



**Cyfoeth  
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Cymru  
**Natural  
Resources**  
Wales

# Annual performance report for Dŵr Cymru Welsh Water 2018

Prepared by the Water Policy & Directives Implementation team,  
Natural Resources Wales.

Version 2

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# 1. Introduction

Natural Resources Wales' purpose is to pursue the sustainable management of natural resources in all our work. This means looking after the air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

We monitor the activities of water companies to minimise the impact their assets and activities have on the environment. We do this by checking their environmental performance throughout the year in areas such as reducing pollution incidents, complying with permits and delivering environmental improvement schemes. We then publish an annual assessment of their performance.

As the environmental regulator we assess the performance of water and sewerage companies that operate within Wales to provide a picture of how companies are progressing against a range of measurable targets (metrics). This report focuses on Dŵr Cymru Welsh Water<sup>1</sup>'s ("Dŵr Cymru") environmental performance for 2018.

Part of Dŵr Cymru's operating area is in England; the Environment Agency regulate operations in England and have contributed to the performance assessment process.

We also assess Hafren Dyfrdwy's performance which you can find on our [website](#).

## 2. Headline performance messages

- In 2018 Dŵr Cymru's overall company star rating improved from 2-star to 3-star, with three green performance metrics and three amber.
- Dŵr Cymru had the lowest number of Category 3 (Low) sewerage incidents to date but still have work to do as it remains amber status.
- They also had three serious sewerage pollution incidents in 2018 so this metric dropped from green to amber.
- Dŵr Cymru self-reported the highest percentage of incidents to date and achieved green status for only the second time since 2011.
- Overall, clean water incident numbers have increased.
- Although compliance with numeric permit conditions has improved (red to amber), it's still got some way to go to achieve green.
- Delivery of Asset Management Plan (AMP) improvement schemes was green at 99.3%.
- Dŵr Cymru's security of supply index score was green.

On the following pages, we look at the data in more detail.

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<sup>1</sup> Companies House information: DWR CYMRU CYFYNGEDIG, Company number 02366777, registered office address: Pentwyn Road, Nelson, Treharris, Mid Glamorgan, CF46 6LY.

# 3. Methodology

## Performance assessment methodology we used

Water company performance reporting is carried out annually on a calendar year basis.

Since 2011, we have used the same Environmental Performance Assessment (EPA) metrics and methodology as the Environment Agency. This means we can consistently report and benchmark the performance of Dŵr Cymru against the other large water and sewerage companies in England and Wales.

We combine our performance data in Wales with data that the Environment Agency provide to us for the Dŵr Cymru area that lies in England. This report therefore reports on performance for Dŵr Cymru as a whole.

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
- delivering secure supplies of water ('security of supply').

We will not be reporting on the performance of Dŵr Cymru's sludge disposal activities for 2018. We have suspended reporting of the sludge metric while we review how we assess and report performance consistently across the water companies on this activity in the future.

The EPA is set for the duration of the water companies' current asset management plan (AMP) period which runs from April 2015 to March 2020. The metrics are absolute rather than relative. All companies that are measured against EPA metrics should therefore be able to achieve good performance against these by 2020 or before.

## Future reporting

We are currently working with the Environment Agency to review the EPA metrics for 2020 onwards. As part of this work we will be looking to ensure metrics developed can be adopted in Wales to allow Dŵr Cymru to be benchmarked against other water and sewerage companies.

Any changes to how we assess Dŵr Cymru would be reflected in 2021, when we report the company's performance for 2020.

# 4. Summary of EPA 2018

## Overall EPA performance

The table below shows how Dŵr Cymru performed against the six EPA metrics in 2018. Each metric has agreed thresholds (which change every five years to continually drive improvements), which are used to rate performance as red, amber or green.

In 2018 Dŵr Cymru improved their overall star rating to a 'good' 3-star company. This was good to see following a drop in overall performance in 2017 when their performance was rated 2-star with the company 'requiring improvement'.

We will be looking for Dŵr Cymru to stabilise their performance at 3-star, aiming to improve the performance of all metrics. The company should be striving towards achieving a 4-star rating.

