

# Water and sewerage companies' performance

## 2018 summary

July 2019

A summary of the environmental performance of the 9 water and sewerage companies operating in England.

## Chair's foreword

The Environment Agency's annual Environmental Performance Assessment (EPA) assesses the performance of the 9 water and sewerage companies in England. It is usually a privilege to write the foreword, helping to explain the complex tapestry of factors that contribute to the quality of England's inland and coastal waters. The situation is never black and white.

However, there is no getting away from the fact that performance in 2018 was simply unacceptable. This report shows that:

- with one exception, none of the companies are performing at the level the environment needs
- rather than improving, the performance of most companies has deteriorated, reversing the trend of gradual improvement since we introduced the EPA in 2011
- serious pollution incidents which damage the local environment, threaten wildlife and in the worst cases put the public at risk, have increased

This report is about 2018, but I am sad to say we are not seeing dramatic improvements in 2019. As a result we will toughen our regulatory approach.

We will increase our inspections and auditing of companies' performance. We will launch a



new programme called 'Improving Water Company Performance'. This will focus on the poor performing companies and on tackling the behaviour which is doing most damage to the environment. This includes failure to prevent serious pollution incidents, non-compliance with permits and the wrong use of sludge.

We will continue to work with Ofwat, the economic regulator, and we will prioritise looking at financial penalties to drive better environmental performance. Fines are currently only a fraction of turnover. Ofwat has been clear that companies need to consider the issues that matter for their customers and wider stakeholders, and take these factors into account when deciding dividend payments to their shareholders. Companies should be

reflecting on their environmental performance and long-term resilience. If this is poor they should be asking themselves whether dividends are justifiable.

The summer drought in 2018 was challenging and we share a vision with water companies of increasing public understanding about water efficiency. But companies cannot rely on taking water from rivers, often viewed as the cheapest option, to feed their network. Those not scoring well are not taking enough action to prepare adequately for droughts in the short term, and are not sufficiently preparing for the long-term supply challenges of population growth and the climate crisis.

It does not have to be like this. Over the last 2 decades the water companies have played a critical part in improving the quality of water in our rivers, streams, lakes and coasts. They have invested billions of pounds in improving the environment. They substantially reduced the number of pollution incidents they cause. They have worked with us to reduce the risks of flooding and drought. And they have delivered reliable, safe, clean and affordable water for all. If they can do all this they can also deliver consistently excellent environmental performance.

Northumbrian Water have shown that it can be done. For the previous 2 years they were at the bottom of the EPA ratings with a poor 2 star rating ('requires improvement'), due to pollution incidents and inadequate compliance with environmental permits. This year they have risen to 4 stars ('industry leading company'), the only company to achieve the highest rating and the only company to improve its performance.

All 9 companies should be aiming for a 4 star rating. This is not only the right thing to do, it makes business sense. In a world where environmental concerns increasingly drive people's behaviour, consumers demand better.

Thank you to my colleagues for producing this important report.

A handwritten signature in black ink that reads "Emma Howard Boyd". The signature is written in a cursive, flowing style.

Emma Howard Boyd, Environment Agency Chair

# Our regulation of water companies

The Environment Agency is the environmental regulator for the water industry in England. We regulate and work in partnership with the 9 water and sewerage companies (called water companies in this report) operating in England, to ensure they:

- protect and improve the environment
- minimise the environmental impact of their assets and activities
- deliver good performance and share good practice
- comply with licences and permits designed to protect people and the environment

We give advice and take enforcement action where appropriate. We work with other regulators of the water industry and relevant organisations to achieve beneficial results for people, the environment and economic growth.

## Performance messages for 2018

This report is about the 9 water and sewerage companies that provide clean (drinking) water and waste water (sewerage) services. There are also a number of water only companies providing only drinking water, and a number of companies providing drinking water and sewerage services on a localised basis. These are not covered in this report.

Overall in 2018, water company performance has deteriorated compared with 2017. This reverses the trend of gradual improvement for the sector since the Environmental Performance Assessment (EPA) was first introduced in 2011. The sector has some way to go to meet the [performance expectations for 2015 to 2020](#) which the Environment Agency set out in 2013 (these are shown on page 5).

### For 2018, the main performance messages for the sector are:

- there was a drop in performance with 3 companies rated as 2 star (requiring improvement) and only one company achieving the highest 4 star rating (industry leading company) under the EPA
- there was no improvement in the total number of pollution incidents, although there was a small drop in sewerage incidents
- self-reporting of pollution incidents remained at 76%, however 5 companies were worse in 2018 than 2017 and the variation between companies increased
- our assessment of company sludge performance data identified the need to review practices and regulations to ensure the right environmental outcomes
- two companies had significant issues with delivery of their Water Resources Management Plans (WRMP) and failed to achieve a score of 100 for the Security of Supply Index (SoSI) for water availability
- compliance with numeric permit conditions at Sewage Treatment Works (STW) and Water Treatment Works (WTW) remained good with 98.6% of permits compliant - further improvement is needed to meet the expectation to plan for 100% compliance particularly from WTW
- 99.8% of planned environmental improvement schemes had been delivered against Asset Management Plans (AMP) targets

Water companies provide an essential public service that underpins the social and economic health of the nation. We expect them to minimise the impact of taking clean water from the environment and returning used water after treatment. Individually and collectively, however, these activities can and do affect the ecological health of rivers and their catchments. They also affect how water can be used downstream by others. It is the role of the Environment Agency to regulate their work.

