

Water and sewerage companies' performance

2014 summary

July 2015

At the end of each year we look back and report on the environmental performance of the 9 water and sewerage companies operating wholly or mainly in England. This report summarises our findings for 2014.

Introduction

The Environment Agency is the government's delivery body charged with environmental regulation of the water industry in England. We work closely with – and challenge – water companies to minimise the impact that their assets and activities have on the environment. We also work closely with other regulators of the water industry to ensure an integrated approach.

There are 9 water and sewerage companies that mainly operate in England providing clean (drinking) water and waste water (sewerage) services. There are also 11 water only companies providing only drinking water and 5 other companies who offer such services to a small number of customers in specific locations. This report is just about the 9 water and sewerage companies in England. Throughout this report we use the term 'water companies' to describe them.

Water companies provide an essential public service that underpins the social and economic health of the nation. However individually and collectively they do affect the ecological health of rivers as well as how water can be used downstream by others.

By far the greatest potential environmental impact from the water companies' activities is on the water environment. Water companies have abstraction licences which allow them to take water from the environment, discharge permits which allow them to put treated waste water back into the environment, and permits or other regulatory controls which allow them to dispose of or recycle sludge or other waste. They also have duties to manage their impact on flood risk.

Abstractions reduce river flows and groundwater levels, whilst discharges affect river water quality because they contain metals and other harmful substances, as well as normal sanitary components. 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 deliver their legal obligations.

Our regulation of water companies

Each year 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 improve their performance in a variety of ways, from auditing their monitoring data to working collaboratively with them on catchment management. Our role is both to regulate water companies, which we do firmly and fairly, and to work in partnership with them on areas of mutual interest.

Environmental Performance Assessment

In 2011 we introduced the Environmental Performance Assessment (EPA) as a tool for comparing performance between water companies and across years. In it we use 6 indicators which provide a meaningful and comparable overview of performance across the 9 water companies.

These indicators measure performance associated with:

- reducing pollution incidents and company reporting of incidents
- complying with discharge permits

- managing and disposing of sewage sludge
- delivering environmental improvement schemes

The EPA indicators and their associated metrics were set for the duration of the Asset Management Period (AMP) which ran from April 2010 to March 2015, and are absolute rather than relative. All companies should therefore be able to achieve good performance against these indicators by 2015. New thresholds will be set for the AMP period 2015 to 2020.

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. This report summarises our findings for 2014 against the backdrop of the previous 3 years for the EPA and longer term trends.

Performance expectations

In 2013 we wrote to all companies setting out our expectations on a number of areas including operational performance. We give the full list of expectations at the end of this report. Those that are directly relevant to the EPA are to:

- reduce category 1 and 2 pollution incidents, trending towards zero by 2020
- trend to minimise all pollution incidents (category 1 to 3) by 2020 with at least a third reduction compared to 2012 figures
- achieve high levels of self-reporting of pollution incidents with at least 75% of incidents self-reported by 2020
- ensure a plan is in place to achieve 100% compliance for all licences and permits
- manage sewage sludge treatment and re-use in a way that does not cause pollution and follows the Sludge (Use in Agriculture) Regulations and the Code of Practice for Managing Sewage Sludge, Slurry and Silage or Environmental Permitting Regulations (EPR).
- plan environmental improvement schemes (eg Asset Management Plan, Water Resource Management Plans) well and deliver them as planned

In developing their business plans for the period 2015 to 2020 the majority of the water companies have translated these expectations into Performance Commitments and associated Outcome Delivery Incentives (see [Ofwat website for Price Review 2014](#)). We will monitor company performance closely and press companies to meet statutory obligations.