Ref in this report	Environmental Performance Assessment (EPA) metric		What this metric means	2018 result	Metric status in 2018
EPA metric 1	<b>Pollution incidents (sewerage)</b>	Category 1-3 incidents per 10,000 km of sewer	How many sewerage pollution incidents occurred, of Category 1-3, normalised by sewer length	28.0	Amber
EPA metric 2	<b>Serious pollution incidents (sewerage)</b>	Category 1-2 incidents per 10,000 km of sewer	How many serious sewerage pollution incidents occurred, of Category 1-2, normalised by sewer length	0.83	Amber
EPA metric 3	<b>Discharge permit compliance (STWs &amp; WTWs)</b>	%	Percentage compliance of Sewage Treatment Works and Water Treatment Works with water quality limits on their discharge	98.0	Amber
EPA metric 4	<b>Self-reporting of pollution incidents</b>	%	Percentage of pollution incidents the company self-reported	75	Green
EPA metric 5	<b>AMP National Environment Programme Delivery</b>	% of planned delivery	Whether the Asset Management Plan National Environment Programme is being delivered to plan	99.3	Green
EPA metric 6	<b>Security of Supply Index</b>	SoSI	How well they would have met their provision on levels of service for restrictions on water supply, if 2018 had been dry	100	Green
<b>Company's star rating:</b>				<b>***</b>	

### Key: Company star rating

****	Industry leading company
***	Good company
**	Company requires improvement
*	Poor performing company

### Key: Performance status

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

## Summary of Dŵr Cymru's EPA performance 2011-18

The table below shows how the company has performed against the metrics since 2011:

	Original EPA					Revised EPA			
	2011	2012	2013	2014	2015	2015E <sup>2</sup>	2016	2017	2018
<b>Pollution incidents (sewerage)</b> Category 1-3 incidents per 10,000 km of sewer	132	110	66	59	59	30.4	29.8	28.2	28.0
<b>Serious pollution incidents (sewerage)</b> Category 1-2 incidents per 10,000 km of sewer	2.2	3.3	1.1	2.2	1	0.6	0.6	0.28	0.83
<b>Discharge Permit Compliance (STWs &amp; WTWs) %</b>	95.6	98.6	97.7	97.8	98.6	97.1	99.0	96.7	98.0
<b>Satisfactory Sludge Use/Disposal %</b>	100	100	100	100	100	100	100	100	N/A <sup>3</sup>
<b>Self-reporting pollution incidents %</b>	37	47	48	60	74	74	68	63	75
<b>AMP National Environment Programme delivery</b> % of planned delivery	87	116	100	100	100	100	100	100	99.3
<b>Security of Supply Index (SoSI)</b>	N/A	N/A	N/A	N/A	N/A	100	100	98	100
<b>Company star rating</b>	*	***	***	***	***	***	***	**	***

### Key: Company star rating

****	Industry leading company
***	Good company
**	Company requires improvement
*	Poor performing company

### Key: Performance status

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

<sup>2</sup> The column headed 2015E refers to the 2015 dataset which has been assessed using the new EPA criteria (2016-2020). This has been included for comparison purposes only. Every five years the Red/Amber/Green thresholds are reviewed.

<sup>3</sup> We will not be reporting on the performance of Dŵr Cymru's sludge disposal activities for 2018. We have suspended reporting of the sludge metric while we review how we assess and report performance consistently across the water companies on this activity in the future.