By far the greatest potential environmental impact from the water companies' activities is on the water and land environment. To regulate this impact, water companies have:

- abstraction licences which allow them to take water from the environment
- water discharge activity and groundwater activity permits which allow them to put treated waste water back into the environment
- permits or other regulatory controls which allow them to dispose of, or use, sludge or other waste
- duties to manage their impact on flood and coastal risk and the environment

We are taking action with the companies, challenging them to address areas where they are failing or not meeting our performance expectations. We describe the actions we take in each section below.

In 2018 we began a review of why water company performance was remaining static, or in some cases had deteriorated, over recent years. This has led to our 'Improving Water Company Performance' programme which we will launch in 2019. The programme will review how we regulate water companies and will make improvements to our regulation. For example, we will:

- increase our inspection and audits of permits and management systems
- require more in-depth root cause analyses of permit breaches and pollution incidents by water companies
- optimise our use of regulatory tools to ensure water companies meet the highest standards and reduce the risk of pollution
- develop incentives that recognise sustained high performance

We have set out our performance expectations for 2020 to 2025 in the Water Industry Strategic Environmental Requirements (WISER). The programme will encourage the water companies to make improvements in their environmental performance to meet those expectations up to 2025.

The licences and permits we issue control the level of impact water companies are allowed to have on the environment. It is vital that they meet the conditions we set in their licences and permits and meet their legal obligations.

We inspect water companies' sites, check sample data and respond to pollution incidents from their assets. We also work with the companies throughout the year to help them improve their performance. For example, auditing their monitoring data and working together on catchment management initiatives. Our role is both to regulate water companies, which we seek to do firmly and fairly, and to work in partnership with them on areas of mutual interest. Where appropriate we carry out enforcement activities. For 2018, these are summarised in the [regulatory interventions](#) section of this report (see page 12).

# Environmental Performance Assessment

In 2011, we introduced the EPA as a tool for comparing performance between water companies and across years. The EPA forms part of a wider assessment of performance including current year-to-date data that we consider during annual performance meetings with the companies. The EPA metrics measure performance associated with:

- reducing pollution incidents and increasing company reporting of incidents
- complying with discharge permits for sewage treatment and water treatment plants
- delivering environmental improvement schemes
- providing secure supplies of water ('security of supply')

We have suspended the sludge disposal and use metric. Instead we have included a [description of compliance for sludge disposal and use](#) in this report (see page 9).

The EPA targets align with the 5 year investment cycles (AMP periods) for water companies to make improvements and meet our expectations. The current AMP period runs from April 2015 to March 2020. Targets were reviewed and tightened for this period. This encourages companies to meet their legal obligations and improve operational practices. As a result of the tightened targets, the EPA metrics are not directly comparable to the previous cycle. The metrics are absolute rather than relative therefore all companies can achieve leading performance by 2020 or before.

[EPA results for 2018](#) are shown in Table 1 (see page 6). [Previous EPA results](#) are shown in Annex 1 (see page 16).

## Performance expectations 2015 to 2020

In 2013 we set out our expectations to the water companies in a number of areas, including their operational performance. The [full list of expectations](#) is in Annex 2 (see page 17). Below are our expectations of companies that are directly relevant to the EPA. We expect:

- a plan in place to achieve 100% compliance for all licences and permits
- a reduction in category 1 and 2 pollution incidents, trending towards zero by 2020
- a trend to minimise all pollution incidents (category 1 to 3) by 2020 with at least a third reduction compared to 2012
- high levels of self-reporting of pollution incidents with at least 75% of incidents self-reported by 2020
- that management of sewage sludge treatment and re-use should not cause pollution and must follow the Sludge (Use in Agriculture) Regulations and the Code of Practice for Managing Sewage Sludge, Slurry and Silage or Environmental Permitting Regulations
- environmental improvement schemes to be planned well and delivered as agreed (for example, AMP and WRMPs)
- security of supply outcomes to be achieved as defined in WRMPs

The majority of water companies have translated our expectations into company performance commitments and associated Outcome Delivery Incentives (ODIs) for their 2015 to 2020 business plans. In 2017 we set out our performance expectations for 2020 to 2025 (WISER). This has helped companies plan for the next AMP (2020 to 2025) by providing a steer on the environment, resilience and flood risk.

