

Annual performance report for Dŵr Cymru Welsh Water 2019

Prepared by the Water, Land, Biodiversity & Marine Regulatory Approaches team

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 this annual Environmental Performance Assessment (EPA) 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) which we explain below. This report focuses on Dŵr Cymru Welsh Water¹'s ("Dŵr Cymru") environmental performance for 2019.

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](#).

Dŵr Cymru's 2019 EPA

The table overleaf shows how Dŵr Cymru performed against the six EPA metrics in 2019, with three green performance metrics and three amber. Each metric has agreed thresholds (which change every five years to continually drive improvements).

Dŵr Cymru's overall company star rating maintained 3-star 'good' company status. This means their overall performance has stabilised, following a drop to 2-star in 2017. However, the results from 2019 show that the company is still some way off achieving a 4-star rating. We expect the company to make every effort to improve the amber metrics to green and aim for 4-star rating in 2020.

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

EPA metric	2019 result (metric status)
Metric 1: Pollution incidents (sewerage)	26 (Amber)
Metric 2: Serious pollution incidents (sewerage)	0 (Green)
Metric 3: Discharge permit compliance (STWs & WTWs)	98.2 (Amber)
Metric 4: Self-reporting of pollution incidents	73 (Amber)
Metric 5: AMP National Environment Programme Delivery	100 (Green)
Metric 6: Security of Supply Index	100 (Green)

Key: metric status

Green	Performance better than target
Amber	Performance close to or slightly below the target
Red	Performance significantly below target

More information

- **Annex 1** explains the methodology we use to assess the company's performance
- **Annex 2** shows how Dŵr Cymru has performed against the EPA metrics since 2011

Headline performance messages

The greens:

- they had no serious sewerage pollution incidents in 2019 so this metric improved from amber to green
- they delivered 100% of their Asset Management Plan (AMP) improvement schemes
- their Security of Supply Index score was 100.

But they still have work to do on the ambers:

- they had the lowest number of Low (Category 3) sewerage incidents to date but still not low enough to achieve green
- their self-reporting performance dropped slightly which dropped it from green to amber
- their compliance with numeric permit conditions remained amber and is still some way off achieving green.

In addition to the metrics, we are concerned that the number of clean water incidents have increased further for the fourth consecutive year.

Pollution incidents

As regulators 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.

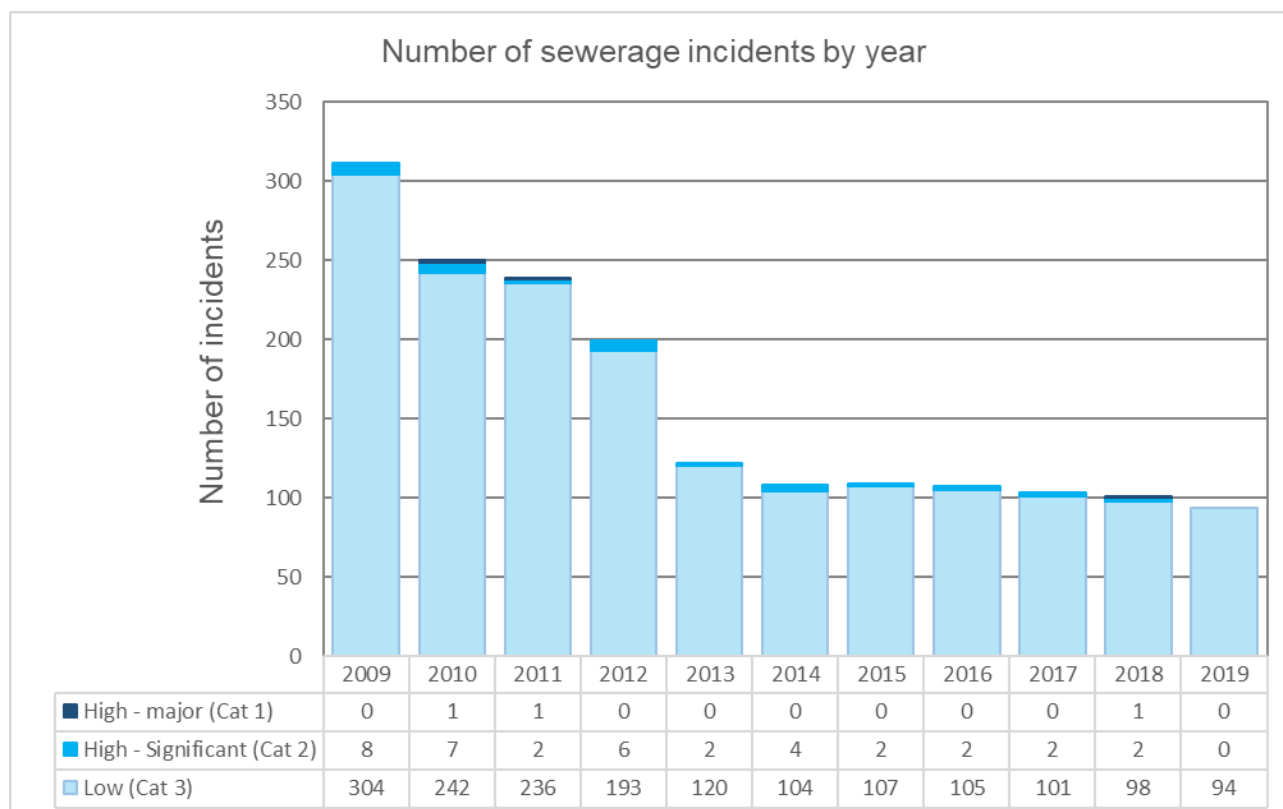
EPA metric 1: Pollution incidents (sewerage)