# 5. Pollution incidents

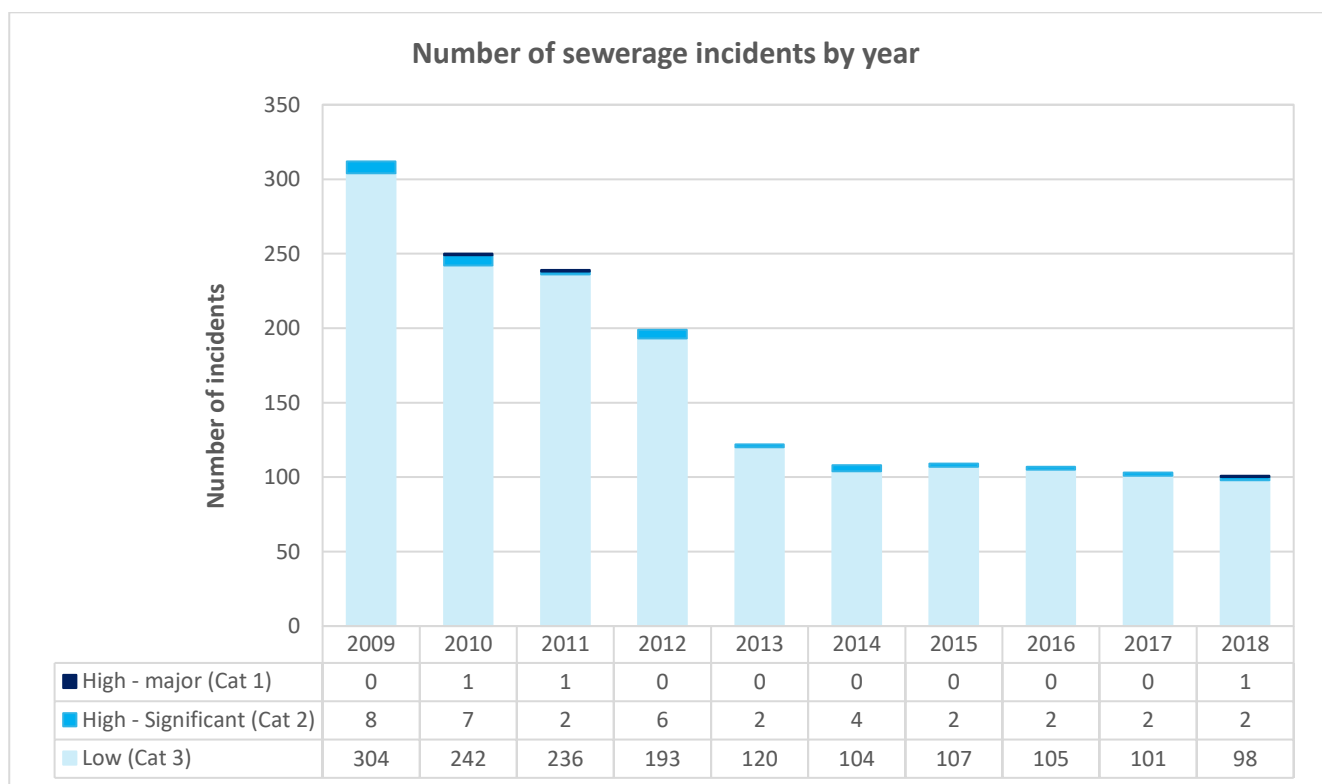
As a regulator we respond to a wide variety of pollution incidents, some of which are from water company assets and networks. We report on how many incidents each water company is responsible for. This is to drive continued reduction in the number of pollution incidents, aiming to reduce incidents to zero.

## EPA metric 1: Pollution incidents (sewerage)

In 2018 Dŵr Cymru had the lowest number of Category 1-3 sewerage pollution incidents to date (101). There were 98 Category 3 (Low impact) incidents, two Category 2 (High – significant) and one Category 1 (High – major). See graph below.

The EPA normalises incident numbers by sewer length, therefore in 2018 the company were assessed as amber for this metric:

Ref in this report	Environmental Performance Assessment (EPA) metric		What this metric means	2018 result	Metric status in 2018
EPA metric 1	<b>Pollution Incidents (sewerage)</b>	Category 1-3 incidents per 10,000 km of sewer	How many sewerage pollution incidents occurred, of Category 1-3, normalised by sewer length	28.0	Amber



As the graph above shows between 2009 and 2014 there was a steady year-on-year reduction in pollution numbers. However, since 2014 there has only been a marginal decrease from 108 incidents overall to 101 in 2018. We are concerned over the slow

decrease in sewerage incidents over the last five years and continue to challenge the company on its level of ambition towards reducing incident number to zero longer-term.

