Storm overflow spill data report – 2023

Introduction

Last year we produced a report on storm overflow spill data from 2022, https://naturalresources.wales/media/ocjbs1gx/nrw-storm-overflow-spill-data-report-final-english.pdf in line with our actions set out in the storm overflow action plans and storm overflow roadmap. We are committed to providing annual updates to this report, sharing spill data received from water companies in Wales and reviewed by NRW. This is to help improve transparency for public and stakeholders and drive improvements in water company performance.

As Wales' environmental regulator, we recognise the public's concern about the number of spills from storm overflows and the potential impact on our rivers and coast.

Working with Welsh Government, Ofwat, Dŵr Cymru Welsh Water and Hafren Dyfrdwy we have established the Better River Quality Taskforce to evaluate the current approach to the management and regulation of overflows in Wales, and to develop detailed plans to drive rapid change and improvement. In the action plans we commit to increase monitoring, gather evidence to evaluate the impact of storm overflows and to tighten our regulatory control over these discharges.

Event Duration Monitors

Across Wales, there are over 2,000 permitted storm overflows on the sewer network. They were designed to relieve pressure during periods of heavy rainfall when the capacity of the sewers becomes overwhelmed. Each storm overflow needs a permit from us to legally discharge into the environment. The permit contains conditions to protect the environment, which water companies must comply with.

We were the first environmental regulator to require water companies to install Event Duration Monitors (EDMs) on all storm overflows operating in Wales. These monitors measure how often, and for how long, overflows discharge into the environment. In Wales the majority of EDMs were installed by 2020. Coverage is now over 99% across the network. Permit conditions require water companies to submit EDM data returns for each site on an annual basis. Data collected from EDM is now central to both the public debate and our understanding of spills.

At the end of February each year, Dŵr Cymru Welsh Water and Hafren Dyfrdwy are

required to submit their EDM regulatory data return to us for scrutiny and publish it on their websites. Dŵr Cymru Welsh Water also submit EDM data related to Bathing Waters at the end of November annually.

Event Duration Monitoring | Dŵr Cymru Welsh Water (dwrcymru.com)

Documents | Regulatory Library | HD Cymru

In 2024, Dŵr Cymru Welsh Water and Hafren Dyfrdwy launched their near real-time maps. The maps show storm overflow activity using EDM data. By sharing this near real-time it will enable stakeholders and the public to make informed decisions regarding water quality in their area.

View Dŵr Cymru Welsh Water's storm overflow map

View Hafren Dyfrdwy's storm overflow map

What does EDM data tells us?

The EDM data provides us with evidence:

- Where storm overflows are operating too frequently
- Where storm overflows are operating for long periods

We report EDM data as part of the annual environmental performance review of both water companies, published each July. View our water company performance reports for Dŵr Cymru Welsh Water and Hafren Dyfrdwy.

Findings from the 2023 data

The data in the table below summarises the 2023 EDM summary returns submitted by Dŵr Cymru Welsh Water and Hafren Dyfrdwy. We are not yet able to assess trends in the data given the relatively small data set (2 years). However, it is our intention to provide trend analysis in future reports.

2023 EDM Headlines	Dŵr Cymru Welsh Water	Hafren Dyfrdwy
Total no. of storm overflows listed in the annual return in 2023	1982	49
Total no. of storm overflows with EDM commissioned	1975	49

% storm overflows listed with EDM commissioned	99.6%	100%
Total no. of storm overflows with spill data	1916	49
Average no. of spills per storm overflow with spill data in 2023	53.5	38.8
Average duration (hours) per monitored spill event in 2023	8.6	8.5
% storm overflows spilled 10 or less times in 2023	26.9%	22.4%
% of storm overflows listed with EDM in operation for at least 90% of the time. *(new addition, not reported in 2022 report)*	86.1%	83.7%

In addition, looking at how often the storm overflows spilled, the 2023 data tells us:

- 3% (65) had no data provided;
- 8% (162) had 0 spills;
- 18% (371) spilled between 1 and 9 times;
- 25% (503) spilled between 10 and 39 times;
- 27% (540) spilled between 40 and 99 times;
- 19% (382) spilled between 100 and 299 times;
- Less than 1% (8) spilled more than 300 times.

There has been an increase in the frequency and average duration of spills in overall storm overflow performance in 2023 compared to 2022, with the number of spills increasing, as well as their duration. Whilst 2023 was a wetter year compared to 2022, it was not significantly worse therefore we would expect the sewer network to be operated and designed to cope with the normal variation in weather patterns experienced in Wales. We expect Water Companies to investigate and report the reasons for increased operation as part of the ongoing assessment work linked to the 2023 NRW guidance.

Our ongoing work Programme.

In October 2023 we issued guidance to the water companies in Wales on how to classify storm overflows to ensure they operate to the required standard. We are working with Dŵr Cymru Welsh Water and Hafren Dyfrdwy on embedding the guidance and ensuring any overflows requiring improvement are factored into improvement plans focusing on those causing harm as a priority.

The Better River Quality Taskforce has collaboratively developed action plans to gather greater evidence on the impact of storm overflows on our rivers, to evaluate and reduce the impacts they cause, to improve regulation and to educate the public on sewer misuse.

View the actions plans on the Welsh Government website

Cyfoeth Naturiol Cymru
Natural Resources Wales

We are working to improve our regulatory approach, focusing on the impact of storm overflows.

In order to achieve our objectives, we are:

- Refining our regulatory guidance including the definition of a heavy rainfall event and the definition of a dry day spill (issued October 2023). This strengthens our ability to act against poorly performing storm overflows. Our regulatory activity is focused on achieving the best environmental outcome and ranges from advice and guidance to enforcement action.

- Improving our analysis and tools to examine the regulatory returns, including checking the completeness and accuracy of the entries in the returns.

- Increasing our regulatory compliance activity from April 2023 across all water quality discharge permits, focusing on those which pose the highest risk to the environment.

- Carrying out an evidence review for storm overflows with a view to developing and implementing an improved monitoring programme in 2025.

- Improving education and communication on sewer misuse, in collaboration with Better River Quality Taskforce members.
- Improving public accessibility of the submitted EDM data via our website. Through the work of the Taskforce, water companies have committed to work towards making EDM data available in near real-time via their websites (actioned).

- Developing further reporting metrics for storm overflows as part of the annual Environmental Performance Assessment (EPA) report. Work is already underway with Ofwat and the Environment Agency on EPA developments for 2026 onwards.