In 2019 Dŵr Cymru had the lowest number of High-Low (Category 1-3) sewerage pollution incidents to date (94). All 94 were Low (Category 3) incidents; there were no High (Category 1 or 2) sewerage incidents.

The EPA normalises incident numbers by sewer length, therefore in 2019 the company were assessed as amber for this metric:

EPA metric	Unit of measurement	What this metric means	2019 result (metric status)
Pollution incidents (sewerage)	Category 1-3 incidents per 10,000 km of sewer	How many sewerage pollution incidents occurred, of Category 1-3, by sewer length	26 (Amber)

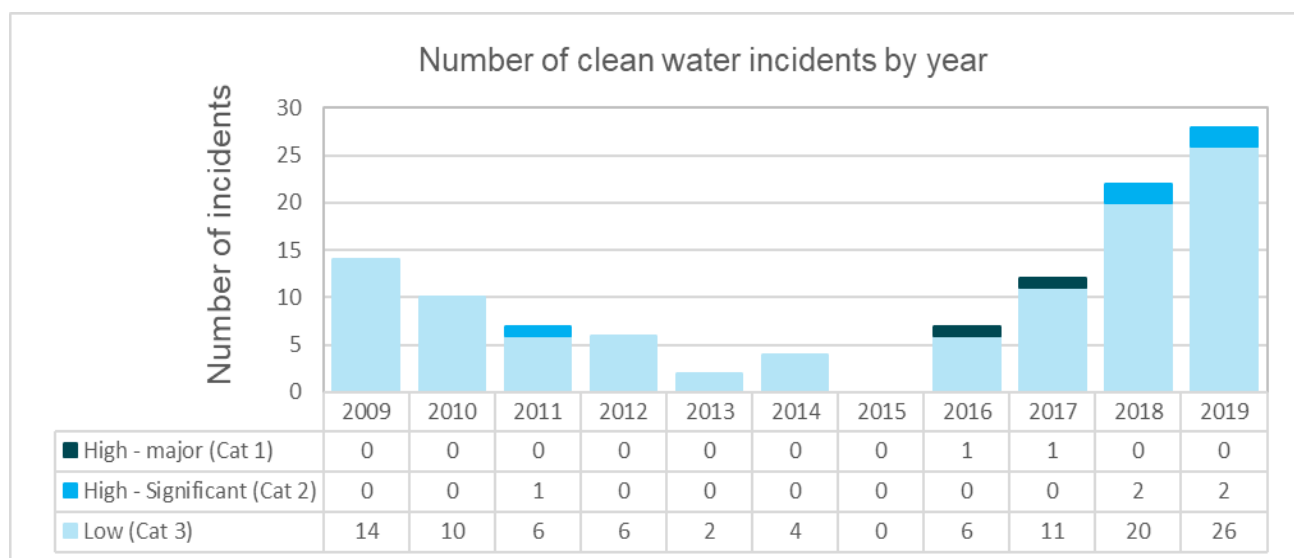
As the graph below shows between 2009 and 2014 there was a steady year-on-year reduction in pollution numbers. However, since 2014 there has only been a marginal decrease from 108 incidents overall to 94 in 2019.