### EPA metric 2: Serious pollution incidents (sewerage)

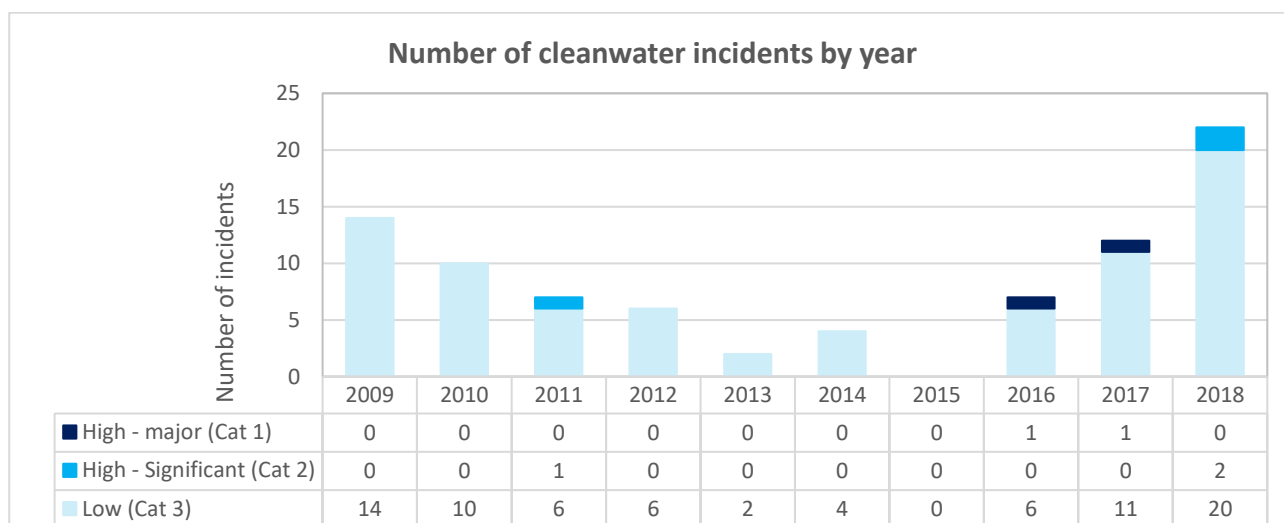
The second metric focuses on the number of serious pollution incidents. As shown in the graph above there were three Category 1 and 2 sewerage incidents in 2018 (when normalised this is 0.83), therefore this metric is also amber:

Ref in this report	Environmental Performance Assessment (EPA) metric	What this metric means	2018 result	Metric status in 2018
EPA metric 2	<b>Serious Pollution incidents (sewerage)</b> Category 1-2 incidents per 10,000 km of sewer	How many serious sewerage pollution incidents occurred, of Category 1-2, normalised by sewer length	0.83	Amber

Performance in this metric has been static since 2013, moving between 2 and 4 serious pollution incidents. As above, we would expect Dŵr Cymru to focus on reducing the number of pollution incidents overall, with serious pollution incidents reducing to zero as soon as possible.

Although not part of an EPA metric, we also monitor the number of clean water incidents. These relate to water supply services, including water treatment works and water distribution systems (potable water mains).

As the graph below shows, there has been an increase in the number of clean water-related incidents, with the doubling from 12 in 2017 to 22 in 2018. We would expect Dŵr Cymru to thoroughly investigate the reasons for this recent increase and put an improvement plan into place. We expect the company to reduce the number of all incidents (clean water and sewerage) to zero in the long-term.