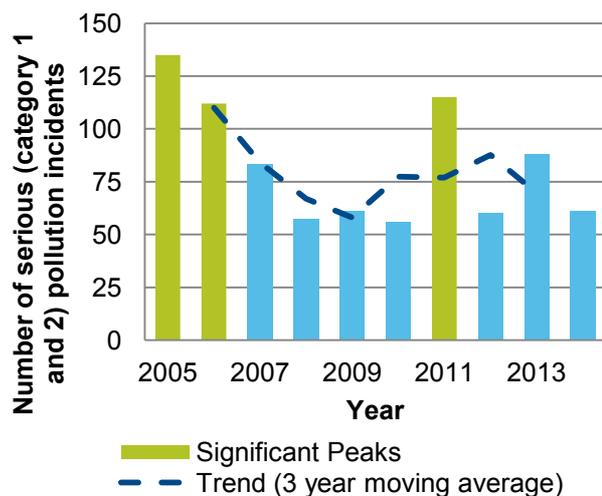
Pollution incident performance

Pollution incidents are usually caused by loss of control. They lead to the release of harmful substances into air, land or water and can cause significant harm to the environment. We categorise such 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 and category 3 incidents have a minor or minimal impact on the environment, people and/or property with only a limited or localised effect on water quality. We work with water companies to minimise the damage that pollution incidents cause. However we expect them to aim to prevent them from occurring at all.

Serious pollution incidents

In 2014 we saw a welcome reduction in the number of serious pollution incidents (categories 1 and 2) to 61 following the disappointing performance in 2013 when the sector was the cause of 88 serious pollution incidents. Yet 61 serious incidents is similar to levels seen in 2008 to 2010 and our expectation is for further reductions.

Numbers of serious pollution incidents and trend for the 9 water companies for the period 2005 to 2014



In 2014 there were only 4 category 1 serious pollution incidents, the lowest ever number recorded for the sector.

Between 2005 and 2010 the numbers of serious incidents across the sector fell markedly. In 2011 we saw a sharp rise which appeared to be brought back under control in 2012. However numbers increased again for most companies in the sector in 2013 to 88, an almost 50% increase compared to 2012. The rise in 2013 marked the continuation of an increasing trend since 2010. This was a move away from our expectation of a trend toward zero by 2020.

Following the increase in serious incidents in 2013 we requested each company to produce an action plan to understand the increase and reverse the rise.

There was no one root cause which has been identified for the increase in 2013, with causes varying between companies. Key factors which contributed were

inadequate monitoring and management and shortcomings in risk assessment, operational practice and staff culture.

Companies' action plans include projects to assess the risk each asset poses to the environment enabling prioritisation of maintenance and upgrades. On staff culture, some companies have told us they are training their staff and facilitating more proactive approaches to finding potential problems early and achieving solutions. This includes transparent reporting and mitigation of potential incidents to ensure action is taken before an incident occurs. It also includes empowering staff to find solutions and making sure any lessons learnt are implemented right across the company. We continue to press companies to have sufficiently ambitious, effective plans in place and achieve timely results.

Total pollution incidents

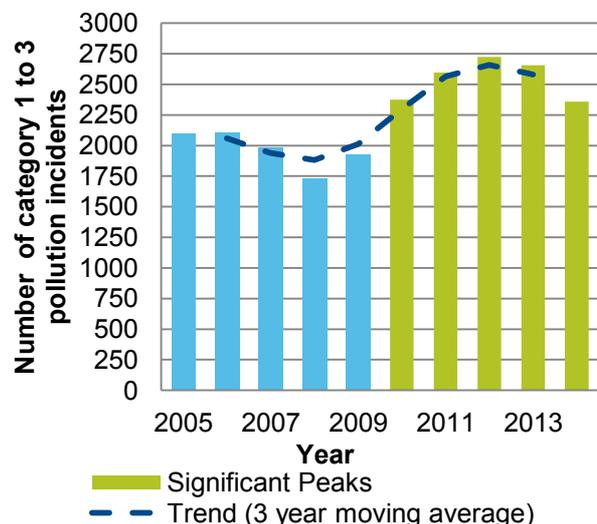
The total number of water quality pollution incidents from sewerage and water service assets (categories 1, 2 and 3) rose steadily between 2008 and 2012. Some of this is due to better reporting by the companies. Numbers for 2014, at 2,358, have reduced compared to 2013 although there is some individual company variation. The sector appears to have turned the corner from the record high in 2012. However category 3 incidents remain high compared to the numbers observed before 2010 and further improvements are needed by the sector. We want to see a further reduction in incidents from all companies in 2015.