We remain concerned over the slow decrease in sewerage incidents over the last five years (only 14% decrease from 2015-2019) and continue to challenge the company on its level of ambition towards reducing incident numbers to zero longer-term. The company has committed to reducing sewerage incidents to 72 by 2025, which would be a significant decrease of 23% - we are concerned that DCWW will not be able to meet this based on their performance to date unless significant improvements are made.

Clean water pollution incidents

Although not included in an EPA metric until 2021, 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).



It is concerning that for the fourth consecutive year the number of clean water incidents has increased, with a total of 28 in 2019 (2 High/Category 1/2) and 26 Low/Category 3. We need to see an improvement in clean water performance in 2020 ahead of it being formally included in the EPA metrics from 2021. As the graph above shows, the number of clean water-related incidents increased from 0 in 2015 to 28 in 2019.

The company has discussed improvement plans and embedding learning from wastewater into clean water activities for several years, but this has not materialised in an improvement in clean water performance. In 2018 we asked Dŵr Cymru to investigate the reasons for this recent increase and put an improvement plan into place. However, the continuing worsening of performance means we now expect urgent, focused action. We expect the company to provide a Clean Water Pollution Reduction Plan. The plan should be ambitious; we expect the company to reduce the number of all incidents (clean water and sewerage) to zero in the long-term, with no serious incidents in the short-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 zero High (Category 1 and 2) sewerage incidents in 2019, therefore this metric has improved from amber to green.

EPA metric	Unit of measurement	What this metric means	2019 result (metric status)
Serious pollution incidents (sewerage)	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 (Green)

We expect Dŵr Cymru to continue their efforts to ensure there are no serious sewage pollution incidents in 2020 and maintain this good performance.

Water discharge permit compliance

Natural Resources Wales and the Environment Agency issue permits for water discharges, including 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)

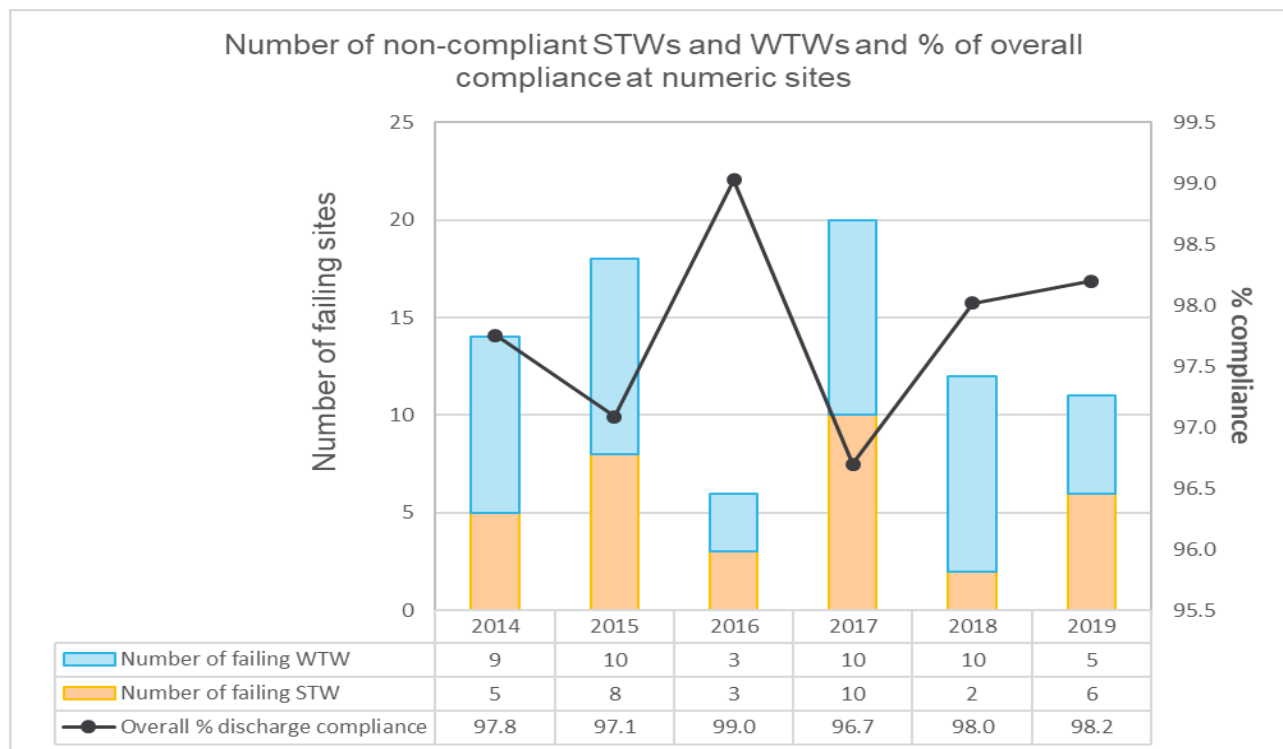
In 2019, overall Dŵr Cymru were 98.2% compliant with the water quality limits on their numeric permits for sewage treatment works (STWs) and water treatment works (WTWs). This was very similar to their 98% performance in 2018.