## 6. Water discharge permit compliance

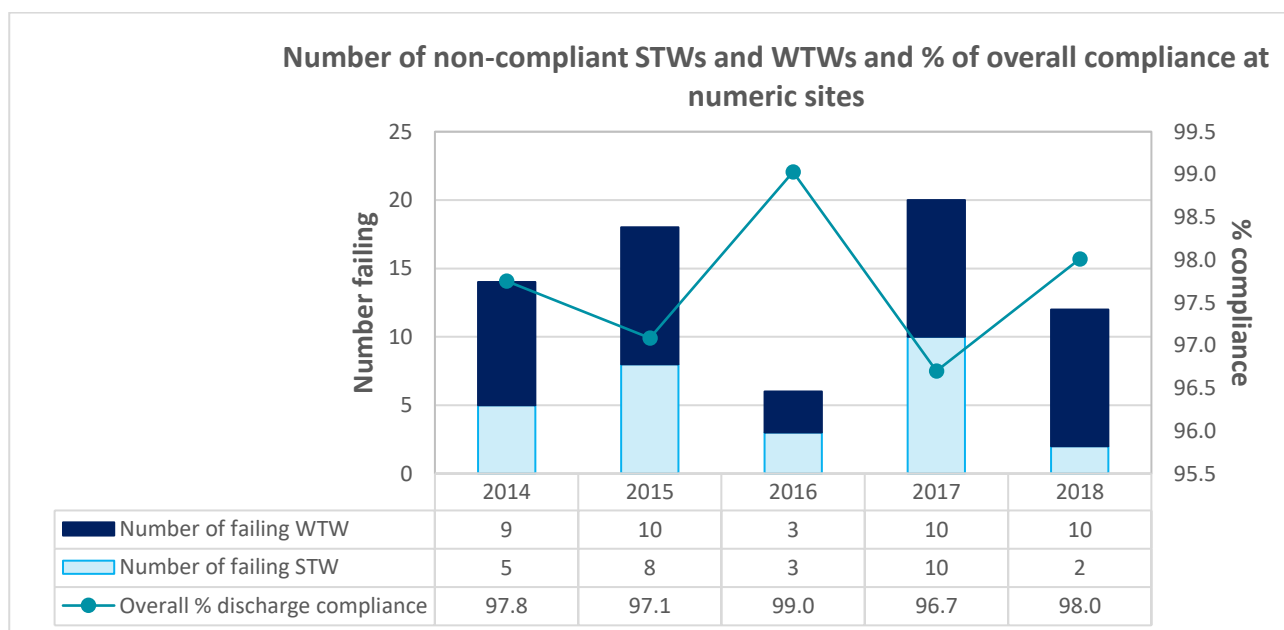
Both Natural Resources Wales and the Environment Agency issue permits for water discharges, which includes treated discharges from water company sewage treatment works and water treatment works. The permits require the discharge to meet specific criteria to make sure there's no deterioration to the water environment. Water companies self-monitor their discharges and provide data to us which we assess for compliance. We expect all permit conditions to be complied with.

### EPA metric 3: Discharge Permit Compliance (STWs & WTWs)

In 2018, overall Dŵr Cymru were 98% compliant with the water quality limits on their numeric permits for sewage treatment works (STW) and water treatment works (WTW). There were two non-compliant STWs out of 559 that Dŵr Cymru operate and 10 non-compliant WTWs out of 47.

Ref in this report	Environmental Performance Assessment (EPA) metric	What this metric means	2018 result	Metric status in 2018
EPA metric 3	Discharge permit compliance (STWs & WTWs)	Percentage compliance of Sewage Treatment Works and Water Treatment Works with water quality limits on their discharge	98.0	Amber

The company's 98% compliance means the EPA metric has improved from last year's red to amber for 2018, which is good to see. As the graph below shows sewage treatment works' compliance is the highest it's been since 2014, but the trend is not stable.



For sewage treatment works we expect Dŵr Cymru to build on 2018's high compliance and to ensure that for the future they achieve 100% of their sewage treatment works compliant with their numeric limits. Whilst Dŵr Cymru have never achieved 100%, this target has been achieved by other companies in the sector.

We are aware that Dŵr Cymru implemented several new ways of working to be more proactive at identifying sewage treatment works where the quality of the discharge may be dropping. We understand that this work has resulted in a reduction in the number of failing sewage treatment works from 10 in 2017 to 2 in 2018.

We are disappointed that water treatment works compliance is poor with a high number of non-compliant sites (9 or 10) every year since 2014, except a low of 3 in 2016. We understand that the company is intending to adopt similar processes to those used to manage sewage works to help improve compliance. Therefore, we expect to see positive results for water treatment works' compliance in 2019 as we have with sewage works' compliance in 2018.

We expect Dŵr Cymru to continue to seek opportunities to monitor and proactively identify sewage treatment works and water treatment works which may be dropping in performance, with the aim of achieving 100% (green) compliance with this metric as soon as possible.

