

Storm overflow spill data report – 2024

Introduction

This is our third annual report on storm overflow spills. You can find previous reports for 2022 and 2023 here: [Natural Resources Wales / Storm overflow spill data reports](#)

The two water companies operating in Wales are Dŵr Cymru Welsh Water and Hafren Dyfrdwy. Dŵr Cymru also has storm overflows in England, but spills from these discharges are not included in this report.

We continue to work with Welsh Government, Ofwat, Dŵr Cymru, and Hafren Dyfrdwy on the Better River Quality Taskforce. Together, we're developing plans to expand monitoring, gather better evidence, and strengthen our regulatory controls on storm overflows.

As part of the taskforce storm overflow action plans and roadmap, we publish this report to share spill data provided by the water companies and reviewed by us. We know people across Wales are concerned about the number of spills and the possible impact on our rivers and coasts. Our aim is to improve transparency, inform the public and stakeholders, and drive better performance from water companies, through our compliance and enforcement work.

[View the Taskforce action plans on the Welsh Government website](#)

Event Duration Monitors

There are over 2,000 permitted storm overflows across Wales. These systems are designed to relieve pressure on the sewer network during heavy rainfall, when sewers can become overwhelmed. Each overflow needs a permit from us to legally discharge to the environment. The permits have conditions to protect rivers, streams, and coastal waters.

We were the first environmental regulator in the UK to require water companies to install Event Duration Monitors (EDMs) on all storm overflows in Wales. These monitors track how often and how long each overflow discharges. Most EDMs were installed by 2020, and now over 99% of permitted overflows are monitored. In a few rare cases, we have agreed that EDMs are not required due to technical constraints at the site. Dŵr Cymru also has a small number of EDM installations outstanding.

Water companies must submit EDM data to us every year by the end of February. This data helps us assess compliance and identify areas for improvement. They also publish this information on their websites.

[View Dŵr Cymru's EDM data web page](#)

[View Hafren Dyfrdwy's EDM data web page](#)

As part of the taskforce commitment to transparency, Dŵr Cymru and Hafren Dyfrdwy launched near real-time storm overflow maps in 2024. These interactive tools use EDM data to show current overflow activity. This gives the public and stakeholders up-to-date information and helps them make informed decisions about water quality in their area.

[View Dŵr Cymru's storm overflow map](#)

[View Hafren Dyfrdwy's storm overflow map](#)

Data quality

We require EDM data submissions to be timely, complete, and underpinned by accurate, consistent, and reliable data. High-quality data is essential for transparency, regulatory compliance, and environmental protection.

Following Dŵr Cymru's 2024 submission, data validation issues were identified, leading to a corrected resubmission. We agreed to accept the resubmission on this occasion in order to work with the most accurate information, but we have made it clear that their data quality and validation processes must improve. We are following up on their compliance before determining our regulatory response.

We also expect both Dŵr Cymru and Hafren Dyfrdwy to improve their performance against the 90% EDM time operational target, which is an agreed minimum standard across the industry.

What the EDM data tells us

EDM data helps us identify storm overflows that are discharging too often or for extended periods. This allows us to focus where the environmental risk is highest and take action where needed.

The EDM data also feeds into our annual environmental performance reporting for both Dŵr Cymru and Hafren Dyfrdwy. These reports cover a broader range of water company performance. The 2024 report will be published in Autumn 2025. Once available, you'll be able to view the reports here:

[View Dŵr Cymru's annual environmental performance reports](#)

[View Hafren Dyfrdwy's annual environmental performance reports](#)

Findings from the 2024 data

The tables below show EDM summary data from 2022 to 2024 for permitted storm overflows with EDM conditions, submitted by Dŵr Cymru and Hafren Dyfrdwy.

Dŵr Cymru's EDM headlines	2022	2023	2024
Total no. of storm overflows listed in the annual return	1946	1982	2064
Total no. of storm overflows with EDM commissioned	1942	1975	2060
% storm overflows listed with EDM commissioned	99.8%	99.6%	99.8%
Total no. of storm overflows with spill data	1886	1916	2051
Average no. of spills per storm overflow with spill data	40.9	55.3	48.9
Average duration (hours) per monitored spill event	7.1	8.6	8.2
% storm overflows spilled 10 or less times	34.6%	26.9%	28.4%
% of storm overflows listed with EDM in operation for at least 90% of the time	84.9%	86.1%	86.5%

- Dŵr Cymru's number of permitted storm overflows rose from 1,946 in 2022 to 2,064 in 2024, mainly due to permit changes consolidating storm activities with other types of discharge so some discharges appear on the return twice reporting spills against the permit that was in force for that period of 2024.
- Almost all storm overflows now have monitoring equipment (EDM) installed, consistently at around 99.8%.
- Overflows with spill data increased from 1,886 in 2022 to 2,051 in 2024.
- Average spills per overflow peaked at 55.3 in 2023, dropping to 48.9 in 2024, still above 2022 levels (40.9).
- Spill duration rose from 7.1 hours in 2022 to 8.2 in 2024, after peaking at 8.6 in 2023.
- Fewer overflows spilt 10 times or less in 2024 compared to previous years.
- EDM time operational improved slightly, with 86.5% operating at least 90% of the time in 2024, up from 84.9% in 2022. We issued Compliance Assessment Reports for those below 90%, requiring investigations and corrective actions, and are currently monitoring progress.