There were six non-compliant STWs out of 564 that Dŵr Cymru operate and five non-compliant WTWs out of 48.

EPA metric	Unit of measurement	What this metric means	2019 result (metric status)
Discharge permit compliance (STWs & WTWs)	%	Percentage compliance of Sewage Treatment Works and Water Treatment Works with water quality limits on their discharge	98.2 (Amber)

The company's 98.2% compliance means the EPA metric stayed amber the second year, but the trend is not stable, as shown by the graph below. In 2018 STW performance was better than WTWs, but in 2019 this reversed. This is disappointing as best practice learning from STW management was rolled out to WTWs in 2019, but instead of seeing both sides improving, STW performance has now declined. We expect Dŵr Cymru to investigate why this happened.

We remain disappointed that Dŵr Cymru are still at amber status for this metric. We expect Dŵr Cymru to continue to seek opportunities to monitor and proactively identify STWs and WTWs which may be dropping in performance, with the aim of achieving 100% (green) compliance with this metric as soon as possible. Whilst Dŵr Cymru have never achieved 100%, this target has been achieved by other companies in the sector.



Water discharge descriptive permit condition compliance

Descriptive conditions relate to non-numeric aspects such as maintenance, management and reporting. Overall, descriptive condition compliance at STWs and WTWs with numeric and descriptive permits is 93% (50 non-compliant out of a total of 762).

Of the 62 breaches we identified two had the potential for significant environmental impact (CCS2²) breaches so a significant environmental impact was reasonably foreseeable.

We expect to see year-on-year improvement in the performance of compliance against descriptive permit conditions.

Flow

Dŵr Cymru provided Dry Weather Flow (DWF) data in accordance with their permit requirements. Eleven sewage treatment works were reported as exceeding their DWF permit limits in 2019, resulting in the sites discharging more treated sewage than

² 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.

permitted. Dŵr Cymru are required to carry out investigations and report the cause of exceedance to us and where appropriate complete remedial action.

A further five sewage treatment works experienced data issues in 2019 which the company is working to resolve.

Eleven 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.

The company has made 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 are two sites currently under investigation for failure of re-certification and one site whose certification expired in 2019.

Self-reporting incidents

We would like to see water companies self-report³ 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