### **Water discharge descriptive permit condition compliance**

We carried out 105 compliance assessments at sites with water discharge permits and identified breaches of their descriptive permit conditions during 66 of these (63%).

Descriptive conditions relate to non-numeric aspects such as maintenance, management and reporting. Most of the breaches identified were Category CCS3 or CCS4<sup>4</sup> but there was also one CCS1 and four CCS2 breaches. We expect to see improvement in this level of descriptive condition non-compliance to ensure full compliance in future.

### **Flow**

Fifteen sewage treatment works were reported as exceeding their Dry Weather Flow (DWF) permit requirements in 2017<sup>5</sup>, resulting in the sites receiving more sewage than permitted. The company promptly investigated and successfully resolved seven of these exceedances. There are ongoing investigations for the remainder.

A further ten sewage treatment works experienced data issues in 2017 which the company is working to resolve.

Three other works are also being investigated due to queries over their flow to full treatment (FFT) permitted limits, which means they may not be treating the flow required by their permits. Another has already been investigated and been brought back into compliance.

The company has made significant progress with their internal management system for MCERTS certification, a system which independently audits and certifies the suitability and accuracy of their flow monitoring equipment. There is one site currently under investigation for failure of re-certification.

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<sup>4</sup> CCS (Compliance Classification Scheme) categories are the way we categorise non-compliance breaches. They are on a scale between 1-4. CCS1 is most likely to have a serious impact on the environment to CCS4 which is likely to have little or no impact. CCS3 is likely to have minor impact to the environment.

<sup>5</sup> We assess and report data related to Dry Weather Flow and Flow to Full Treatment two years in arrears, therefore we are reporting 2017 information in this section.

# 7. Self-reporting incidents

We would like to see water companies self-report<sup>6</sup> at least 80% of their pollution incidents.

This means we can be more confident that the water company:

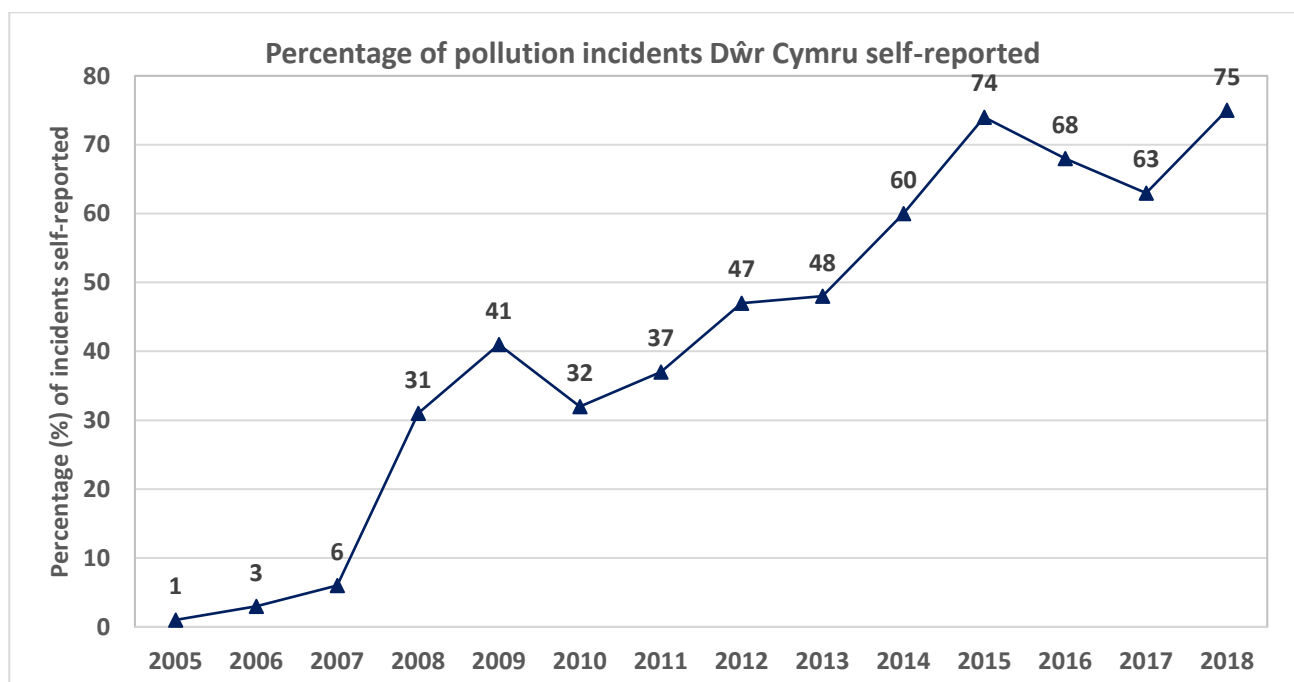
- understands their assets and networks better;
- continually looks for ways to improve how they predict pollution incidents, including using their own telemetry data to improve levels of self-reporting;
- use their data to identify hot spots and target high risk locations and specific asset types;
- attends and reacts to incidents quickly to stop any impact as soon as possible.