**Table 1: Water and sewerage companies – Environmental Performance Assessment (EPA) 2018**

Units	Indicators												Performance Star Rating
	Pollution Incidents (sewerage)		Serious Pollution Incidents (sewerage)		Discharge Permit Compliance (STWs & WTWs)		Self Reporting of Pollution Incidents		AMP National Environment Programme Delivery		Security of Supply Index (SoSI)		
	Category 1-3 incidents per 10,000 km of sewer		Category 1-2 incidents per 10,000 km of sewer		%		%		% of planned delivered		Above or below target		
Red, Amber, Green, thresholds	≥50 red		≥1.5 red		≤97 red		≤55 red		≤97 red		Above SoSI target (green)		
	>25 amber		>0.5 amber		<99 amber		<75 amber		>97 amber		With concerns (amber)		
	≤25 green		≤0.5 green		≥ 99 green		≥75 green		≥99 green		Below SoSI target (red)		
Water Company													
Anglian Water	25	↑↑	0.8	↑	98.2	↓	62	↓	100	↔	100	↔	***
Northumbrian Water	12	↑	0.3	↑↑	99.4	↑↑↑	84	↑	100	↔	100	↔	****
Severn Trent Water <sup>1</sup>	31	↓	0.6	↓↓	98.4	↓↓	79	↓	100	↔	100	↔	***
Southern Water	39	↓	1.8	↓↓	99.1	↑↑	83	↑↑	100	↔	98	↓↓↓	**
South West Water	98	↑	1.2	↑↑	98.7	↑	77	↑↑	100	↔	100	↔	**
Thames Water	27	↑	0.8	↑	99.0	↓	76	↑↑	100	↔	98	↑	***
United Utilities	24	↓	0.1	↔	98.7	↓	79	↓	98.6	↓↓	100	↔	***
Wessex Water	24	↓	1.2	↓	100	↑	74	↓↓	100	↔	100	↔	***
Yorkshire Water	44	↓	2.3	↓↓	97.5	↓	73	↓↓	100	↔	100	↔	**
<b>Sector</b>	<b>31</b>	<b>↔</b>	<b>0.9</b>	<b>↓</b>	<b>98.6</b>	<b>↔</b>	<b>76</b>	<b>↔</b>	<b>99.8</b>	<b>↓↓</b>	<b>99.6</b>	<b>↓</b>	

**Key - Status for Performance**

	Performance better than target
	Performance close to or slightly below the target
	Performance significantly below target

**Key – Performance star rating**

****	Industry Leading Company
***	Good Company
**	Company Requires Improvement
*	Poor Performing Company

**Key – Performance star rating**

4 Star - 5 or more green metrics and no red metrics
3 Star - 1 or more green metrics and no red metrics
2 Star - 1 or 2 red metrics and/or zero green metrics
1 Star - More than 2 red metrics

**Key – Performance comparison to last year**

↑	Improving within class	↓	Deteriorating within class
↑↑	Improved a class	↓↓	Deteriorated a class
↑↑↑	Improved by 2 classes, e.g. from red to green	↓↓↓	Deteriorated 2 classes, e.g. from green to red
↔	About the same		

<sup>1</sup>Severn Trent Water data is for England only (2018 onwards)

Note: These results are drawn, in part, from information submitted by the companies and may change as a result of subsequent audits and checking

# Pollution incident performance

We expect companies to prevent serious pollution incidents. We understand that water companies manage complex and sometimes ageing assets, and work with them to minimise damage when incidents occur. Incidents lead to the release of harmful substances into air, land or water, and some can cause significant harm to the environment. We categorise all incidents based on their impact. A category 1 incident has a serious, extensive or persistent impact on the environment, people or property and may, for example, result in a large number of fish deaths. Category 2 incidents have a lesser, yet significant impact. Category 3 incidents have a minor or minimal impact on the environment, people or property with only a limited or localised effect on water quality.

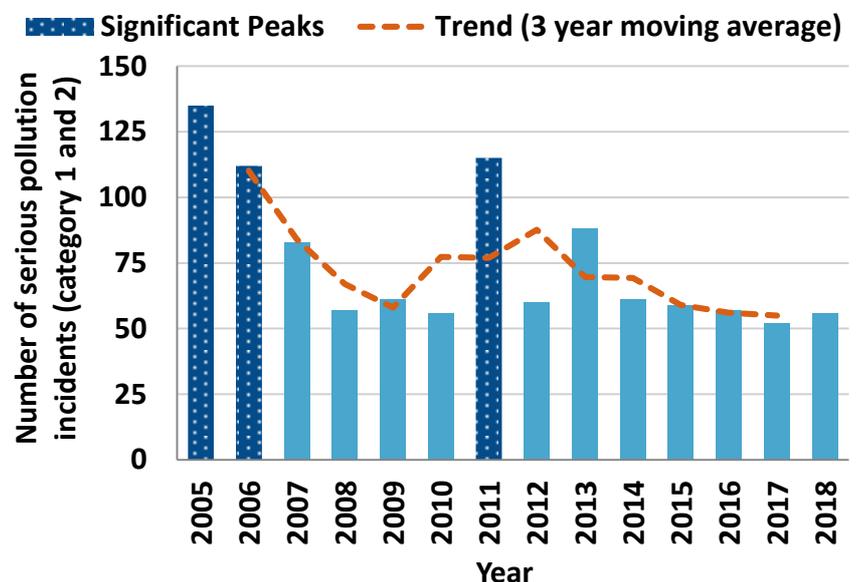
## Serious pollution incidents

In 2018, the number of serious pollution incidents (categories 1 and 2) increased slightly to 56, compared to 52 in 2017 (Figure 1). This is the first increase since the poor performance in 2013 when the sector was the cause of 88 serious pollution incidents. This increase is disappointing and contrary to our expectations to trend to zero by 2020. Four of the companies (Severn Trent, Southern Water, Wessex Water and Yorkshire Water) all had increased numbers of serious pollution incidents compared to 2017.