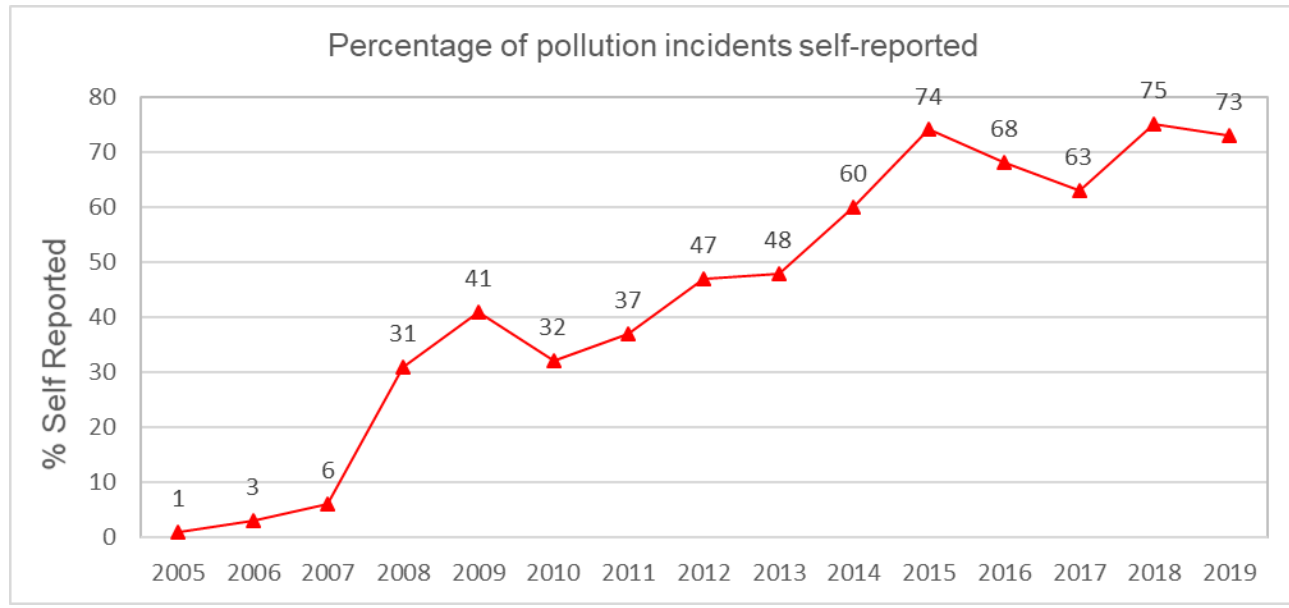
In 2019, it is disappointing that Dŵr Cymru's self-reporting performance dropped from 75% to 73%. This drop moved their performance across the amber-green threshold therefore causing them to drop to amber status for this metric:

EPA metric	Unit of measurement	What this metric means	2019 result (metric status)
Self-reporting of pollution incidents	%	Percentage of pollution incidents the company self-reported	73 (Amber)

We would encourage the company to consider other initiatives that they could implement to achieve a higher rate of self-reporting.

³ To report an incident to us, call our Incident Hotline on 03000 65 3000

As the graph below shows, the company's performance in this metric had been unstable in recent years. We are looking for the company to stabilise their rate of self-reporting to maintain green status.



Water resources

Water resources licence compliance

A focus on water resources licence compliance continued in 2019. We carried out 35 licence inspections at 26 sites. We identified licence non-compliance during ten of the 35 inspections. This compares to 9 non-compliant out of 16 inspections in 2018.

It is disappointing that in 2019 three of the six non-compliant sites were issued with actions and warnings on two separate occasions in 2019. We expect sites given actions and warnings to take appropriate action to rectify the non-compliance in good time so they would come back into compliance and avoid a second non-compliance. We expect the company to make progress on this for 2020.

All ten non-compliances were Category CCS3 or CCS4⁴ and although these are the lower categories of environmental risk, we still expect to see improvement to ensure full compliance in future.

⁴ 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.

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 2019 is 100, therefore the EPA metric is green.

EPA metric	Unit of measurement	What this metric means	2019 result (metric status)
Security of Supply Index	SoSI index score, max. 100	How well they would have met their provision on levels of service for restrictions on water supply, if 2019 had been dry	100 (Green)

Drought planning & 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 a statutory requirement for water companies to prepare, maintain and publish water resources management plans (WRMPs) and drought plans. The latest WRMP was published in 2019 with the latest Drought Plan currently in draft for 2020. These are published every five years. For the latest information on Dŵr Cymru' water resources management plans, please see their website:

- Water Resources Management Plan – <https://www.dwrcymru.com/en/My-Water/Water-Resources/Final-Water-Resources-Management-Plan-2019.aspx>
- Draft Drought Plan – <https://www.dwrcymru.com/en/My-Water/Water-Resources/Draft-Drought-Plan-2020.aspx>

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
- Drought: 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 reported in its annual review for 2019/20 that the average per capita consumption (PCC), which is how much water each person uses, was 160 litres per person per day (l/h/d), this is an increase of 2.35 l/h/d from the previous reported annual average of 157 l/h/d. They also reported a leakage 167.95 megalitres per day for 2019/20, below their agreed target for the year of 171 megalitres per day.

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

Other regulatory work

EPA metric 5: AMP National Environment Programme delivery

This metric looks at how Dŵr Cymru have delivered against their 5-year Asset Management Programme (AMP) period, April 2015-March 2020. It looks at the percentage of schemes delivered compared to planned from 2015-2020.