Hafren Dyfrdwy's EDM headlines	2022	2023	2024
Total no. of storm overflows listed in the annual return	49	49	50
Total no. of storm overflows with EDM commissioned	49	49	50
% storm overflows listed with EDM commissioned	100%	100%	100%
Total no. of storm overflows with spill data	49	49	50
Average no. of spills per storm overflow with spill data	29.0	38.8	36.2
Average duration (hours) per monitored spill event	7.5	8.5	9.4
% storm overflows spilled 10 or less times	36.7%	22.4%	22.0%
% of storm overflows listed with EDM in operation for at least 90% of the time	73.5%	83.7%	80.0%

- Hafren Dyfrdwy's number of permitted storm overflows remained stable.
- All storm overflows have EDM monitoring in place, maintaining 100% coverage across all three years.
- Average spills per overflow increased from 29.0 in 2022 to 38.8 in 2023, before falling slightly to 36.2 in 2024.
- The average duration of each spill rose steadily from 7.5 hours in 2022 to 9.4 hours in 2024.
- Fewer overflows spilt 10 times or less in 2024 compared to previous years.
- EDM time operational improved from 73.5% operating at least 90% of the time in 2022 to 83.7% in 2023, before dropping slightly to 80.0% in 2024. We issued Compliance Assessment Reports for those below 90%, requiring investigations and corrective actions, and are currently monitoring progress.

We also looked at how frequently permitted storm overflows spilled for Dŵr Cymru and Hafren Dyfrdwy combined. The data shows:

Percentage of permitted storm overflows in Wales that spilled:	2022	2023	2024
0 times	12% (247)	8% (162)	7% (156)
between 1 and 9 times	21% (416)	18% (371)	19% (409)
between 10 and 39 times	26% (517)	25% (503)	28% (587)
between 40 and 99 times	27% (538)	27% (540)	30% (639)
between 100 and 299 times	10% (202)	19% (382)	15% (308)
more than 300 times	Less than 1% (5)	Less than 1% (8)	Less than 1% (2)
Unknown – no data provided	4% (70)	3% (65)	1% (19)

- Fewer storm overflows are not spilling, with more spilling 10-99 times, while those spilling over 100 times decreased in 2024 after rising in 2023.
- While total rainfall varied across 2022, 2023, and 2024, the legitimacy of a storm overflow spill depends on the intensity and duration of individual rainfall events in the storm overflow's catchment, not just total rainfall.
- We've tightened the definition of legitimate spills, and water companies are developing methods using rainfall and EDM data to detect potential non-compliance. We will review and audit these methods to ensure they meet our regulatory expectations.

Our regulatory action on storm overflows

We're taking firm and targeted action to regulate storm overflows and reduce their impact on Wales' rivers and coasts.

In October 2023, we issued updated guidance to water companies on how to classify storm overflows and ensure they meet required standards. Based on this, Dŵr Cymru and Hafren Dyfrdwy are carrying out assessments from 2025 to 2030 to help prioritise improvements. Both companies have also been allocated funding to improve performance at over 140 assets by 2030, starting with those causing the most harm.

We are also strengthening our own regulatory approach, focusing on high-impact interventions. Our priorities include:

- Stronger guidance

We've clarified key definitions, such as what counts as a "heavy rainfall event" or a "dry day spill" to tighten regulatory controls and support enforcement.

- More compliance checks

We're increasing our regulatory activity year-on-year across all water discharge permits, with a focus on sites that pose the highest risk to the environment.

- Enhanced auditing

In 2025-2026, we will deliver Operator Monitoring Assessment (OMA) audits and formalise our approach to auditing how water companies manage and report EDM data.

- Better data analysis

We're improving our tools to check the accuracy and completeness of regulatory returns, helping us act more effectively on the data.

- Public education

Working with Taskforce partners, public awareness communications around sewer misuse and what the public can do to help will continue.

- New performance metrics

From 2026, new Environmental Performance Assessment (EPA) metrics will bring greater scrutiny to EDM data. Developed with Ofwat and the Environment Agency, they aim to ensure water companies achieve 90% time operational across all EDMs.

- New legislation

The Water (Special Measures) Act, passed in February 2025, strengthens our powers to hold failing water companies accountable. It introduces Pollution Incident Reduction Plans (PIRPs), requiring water companies to outline how they will reduce pollution, including from storm overflows. We'll publish guidance by the end of 2025, and water companies must have PIRPs in place by April 2026. These plans will set them targets to deliver annual improvements.

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