## EPA metric 4: Self-reporting of pollution incidents

In 2018, we are pleased to report that Dŵr Cymru achieved green status for this metric and self-reported 75% of their incidents (Category 1-3 sewerage and clean water incidents).

Ref in this report	Environmental Performance Assessment (EPA) metric	What this metric means	2018 result	Metric status in 2018	
EPA metric 4	Self-reporting of pollution incidents	%	Percentage of pollution incidents the company self-reported	75	Green

As the graph below shows, the company's performance in this metric had been declining in recent years. We will be looking for the company to continue to improve their rate of self-reporting to maintain green status and achieve 80%.



<sup>6</sup> To report an incident to us, call our Incident Hotline on 03000 65 3000

## 8. Water resources

### Water resources licence compliance

With the prolonged dry weather Wales experienced during Summer 2018, our regulatory work had a focus on water resources licence compliance in 2018. In Wales, we carried out 16 licence inspections at 15 sites. We identified breach of licence condition during nine of the 16 inspections. All the breaches were either Category CCS3 or CCS4<sup>4</sup> and although these are the lower categories of environmental risk, we still expect to see improvement to ensure full compliance in future. Three of the non-compliant sites were issued with warnings; all nine non-compliant sites had action/s required.

### EPA metric 6: Security of Supply index

The Security of Supply index (SoSI) metric measures the extent to which the company can guarantee provision of its levels of service for restrictions of water supply (e.g. Temporary Use Bans) if the previous year had been dry. The SoSI score for 2018 is 100, therefore the EPA metric is green.

Ref in this report	Environmental Performance Assessment (EPA) metric		What this metric means	2018 result	Metric status in 2018
EPA metric 6	<b>Security of Supply Index</b>	SoSI	How well they would have met their provision on levels of service for restrictions on water supply, if 2018 had been dry	100	Green

Dŵr Cymru was amber for SoSI in 2017/18, mainly due to impact of freeze thaw events on leakage (note: company leakage target was met). The expectation was that they would score 100 in 2018/19 by bringing leakage under control at resource zone level and that Dŵr Cymru would tanker water to customers in Tywyn, Aberdyfi if there was a supply problem before the new supply scheme for that zone is implemented. In addition, in 2018/19 Dŵr Cymru carried out further leakage control to reduce demand in this zone.

### Drought planning and water resources management plans

Water companies have a duty to maintain water supplies in their area, without damaging the environment or affecting the needs of other water users. There is statutory requirement for water companies to prepare, maintain and publish water resources management and drought plans. These are published every five years.

For the latest information on Dŵr Cymru' water resources management plans please see their website: [www.dwrcymru.com](http://www.dwrcymru.com)

Please also have a look at our webpages for more information:

- Water Resources Planning: [naturalresources.wales/about-us/what-we-do/water/water-resource-management-planning](http://naturalresources.wales/about-us/what-we-do/water/water-resource-management-planning)
- Drought: [naturalresources.wales/guidance-and-advice/environmental-topics/water-management-and-quality/drought](http://naturalresources.wales/guidance-and-advice/environmental-topics/water-management-and-quality/drought)
- Drought plan guidance: <https://cdn.naturalresources.wales/media/684414/final-wc-drought-plan-guidance-2017.pdf?mode=pad&rnd=131656713580000000>

### Leakage and water use

Dŵr Cymru has reported in its annual review for 2017/18 that the average per capita consumption (PCC), which is how much water each person uses, was 151 litres per person per day. The total leakage was 173 megalitres per day for 2017/18.