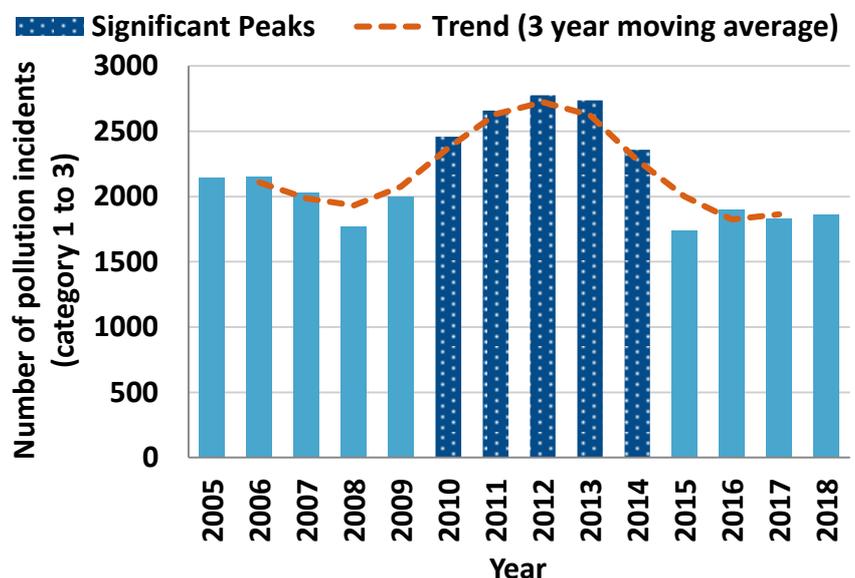
In 2018, there was a total of 48 serious pollution incidents from the companies' sewerage networks and sewage treatment works (STW). Only 2 companies achieved performance better than targeted (green) for this EPA metric. This poor performance by the sector is unacceptable.

In 2018 there were 8 serious incidents from the clean water system. This was an improvement on 2017 when we saw a large, unexpected rise to 14 compared to 4 in 2016.

**Figure 1. Numbers of serious pollution incidents and trend for the 9 water companies 2005 to 2018**



**Figure 2. Numbers of category 1 to 3 pollution incidents and trend for the 9 water companies 2005 to 2018**



The number of the most serious incidents (category 1) fell slightly to 9 in 2018. This compares to 11 in 2017 and 9 in 2016, after the lowest ever levels of 4 per year in 2014 and 2015. All 9 in 2018 were from waste water assets.

In 2018, United Utilities reported the best performance across the industry on serious pollution incidents. This high performance shows it is possible for the industry to have a consistent and faster trend to zero. There is a clear need for the industry to continue to invest in reducing pollution incidents.

## Total pollution incidents

The total number of water quality pollution incidents (categories 1, 2 and 3) in 2018 was 1,863. This was a slight increase on 1,827 in 2017 (Figure 2). This means the industry did not quite achieve our performance expectation of at least a third reduction compared to 2012 (32.9%). South West Water continues to perform poorly for total pollution incidents. Northumbrian Water reported the lowest number of total pollution incidents in 2018 (37).

However, sewerage pollution incidents fell slightly from 1627 to 1623, with 4 companies achieving green for this EPA metric. If all companies achieved green status, then the water companies would achieve at least a 23% reduction (373 fewer) total sewerage pollution incidents.

There needs to be a significant improvement by the sector to meet our expectations for both serious and total pollution incidents.

We require companies to have effective pollution reduction plans that are sufficiently ambitious and achieve timely results. We want them to share best practice, work in partnership on initiatives and explore the use of new technologies to complement existing operational practices. The use of robust self-reporting data is also fundamental to informing plans to reduce incidents further.

We have set stricter targets for 2020 to 2025 in WISER to influence company business planning and focus the companies on improving.

## Self-reporting of incidents

Without a rapid response, relatively minor events can escalate and the opportunity for mitigation measures is often lost. This is why we seek high levels of self-reporting of incidents, where water companies tell us about their incidents before a member of the public or third party does.

In 2018 we saw 76% self-reporting of pollution incidents by the sector. This equalled the highest level achieved the year before. However, 5 of the companies were worse in 2018 than 2017. The variation between companies in this measure also increased to 22% with the best at 84% and the worst at 62%.

## Compliance with licences and permits

All water companies have licences and permits with conditions to control the level of impact they are allowed to have on the environment. These vary in complexity depending on the activities concerned and the nature and sensitivity of the local environment. We set these conditions carefully and so expect companies to be 100% compliant with them. The EPA compliance metric covers water treatment works (WTW) and STW.

Overall compliance with STW and WTW permits in 2018 was 98.6%, the same as in 2017. However individual company performance varied. Out of 3,817 works, 52 failed to comply with numeric permit conditions in 2018 (Figure 3). Only 4 companies achieved

performance better than targeted (green) for this EPA metric. Wessex Water is the only company to record 100% compliance with their permits and operate at the level we expect.