EPA metric	Unit of measurement	What this metric means	2019 result (metric status)
AMP National Environment Programme Delivery	% of planned delivery	Whether the Asset Management Plan National Environment Programme is being delivered to plan	100 (Green)

In 2019/20 Dŵr Cymru delivered all their 183 remaining schemes as planned. The company also caught up the 1 Water Frame Directive investigation that was outstanding from 2018/19, so they have now delivered all 334 outputs expected over the 5-year period. Therefore, they delivered 100% of schemes so this EPA metric 5 remains at green status.

The improvements delivered by the programme will mean assets achieve higher standards and deliver water quality improvements. We expect Dŵr Cymru to maintain green status for 2020.

Enforcement (higher than a Warning)

In 2019 NRW completed our enforcement response to three pollution incidents in Wales that were higher than a Warning.

Dŵr Cymru were prosecuted for a pollution incident in July 2018 at their Felindre Water Treatment Works, where they committed offences under the Environmental Permitting (England and Wales) Regulations 2016 and Salmon and Freshwater Fisheries Act 1975. The courts imposed a fine of £40,000.

Dŵr Cymru also accepted formal cautions in 2019 for two pollution incidents in January and March 2017 in Chirk where they committed offences under the Environmental Permitting (England and Wales) Regulations 2016.

No enforcement action was completed in 2019 in England higher than a warning.

Reservoirs

At the end of 2019, Dŵr Cymru were managing 128 Large Raised Reservoirs (LRRs) with a raised capacity greater than 10,000m³ 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. During 2019-20 Dŵr Cymru engaged with us to produce new reservoir flood maps which will be shared with us for designation and emergency planning purposes.

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 the National Flood and Coastal Erosion Risk Management Strategy for England. They have a duty to cooperate with other risk management authorities in England and 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 and therefore include Dŵr Cymru. Our latest report covers the period 2016-19 and can be found on our [Flood and coastal erosion risk in Wales](#) webpage.

Performance expectations for 2020

Considering the challenges with Covid-19 and serious storms experienced across Wales so far in 2020, we acknowledge the pressures the company has operated under given the unprecedented circumstances. They have shown resilience in their ability to maintain services.

With that in mind, we still feel that the company can improve performance against the metrics and have set out our expectations for Dŵr Cymru's 2020 performance below.

→ Improve performance of amber metrics to achieve green status by:

- ensuring compliance improves to 100% for all numeric permit compliance at sewage and water treatment works and:
 - show year-on-year improvement for compliance with water quality descriptive permit conditions
 - continue to improve compliance with water resource licence conditions
- improving and stabilising self-reporting of pollution incidents
- continuing to reduce sewage pollution incident numbers

→ Maintain performance of green metrics by:

- keeping serious sewage pollution incidents at zero
- delivering 100% of Asset Management Plan (AMP) improvement schemes
- continuing to achieve a Security of Supply index score of 100

→ In addition to the EPA metric above, we expect Dŵr Cymru to:

- focus on reducing clean water incidents and reverse the current trend of worsening performance

Annex 1: 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 2019. We have suspended reporting of the sludge metric since 2018 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 2021 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 2022, when we report the company's performance for 2021.

Annex 2: Summary of Dŵr Cymru's EPA performance 2011-19

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

	2011	2012	2013	2014	2015	2015E ⁵	2016	2017	2018	2019
Pollution incidents (sewerage) Category 1-3 incidents per 10,000 km of sewer	132	110	66	59	59	30.4	29.6	28.2	28.0	26.0
Serious pollution incidents (sewerage) 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	0
Discharge Permit Compliance (STWs & WTWs) %	95.6	98.6	97.7	97.8	98.6	97.1	99.0	96.7	98.0	98.3
Satisfactory Sludge Use/Disposal %	100	100	100	100	100	100	100	100	N/A ⁶	N/A ³
Self-reporting pollution incidents %	37	47	48	60	74	74	68	63	75	73
AMP National Environment Programme delivery % of planned delivery	87	116	100	100	100	100	100	100	99.3	100
Security of Supply Index (SoSI)	N/A	N/A	N/A	N/A	N/A	100	100	98	100	100
Company star rating	1-star	3-star	3-star	3-star	3-star	3-star	3-star	2-star	3-star	3-star

Key: Company star rating

4-star	Industry leading company
3-star	Good company
2-star	Company requires improvement
1-star	Poor performing company

⁵ 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.

⁶ We will not be reporting on the performance of Dŵr Cymru's sludge disposal activities for 2018 or 2019. 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.