We work with Ofwat to publish a wide variety of water company data which includes leakage rates and water use and this will be available at [discoverwater.co.uk](https://discoverwater.co.uk)

## 9. Other regulatory work

### EPA metric 5: AMP National Environment Programme delivery

Dŵr Cymru have completed most (150/151) of their expected year 4 outputs from their Asset Management Plan 6 (AMP 6) National Environment Programme (NEP). However, one Water Framework Directive investigation was not delivered within scope. This means they are 99.3% compliant, but still remain green status with EPA metric 5:

Ref in this report	Environmental Performance Assessment (EPA) metric	What this metric means	2018 result	Metric status in 2018	
EPA metric 5	<b>AMP National Environment Programme Delivery</b>	% of planned delivery	Whether the Asset Management Plan National Environment Programme is being delivered to plan	99.3	Green

The improvements delivered by the programme will mean assets achieve higher standards and deliver water quality improvements.

We expect Dŵr Cymru to improve performance in 2019 to achieve 100% and maintain green status for this metric.

### Enforcement

In 2018 we accepted two Enforcement Undertakings from Dŵr Cymru for offences under the Salmon and Freshwater Fisheries Act 1975. The company committed the offences which caused two pollution incidents in January and November 2016. They offered compensation totalling £90,000 which will be spent in the catchment affected by the pollution incidents.

Dŵr Cymru also accepted two formal cautions in 2018 for permit condition breaches at two of their pumping stations. The breaches occurred in 2016 and 2017 and constituted an offence under the Environmental Permitting Regulations 2010.

### Reservoirs

Dŵr Cymru manage 129 Large Raised Reservoirs (LRRs) greater than 10,000m<sup>3</sup> which we regulate under the Reservoirs Act 1975. The purpose of this law is to prevent an uncontrolled release of water and subsequent flooding of downstream communities. Every LRR must undergo statutory periodic inspection and implement the recommendations made by an independent Inspecting Engineer. These reservoirs must also always be supervised by a qualified civil engineer and records kept of principal information and monitoring activities.

We meet regularly with Dŵr Cymru's Dam Safety Team to review progress on completion of safety measures and to provide evidence. Compliance levels are generally high. Where delays in completion of safety works have been experienced they have been justified and we have been informed at the earliest stages, along with advisory notes from independent reservoir engineers. Dŵr Cymru has stated that they wish to be an "exemplar organisation for reservoir safety".

During the last year we understand Dŵr Cymru has appointed a consultant to provide flood maps for all its registered reservoirs showing the possible consequences following a dam breach. We will be provided with a copy of these maps to carry out a risk designation exercise, determine the level of regulation required and to inform our emergency response planning with professional partners.

### Flood Risk Management

Under the Flood and Water Management Act 2010, water and sewerage companies are defined as risk management authorities. They are required to act in a manner consistent with the National Strategy for Flood and Coastal Erosion Risk Management in Wales and have a duty to cooperate with other risk management authorities in Wales.

Every few years we produce a report for the Welsh Ministers about how flood risk and coastal erosion is managed across Wales and about the activities underway to raise awareness and increase resilience of those who are at risk. We do this on behalf of all Risk Management Authorities who operate in Wales, therefore we will include Dŵr Cymru. Work is underway on the 201/18 report – please refer to our [Flood and coastal erosion risk in Wales](#) webpage later in 2019 when it is published.

## 10. Performance expectations for 2019

We would expect Dŵr Cymru to:

- ensure compliance improves to 100% for all permitting and regulatory regimes; continuing to improve compliance with permitted numeric limits, focusing on water treatment works' compliance and descriptive condition compliance
- continue to improve self-reporting of pollution incidents and maintain green status
- continue to reduce pollution incident numbers, aiming for zero incidents, focusing on serious pollution incidents and clean water incidents
- improve delivery of Asset Management Plan (AMP) improvement schemes to achieve 100%
- maintain the SoSI index score to achieve 100.



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