Forty of the failing sites were non-compliant STW, the same number as 2017. Six companies achieved the same or better compliance with numeric discharge permits at STW in 2018 compared with 2017.

Overall, WTW compliance improved in 2018 compared to previous years to 12 failing permits (compared to 13 in 2017 and 20 in 2016). Improvement is needed as sector compliance remains only 95.4% for WTW compared to 98.9% compliance at STW. As with waste water from STW, adequate treatment of dirty water from WTW is essential to ensure the receiving environment is not polluted. We expect companies to have a plan in place to achieve 100% compliance with all licences and permits.

Water companies achieved 95.6% compliance with water abstraction and impoundment licences in 2018. Most licence breaches caused no risk or minor harm to the environment. We responded by issuing written warnings or advice and guidance letters to the licence holders.

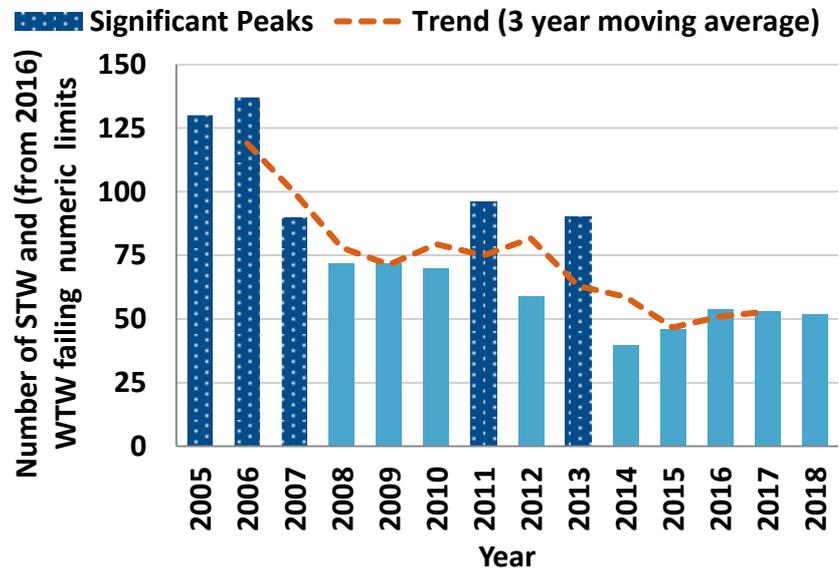
Water companies operate a variety of waste facilities ranging from biowaste treatment, landfill, biogas combustion, sludge incineration and transfer stations. They hold 275 permits for waste management operations and a further 332 registered exemptions for waste treatment. For permitted activities we assessed compliance over the year and allocated a compliance band of A (good) to F (poor). In 2018, 2 permitted operations were assessed as band E and 4 were band D. This is a significant deterioration since 2017 when there were 3 band D operations. In all instances the operators have been required to take remedial actions to address the root cause of their non-compliances. There was one serious (category 2) incident at a site managed by Northumbrian Water involving odour. A further 12 minor impact (category 3) incidents were reported, mostly for odour, release of biogas or failure to contain sewage sludge.

## Sludge disposal and use

All water companies produce sludge as part of their sewage treatment processes. This sludge can often be put to good use, for example as a soil conditioner or fertiliser on agricultural land. Its storage and spreading, however, requires careful control as misuse can result in damage to the environment.

For 2018 we have undertaken an in-depth assessment of water company sewage sludge disposal and use. We have reviewed data to check compliance with the Sludge Use in Agriculture Regulations and the Environmental Permitting Regulations. We found

**Figure 3. Number of Sewage Treatment Works (and from 2016 including Water Treatment Works) failing numeric limits and trend for the 9 water companies 2005 to 2018**



previously unknown, or not fully understood practices that were difficult to assess for compliance against our sludge disposal and use metric. Therefore we have suspended the metric from the EPA whilst we investigate and review our compliance assessment approach. This will enable us to clearly describe acceptable practice and report compliance more clearly. It will also allow good practice to continue and enable innovation to achieve better environmental outcomes. We will investigate any breaches of the regulations in 2018. Where necessary, we will take action in accordance with our enforcement and sanctions policy.

## Progress with environmental improvement schemes

In 2014, the economic regulator Ofwat set the prices that water companies could charge their customers between 2015 and 2020. As part of that price review we developed the National Environment Programme (NEP).

The NEP sets out the environmental improvements the water companies need to make over that period, to make sure they meet European and national environmental standards related to water. The NEP, within each company's business plan, includes schemes, investigations and monitoring to improve and protect the environment.

Bathing water quality has improved significantly over the past 3 decades as a direct result of investment by water companies and work by other stakeholders. The majority of our bathing waters are very high quality and further investment is planned. Similarly, investment by water companies has improved the quality of thousands of kilometres of river. This has benefitted people and wildlife and contributed to economic growth.

This EPA reports on the cumulative 4 year progress companies have made against their plans up to the end of March 2019. It includes schemes associated with water resources, fisheries, biodiversity and geomorphology. For the year to the end of March 2019, all but one company reported 100% delivery of planned schemes. United Utilities failed to deliver 2 schemes to the planned deadline.