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 2014, as over the last few years, the average self-reporting remains static at 66% for the sector. The range for individual companies is variable (42% to 77%) and we have told all companies that we expect their self-reporting to reach 75% by 2020. Clearly some have more to do than others to achieve this.

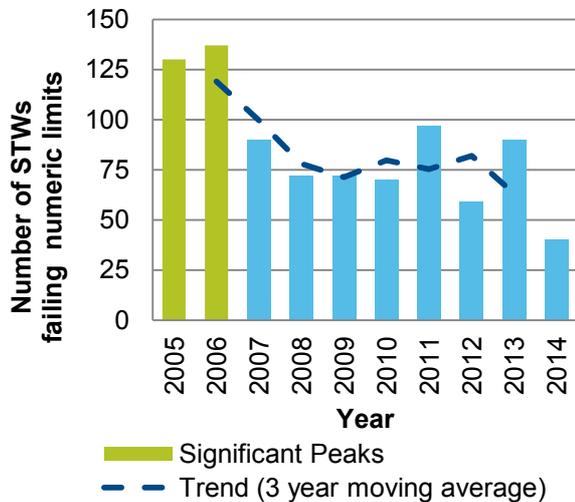
Numbers of category 1 to 3 pollution incidents and trend for the 9 water companies for the period 2005 to 2014



Compliance with licences and permits

All water companies have licences and permits which control the level of impact they are allowed to have on the environment.

Number of sewage treatment works failing numeric limits and trend for the 9 water companies for the period 2005 to 2014



These vary in complexity depending on the activities concerned and the nature of the environment they affect. We set these conditions carefully and expect companies to be 100% compliant with them.

Encouragingly, compliance with numeric waste water discharge permits was 98.9% in 2014. This is the highest ever numeric permit compliance achieved by the sector.

40 sewage treatment works out of the 3,493 assessed failed to comply with their numeric permit conditions in 2014. This compares with the 97.4% achieved in 2013 when 90 sewage treatment works failed to comply with their numeric permit conditions.

We were pleased to see that all the companies except one achieved better compliance with numeric discharge permits in 2014 compared with 2013.

Compliance with other licences and permits in 2014 was generally high. Only 10 contraventions of abstraction or impoundment licences were recorded in 2014, out of a total of 1,287 licences held by the water companies. These 10 licence contraventions were at sites owned by 3 of the water companies and all were of a minor nature, causing little or no environmental impact.

Water companies also have permits for waste activities. The majority of these are for biowaste activities – managing and treating sewage sludge. None of the 149 water company biowaste sites gave us cause for concern during the year.

Sludge disposal

All water companies produce sludge as part of their sewage treatment processes. This sludge needs to be disposed of and can often be put to good use – for example as a fertilizer for agricultural land. However its storage and spreading requires careful control as misuse can result in environmental damage. We work with water companies to ensure they – and their contractors – understand the rules and regulations around sludge.

All of the companies self-reported full compliance against satisfactory sludge disposal criteria. Companies determine their own definitions of satisfactory sludge disposal; as a minimum, we expect companies to adhere to the Safe Sludge Matrix and comply with any legal obligations.

Progress with environmental improvement schemes

In 2009 Ofwat, the economic regulator for the water industry, set the prices that water companies could charge their customers between 2010 and 2015. As part of that price review we developed a programme of environmental improvements (the National Environment Programme or NEP) that water companies needed to make over that period to ensure that they meet European and national environmental standards related to water. The NEP includes schemes and investigations to improve and protect both water quality and water resources. However the EPA reports only on the progress companies have made against their plans to deliver water quality schemes. In the future we intend to expand this reporting.

