable service failure by the sewerage companies. Progress in this area has been positive and consumers are now 8 times less likely to suffer sewer flooding than they were in the early 1990s¹⁴. However, there are still consumers at risk, and companies should avoid complacency about the improving performance to sewer flooding with the increasingly volatile weather in England and Wales. It is important for companies to continue to improve the resilience of the network and further reduce the risk of sewer flooding to those homes and businesses that may become vulnerable in the future.

It is good to see that the industry is working to adopt a common approach to reporting sewer flooding¹⁵, making it easier to carry out comparisons of performance across companies. Regardless of the way that the information is recorded, the ultimate aim should be for the industry to eradicate the risk of flooding from sewers for all homes and businesses. However, the way that sewer flooding is currently reported¹⁶ makes it difficult for us to make direct comparisons between companies. CCWater's long term ambition is for companies to eradicate sewer flooding by 2040, with companies ensuring that the highest risks with the worst consequences are prioritised.

Flooding inside the home

There has been a 26% reduction over the last five years to the total number of properties internally flooded. In 2017-18 this was 3,560 properties which is a 36% decrease from 2016-17. Whilst this reduction is positive news for consumers, it should not be taken out of context, given that in the previous year internal sewer flooding had increased by almost a third. It should also be noted that the drier weather experienced throughout the year will have also contributed to the decrease.

Flooding outside the home

Areas flooded externally have also decreased over the last five years, with a 39% reduction. In 2017-18 there has been a 19% drop compared to the previous year. We are pleased with this overall performance and encourage companies to keep up the good work in tackling external sewer flooding.

Last year, all companies reduced the number of areas flooded externally, with the exception of Yorkshire that had a 12% increase.

Over the longer term, both internal and external sewer flooding have decreased since we started to collect data from the companies in 2012-13. However, it should be noted that 2012-13 was a particularly wet year, so the starting position was high.



¹⁴https://discoverwater.co.uk/sewer-flooding

¹⁵https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Reporting-guidance-sewer-flooding-updated-April-2018.pdf

¹⁶There can be some variances between how companies are recording sewer flooding. Additionally, the metrics that have been used in the past to show performance surrounding sewer flooding, while appropriate for the time, are no longer fully appropriate as they do not include all flooding incidents now that companies are responsible for more sewers.



Internal and External flooding

the total number of properties flooded internally / externally over the last 5 years

Historically, sewer flooding performance has been largely influenced by the weather; however, better collaboration can also influence performance in this area. We think that by working with other flood risk authorities there would be improvements in:

- Planning against all types of sewer flooding;
- The utilisation of sustainable sewerage systems; and
- Identifying properties that are at risk of flooding.

We welcome the collaborative work that the industry is doing through the 21st Century Drainage Board on long term planning and resilience of the drainage network. Of particular note is the campaign to inform consumers what can and can not be disposed of down sinks and toilets – which if, successful, should result in fewer sewer blockages and therefore less flooding and pollution incidents.

Internal Total number of properties flooded



External Total number of properties flooded



7. Pollution Incidents caused by water companies

It is important that the sewerage system is resilient and pollution incidents caused by water companies are avoided. Consumers trust that their company is able to manage and operate their sewer networks and sewage treatment works responsibly and efficiently thereby minimising their impact on the environment.

The Environment Agency (EA) and Natural Resources Wales (NRW) are the environmental regulators for the water industry in England and Wales respectively. They closely monitor the companies' environmental performance, and publish reports based on companies' performance on a number of measures.

Each year, the EA publishes an <u>Environment Performance</u> <u>Assessment</u> (EPA) of the nine sewerage companies in England.

In 2017, there were 52 serious pollution incidents compared to 57 in 2016. This is an improvement by companies; however,

there was a rise from 9 to 11 of the most serious incidents in 2017.

The EA also saw the highest level of self-reporting of pollution incidents by the companies, which is where the company reports the incident to the EA before anyone else - this shows that the companies are aware of the events and quick to take action.

NRW also publish an <u>Annual Performance Report</u>, which looks at the performance of Dŵr Cymru in Wales.

In 2017 they reported that Dŵr Cymru has dropped from a 3 star company rating, to a 2 star, as a company requiring improvement. This has been due to the company failing to comply with permit conditions; the company has accepted two formal cautions for this and NRW are pushing Dŵr Cymru to outperform all their targets across the EPA by 2020.



8. Conclusions

The water industry is facing future challenges to the delivery of both the water and waste water services, from population growth and climate change. In order to tackle these challenges, companies need to build resilience of both services; and improve their planning and increase investment for the longer–term. However, we can see that there are also challenges facing the water companies now which need to be looked at; such as leakage, supply interruptions and water use. It is also essential to learn from recent weather incidents, which have highlighted deficiencies in resilience, as they provide valuable lessons which can be used to inform companies' investment and operational response/recovery plans.

The weather that England and Wales has seen recently has an effect on all of the service areas we present in this report.

- A higher chance of drought means companies need to focus on reducing leakage and bringing consumers daily water use down. However, it is disappointing that both leakage and water use have increased during 2017/18.
 - Whilst companies have been challenged to reduce leakage by 15% by 2025, we are not seeing any great ambition from companies to begin to meet this challenge in the current price review period. We question why they are waiting until 2020 to start to make the changes in this area that consumers expect to see.

- We think that the industry can be better at effectively communicating with consumers about why there is the need to save water, so that daily water use decreases.

- The severe cold snap followed a by a rapid thaw this winter has highlighted the need for companies to have better plans in place to be able to cope with a range of weather events. Following the 'freeze-thaw', companies need to set out their proposed actions, and demonstrate how they will carry out their plans for improvement.
- On the other hand, drier weather is helping to improve the performance to both internal and external sewer flooding and a decrease has been seen over the last five years. However, there is still a risk of sewer flooding to consumers and the industry needs to better plan to mitigate against all types of sewer flooding, including those driven by collapses and blockages, regardless of the weather conditions.

We think that water companies should be able to cope with the volatility of the weather in England and Wales. We want to see clear evidence that companies have learned the lessons from the freeze-thaw event so we can avoid a repeat of widespread supply interruptions. Given that climate change is likely to make the weather even more volatile, it is imperative for companies to proactively adapt to future weather incidents.

Companies are preparing their business plans for the 2020-25 period and we anticipate that resilience will feature heavily within them. However, we think that a consumer focussed water company will not wait until 2020 to initiate resilience building. We would like to see companies making tangible progress between now and 2020 in order to improve the resilience of the water and sewerage services they provide.







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