## Security of water supply

The EPA includes the Security of Supply Index (SoSI). The metric compares forecast water available for supply with actual customer demand. Expected performance is for companies to have a balance or a small surplus of water available when compared with demand (scoring a SoSI of 100).

For the year to end of March 2019, 7 of the 9 companies reported a score of 100 and green status in the EPA. Southern Water and Thames Water both reported a score of 98. Southern Water has red status due to concerns with achieving the target next year.

## Water resources planning

### Restoring sustainable abstraction

Since the restoring sustainable abstraction (RSA) programme began in 2008, we have made 92 water company licence changes. We have 62 left to change by March 2020 when the RSA programme closes. In 2018 we completed actions to change 4 water and sewerage company licences which will save approximately 5 million cubic metres of water from being abstracted each year.

At the end of 2018 we had:

- returned over 13 million cubic metres of water per year to the environment
- reduced the risks posed by abstraction for a further 45 million cubic metres of water per year by removing unused quantities from abstraction licences

## Water resource management plans

All water companies report annually on progress with implementing their [water resource management plans](#) (WRMP). We review these and report our findings to Defra.

For the period April 2017 to March 2018 household metering was at 53%, a slight increase from the previous year. We understand that some companies have found achieving their planned levels of metering more challenging than they expected. Southern Water, Thames Water and Wessex Water are more than 6% below their forecast total planned metering level. We expect water companies to achieve a greater level of metering. We expect them to explain what they will do if lower than planned metering is achieved and how this will impact on the supply-demand balance. The main reasons given for the shortfall are fewer than expected new property builds and lower than expected optional metering uptake.

Average household per capita consumption (PCC) increased slightly to just under 139 litres per head per day for the period April 2017 to March 2018. Some companies experienced hot and dry weather spells during the year. Anglian Water, Severn Trent Water, South West Water and United Utilities all reported significantly higher than forecast PCC. In contrast, Southern Water reported PCC lower than forecast. We would like to see continued improvements in the efficient use of water in England. We are working with government and the water industry to set an ambitious personal consumption target that will help implement the government's [25 year environment plan](#).

For the period April 2017 to March 2018 total leakage increased from 2,400 megalitres to around 2,450 megalitres per day. Almost all companies reported higher than forecast leakage. We expect water companies to take action to bring leakage under control. Ofwat has set a target for all companies to meet a 15% reduction in leakage by the end of March 2025. We think companies should explore innovative approaches to reduce leakage. This should be in line with the recent National Infrastructure Commission's report on England's Water Infrastructure Needs and Water UK's commitment to reduce leakage by 50% by 2050.

Southern Water and Thames Water both had significant issues implementing their WRMPs. This was for reasons including both having higher than forecast outage and leakage. Delays in metering and the impact of population increase have affected Thames Water. The impact of cost-benefit options appraisals and licence variations have caused issues for Southern Water.

## Flood and coastal risk management

Between April 2018 and March 2019, water companies invested:

- £187 million to reduce the risk of sewer flooding to properties
- £288 million to maintain the public sewer system to prevent blockages and flooding
- £4.7 million in property-level protection and mitigation measures to reduce the likelihood of customers' homes experiencing sewer flooding

Under the Flood and Water Management Act 2010, water companies are risk management authorities (RMAs). This means they have to act in a manner consistent with the National Flood and Coastal Erosion Risk Management (FCERM) Strategy for England and have a duty to cooperate with other RMAs.

In 2018 to 2019 water companies have worked with others to:

- support flood risk assessments and produce integrated drainage models to better understand the risk of flooding
- provide co-funded partnership solutions to reduce flood risk to communities and enhance the environment
- enhance the resilience of their networks and services to flooding
- enable growth that manages flooding, pollution and improves water quality
- raise customer awareness of their impact of sewer misuse
- exercise incident management and winter preparedness plans
- start work on their [drainage and wastewater management plans \(DWMPs\)](#)
- develop their [price review 2019](#) plans and future investment needs

An example that covers many of the above themes, is the Northumbrian Integrated Drainage Partnership. This is providing integrated schemes to a value of £11.5 million, with £3.76 million invested between April 2018 and March 2019. These schemes will:

- reduce the flood risk to almost 700 properties
- improve water quality by reducing combined sewer overflow discharges and volumes
- provide new water dependent habitat

Companies continue to work with the wider water sector to develop tools and approaches that will improve their resilience to flooding and strengthen their environmental performance.

Water UK's 21st Century Drainage Programme published a framework in September 2018 for the long term planning of drainage and wastewater services: DWMPs. In 2019, water companies will be carrying out risk assessments and options development work. Some companies have developed information technology solutions to improve data sharing, assist joint working and share information with the public on their plans.

A number of companies are working with partners on strategies and innovative adaptive approaches to make cities and catchments resilient to a changing climate. Good practice includes, Yorkshire Water's work with the [Living with Water](#) partnership and Thames Water's adaptive planning for [London 2100](#).

## Regulatory interventions

Enforcement and sanctions should help deter operators from committing further offences in the future. As a modern regulator, we also use 'earned recognition' to encourage and recognise better performance. This involves approaches that promote innovation for those companies who consistently perform well and partnership working to provide more for the environment and communities.