All but one of the water companies have delivered all of the NEP water quality schemes that they had planned to deliver by March 2015.

Overall environmental performance

In 2011 when we introduced the EPA and set the class boundaries for the remainder of the AMP period to March 2015, our aim was to provide companies with a pathway to high performance. Our ambition is that no company will have poor performance status (ie performance significantly below target) for any indicator by the end of the AMP period and that all have a goal of reaching 'industry leading' status. The existing thresholds will be used to report 2015 performance in the summer of 2016. New thresholds will apply for the 2016 performance year to be reported in 2017.

The EPA for 2014 is presented in table 1.

In 2011 the 9 water companies between them had poor performance for 9 components of the EPA. In 2012 this had dropped to 5 but rose again to 7 in 2013. We were pleased to see that in 2014 there were just 3 poor components associated with 2 companies.

The EPA for 2014 reflects an improved performance from 2013 and is the best result for the sector since the EPA was first introduced in 2011.

Key performance messages for the sector

This year's Environmental Performance Assessment has shown some welcome improvements when compared to previous years (see Annex 1). In particular the sector has achieved:

- a significant reduction in the number of serious pollution incidents from 88 in 2013 to 61 in 2014
- the lowest ever number of category 1, the most serious pollution incidents, with only 4 recorded in 2014
- the highest ever permit numeric compliance at 98.9%
- the best overall Environmental Performance Assessment since the EPA was introduced in 2011

However, although total pollution incidents were lower than in 2013 and the sector appears to have turned the corner from the record high in 2012, less serious category 3 incidents remain high compared to the numbers observed before 2010. Further improvements are needed by the sector.

Over the last few years the self reporting of pollution incidents has become static at about 66%. There is wide variability on performance between companies and we need to see further improvements from several companies.

Conclusions and forward look

The activities water companies undertake through their day-to-day responsibilities of providing clean drinking water and treating waste water have the potential to have a significant adverse impact on the environment. The Environment Agency issues and enforces permits and licences which aim to limit the impact of these activities through regulation.

The industry no longer has the level of adverse impact on the environment that it had in the past and we welcome this while recognising there is further work to do to meet the requirements of the Water Framework Directive. Water companies have made improvements in compliance with their licences and permits. We will be working with all companies throughout the year to satisfy ourselves that their plans to improve performance are working sufficiently quickly and that environmental protection remains a high priority for them.

Table 1: Water and sewerage companies – Environmental Performance Assessment (EPA) 2014

Units	Indicators						Overall Performance Rating * star rating
	Pollution Incidents (sewerage)	Serious Pollution incidents (sewerage)	Discharge Permit Compliance	Satisfactory Sludge Disposal	Self Reporting of Pollution Incidents	AMP National Environment Programme Delivery	
	Category 1-3 incidents per 10,000 km of sewer	Category 1-2 incidents per 10,000 km of sewer	%	%	%	% of planned delivered	
Red, Amber, Green, thresholds	≥130 red >50 amber ≤50 green	≥ 4 red >1.5 amber ≤1.5 green	≥ 99 green <99 amber ≤96 red	≤98 red >98 amber 100 green	≤37 red <68 amber ≥68 green	≤96 red >96 amber ≥99 green	
Water Company							
Anglian Water (ANH)	90 ↔	1.8 ↑	98.6 ↑	100 ↔	76 ↔	100 ↔	*** Self reporting remains high. Permit compliance and incident performance needs to improve.
Northumbrian Water (NES)	54 ↑	1.9 ↑	99.4 ↑↑	100 ↔	56 ↑	100 ↔	*** Improved permit compliance. Self reporting has improved with further improvement needed.
Severn Trent Water (SVT)	65 ↑	1.7 ↓↓	99.9 ↑	100 ↔	71 ↑	100 ↓	*** Poorer performance on serious incidents than in 2013. Commendable permit compliance.
Southern Water (SRN)	135 ↑	5.6 ↓	99.0 ↑↑↑	100 ↔	69 ↓	100 ↔	** Incidents performance needs to improve. Permit compliance is greatly improved. Self reporting fell again.
South West Water (SWT)	169 ↑	3.3 ↑↑	96.1 ↑↑	100 ↔	42 ↓	100 ↔	** Improved serious incidents and permit compliance, yet further improvement needed. Total incidents and self reporting needs to improve.
Thames Water (TMS)	76 ↑	2.3 ↑	98.9 ↑↑	100 ↔	53 ↓	102 ↔	*** Permit compliance is improved. Self reporting and pollution incidents need to improve.
United Utilities (UU)	49 ↔	0.5 ↑	98.3 ↓	100 ↑	75 ↑	97 ↓↓	*** Incident performance is commendable. Permit compliance and AMP delivery needs to improve.
Wessex Water (WSX)	44 ↑	1.7 ↑	99.7 ↑	100 ↔	62 ↑	100 ↓	*** Total incident performance and compliance is commendable. Self reporting needs to improve.
Yorkshire Water (YKY)	59 ↑	1.3 ↑↑	99.3 ↑↑	100 ↔	77 ↓	100 ↓	**** Serious incidents performance and permit compliance has improved and is commendable.
Sector – all companies	74 ↑	2.0 ↑	98.9 ↑	100 ↑	66 ↔	100 ↓	