Our [Environment Agency enforcement and sanctions policy](#) sets out how we conduct enforcement activity in relation to environmental offences and breaches. The formal options we have include a written warning, enforcement notices, issuing a formal caution, prosecution or considering a civil sanction. Since 2011, we have been able to accept or

reject an Enforcement Undertaking (EU) offer, a civil sanction. This is a voluntary agreement offered by those who have committed an offence that becomes legally binding once accepted.

It takes time to gather data and investigate events, so enforcement activity can conclude some months or years after the original offence occurred. As a result, enforcement activity, in any one calendar year, is not necessarily directly related to offences in that year. The numbers of prosecutions vary per year due to many factors.

In 2018 there were 5 prosecutions against water companies with total fines of £2,227,000 (Table 2), ranging from £15,000 to £2 million. In recent years, fines have increased to reflect the size of the organisations as well as the offence category. But sentencing is a matter for the courts who fine on a case-by-case basis, and for this reason fines vary.

**Table 2. Enforcement and sanctions for the 9 water companies 2015 to 2018**

Year	Number of prosecution cases	Value of prosecution fines	Number of cases receiving formal caution	Number of enforcement undertakings	Value of enforcement undertakings
2015	9	£2,494,500	22	0	£0
2016	10	£6,560,000	12	4	£610,000
2017	16	£21,589,334	8	15	£1,435,900
2018	5	£2,227,000	1	15	£3,432,150

In 2018 only one formal caution was accepted, a big reduction on previous years (Table 2). This contrasts with a growth in EUs in recent years as more companies have become aware of them. In 2018 we accepted 15 EU offers totalling £3,432,150. Financial contributions are made on a case-by-case basis. The amounts offered and accepted to fund environmental improvements vary. In 2018 accepted amounts ranged from £35,000 to £975,000. An EU offer also requires that steps are taken to put right what went wrong and to prevent it happening again.

Enforcement and prosecution, and the use of civil sanctions, help to deter companies from committing further offences.

As a modern regulator, we use 'earned recognition' to encourage and recognise better performance for those companies who comply with regulation and consistently perform well. We work with these companies to promote partnership and innovation. We also use influence, advice and other complementary approaches wherever possible to achieve more environmental outcomes whilst reducing the regulatory burden on water companies. For example, we agreed that Anglian Water could trial a new initiative at one of their STW to improve discharge quality.

## Anglian Water: Ingoldisthorpe Wetland

As part of the current investment period (AMP6), Anglian Water was required to improve the quality of the discharge from Ingoldisthorpe STW in Norfolk.

Having considered and discarded more traditional energy intensive alternatives, Anglian Water proposed that a natural capital approach would be much more suitable at this location. We agreed for Anglian Water to trial an 'integrated constructed wetland' solution. Treated final effluent from the STW is passed through a newly constructed 1.5 hectare wetland before it is discharged to the river Ingol. A wetland acts as a natural filter that improves the quality of the discharge and supports natural habitats and biodiversity.



Innovation occurred through the solutions progression. Anglian Water worked with the Norfolk Rivers Trust who planned and excavated the wetland and are contracted to maintain it for the next 25 years. The partnership has also developed an integrated monitoring scheme.

This is providing evidence on the efficacy of wetlands as a treatment system, and quantifying the additional natural capital benefits to the local environment and for local communities. We issued a bespoke, innovative permit for the discharge to make sure the scheme is appropriately regulated.

More information on the river Ingol wetland is available:

- [River Ingol Wetland brochure](#)
- [Norfolk Rivers Trust - Ingoldisthorpe](#)

Following the success of this scheme, [Anglian Water are planning to invest more in wetlands in the future](#). This has encouraged other water companies to consider the same approach.

## Conclusions and forward look

This year, we are disappointed by the performance of several companies compared to 2017. This is contrary to our expectations and to performance improvements made in preceding years. In particular, we are concerned that the number of 2 star companies (requiring improvement) has increased. Southern Water, South West Water and Yorkshire Water all demonstrated this unacceptable level of performance. Only Northumbrian Water achieved the highest level of performance (industry leading) which we expect from all companies.

We are setting up the 'Improving Water Company Performance' programme which will adjust our regulation to help water companies drive the necessary improvements. This will result in closer regulation and use of the most effective enforcement and sanctions outcomes for poorer performing companies. We will continue to discuss with Ofwat how

we can work closely to use financial penalties and incentives associated with the environmental performance of the companies. We will seek to recognise and promote good performance, but there will be consequences where poor performing companies do not achieve expectations.

As we move into the final year of the current AMP investment period and the current round of EPA reporting, we will continue to use the metrics to highlight where improvement is needed. We want companies to focus on the targets we have set, not only where performance has deteriorated but where it has begun to plateau. We expect companies to respond positively and increase their ambition to meet these expectations. This will ensure that all companies comply with the law and deliver the right environmental outcomes.

# Annex 1: History of EPA results

Water and sewerage companies – Environmental Performance Assessment (EPA) 2017

	Pollution Incidents (sewerage)	Serious pollution incidents (sewerage)	Discharge permit compliance	Satisfactory sludge disposal	Self-reporting of pollution incidents	AMP National Environment Programme delivery	Security of Supply Index (SoSI)	Overall performance rating
Anglian Water								***
Northumbrian Water								**
Severn Trent Water								****
Southern Water								***
South West Water								**
Thames Water								***
United Utilities								****
Wessex Water								****
Yorkshire Water								***

Water and sewerage companies – Environmental Performance Assessment (EPA) 2016

	Pollution Incidents (sewerage)	Serious pollution incidents (sewerage)	Discharge permit compliance	Satisfactory sludge disposal	Self-reporting of pollution incidents	AMP National Environment Programme delivery	Security of Supply Index (SoSI)	Overall performance rating
Anglian Water								***
Northumbrian Water								**
Severn Trent Water								***
Southern Water								***
South West Water								**
Thames Water								**
United Utilities								****
Wessex Water								****
Yorkshire Water								***

Water and sewerage companies – Environmental Performance Assessment (EPA) 2015

	Pollution Incidents (sewerage)	Serious pollution incidents (sewerage)	Discharge permit compliance	Satisfactory sludge disposal	Self-reporting of pollution incidents	AMP National Environment Programme delivery	Overall performance rating
Anglian Water							***
Northumbrian Water							***
Severn Trent Water							****
Southern Water							***
South West Water							*
Thames Water							***
United Utilities							****
Wessex Water							****
Yorkshire Water							***

Water and sewerage companies – Environmental Performance Assessment (EPA) 2014

	Pollution Incidents (sewerage)	Serious pollution incidents (sewerage)	Discharge permit compliance	Satisfactory sludge disposal	Self-reporting of pollution incidents	AMP National Environment Programme delivery	Overall performance rating
Anglian Water							***
Northumbrian Water							***
Severn Trent Water							***
Southern Water							**
South West Water							**
Thames Water							***
United Utilities							***
Wessex Water							***
Yorkshire Water							****

Water and sewerage companies – Environmental Performance Assessment (EPA) 2013

	Pollution Incidents (sewerage)	Serious pollution incidents (sewerage)	Discharge permit compliance	Satisfactory sludge disposal	Self-reporting of pollution incidents	AMP National Environment Programme delivery	Overall performance rating
Anglian Water							***
Northumbrian Water							***
Severn Trent Water							****
Southern Water							*
South West Water							*
Thames Water							**
United Utilities							***
Wessex Water							***
Yorkshire Water							***

# Annex 2: Expectations for operational performance 2015 to 2020

In 2013, following Ofwat's publication of its final methodology for developing business plans, we wrote to all water companies setting out our expectations on a range of areas. This annex repeats the expectations around operational performance.

## **Protecting the environment**

1. A plan in place to achieve 100% compliance for all licences and permits.
2. Look up table permits for water quality discharges should be 100% compliant.
3. Compliance with flow requirements, including MCERTS certification, at Waste Water (sewage) Treatment Works.
4. Reducing serious (category 1 and 2) pollution incidents, trending towards zero by 2020. There should be at least a 50% reduction compared to numbers of serious incidents recorded in 2012.
5. Trend to minimise all pollution incidents (category 1 to 3) by 2020. There should be at least a third reduction compared to numbers of incidents recorded in 2012.
6. Restored sustainable abstractions outcomes are achieved.
7. Management of sewage sludge treatment and re-use should not cause pollution and must follow the Sludge (Use in Agriculture) Regulations and the Code of Practice for Managing Sewage Sludge, Slurry and Silage or Environmental Permitting Regulations (EPR).
8. High levels of self-reporting of pollution incidents. At least 75% of incidents self-reported by 2020.
9. Environmental improvement schemes (eg Asset Management Plan, Water Resource Management Plans) are planned well and delivered as planned.
10. Effective management of transferred private sewers and pumping stations with low levels of pollution incidents.
11. No D, E, or F rated sites under OPRA for waste related sewerage service Environmental Permitting Regulations permits.
12. Sample and provide data in relation to self-monitoring under Operator Self-Monitoring (OSM) and Urban Waste Water Treatment Directive (UWWTD).
13. Act in a manner consistent with the National Flood and Coastal Erosion Risk (FCERM) Strategy for England, when carrying out FCERM functions.
14. By 2020, the vast majority of storm discharges should have event duration monitoring. The discharges that require monitoring will be determined by a risk based methodology that is currently being developed. The required monitoring will be proportionate depending on the sensitivity of the receiving water and frequency of operation.

## **Sustainable management of drainage and surface water**

15. Mapping of assets and application of the Drainage Strategy Framework (priority catchments by 2020) combined with comprehensive, monitoring, and management of key assets by 2020.
16. A comprehensive maintenance programme for networks and sewage treatment works.

17. A targeted programme of capital maintenance.
18. Reduced sewer flooding of properties, trending to zero.
19. Work in partnership with lead local flood authorities to deliver value for money sustainable solutions that reduce flood risk.

**Security of supply**

20. Delivery of Water Resources Management Plans (WRMPs).
21. Achieve security of supply outcomes as defined in WRMPs.
22. Achieve at least the sustainable economic level of leakage.
23. Universal metering in water stressed areas where your WRMP appraisal supports that.
24. All outstanding actions on drought plans are resolved and completed.

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