Key - Status for Performance

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

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		

Key - Overall Rating

****	Industry Leading Company
***	Above Average Company
**	Below Average Company
*	Poor Performing Company

customer service line
03708 506 506

incident hotline
0800 80 70 60

floodline
0345 988 1188

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Annex 1: History of EPA results

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	Yellow	Yellow	Yellow	Green	Green	Green	***
Northumbrian Water	Yellow	Yellow	Yellow	Green	Yellow	Green	***
Severn Trent Water	Yellow	Green	Green	Green	Green	Green	****
Southern Water	Red	Red	Red	Green	Green	Green	*
South West Water	Red	Red	Red	Green	Yellow	Green	*
Thames Water	Yellow	Yellow	Red	Green	Yellow	Green	**
United Utilities	Green	Green	Yellow	Yellow	Green	Green	***
Wessex Water	Green	Yellow	Green	Green	Yellow	Green	***
Yorkshire Water	Yellow	Yellow	Yellow	Green	Green	Green	***

Water and sewerage companies – Environmental Performance Assessment (EPA) 2012

Anglian Water	Yellow	Green	Yellow	Green	Green	Green	***
Northumbrian Water	Yellow	Yellow	Green	Green	Green	Green	***
Severn Trent Water	Yellow	Yellow	Green	Yellow	Yellow	Green	***
Southern Water	Red	Red	Yellow	Green	Green	Green	**
South West Water	Red	Red	Yellow	Green	Yellow	Green	**
Thames Water	Yellow	Yellow	Green	Green	Yellow	Yellow	***
United Utilities	Yellow	Green	Green	Yellow	Green	Green	***
Wessex Water	Green	Green	Green	Green	Yellow	Green	****
Yorkshire Water	Yellow	Yellow	Red	Yellow	Green	Green	**

Water and sewerage companies – Environmental Performance Assessment (EPA) 2011

Anglian Water	Yellow	Yellow	Yellow	Green	Yellow	Green	***
Northumbrian Water	Yellow	Red	Green	Green	Red	Green	**
Severn Trent Water	Yellow	Yellow	Yellow	Yellow	Yellow	Green	***
Southern Water	Red	Red	Yellow	Green	Green	Green	**
South West Water	Red	Red	Red	Green	Red	Green	*
Thames Water	Green	Yellow	Green	Green	Yellow	Green	***
United Utilities	Yellow	Green	Yellow	Yellow	Green	Green	***
Wessex Water	Green	Green	Green	Green	Yellow	Green	****
Yorkshire Water	Yellow	Red	Yellow	Green	Green	Green	**

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Annex 2: Expectations for operational performance

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 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.