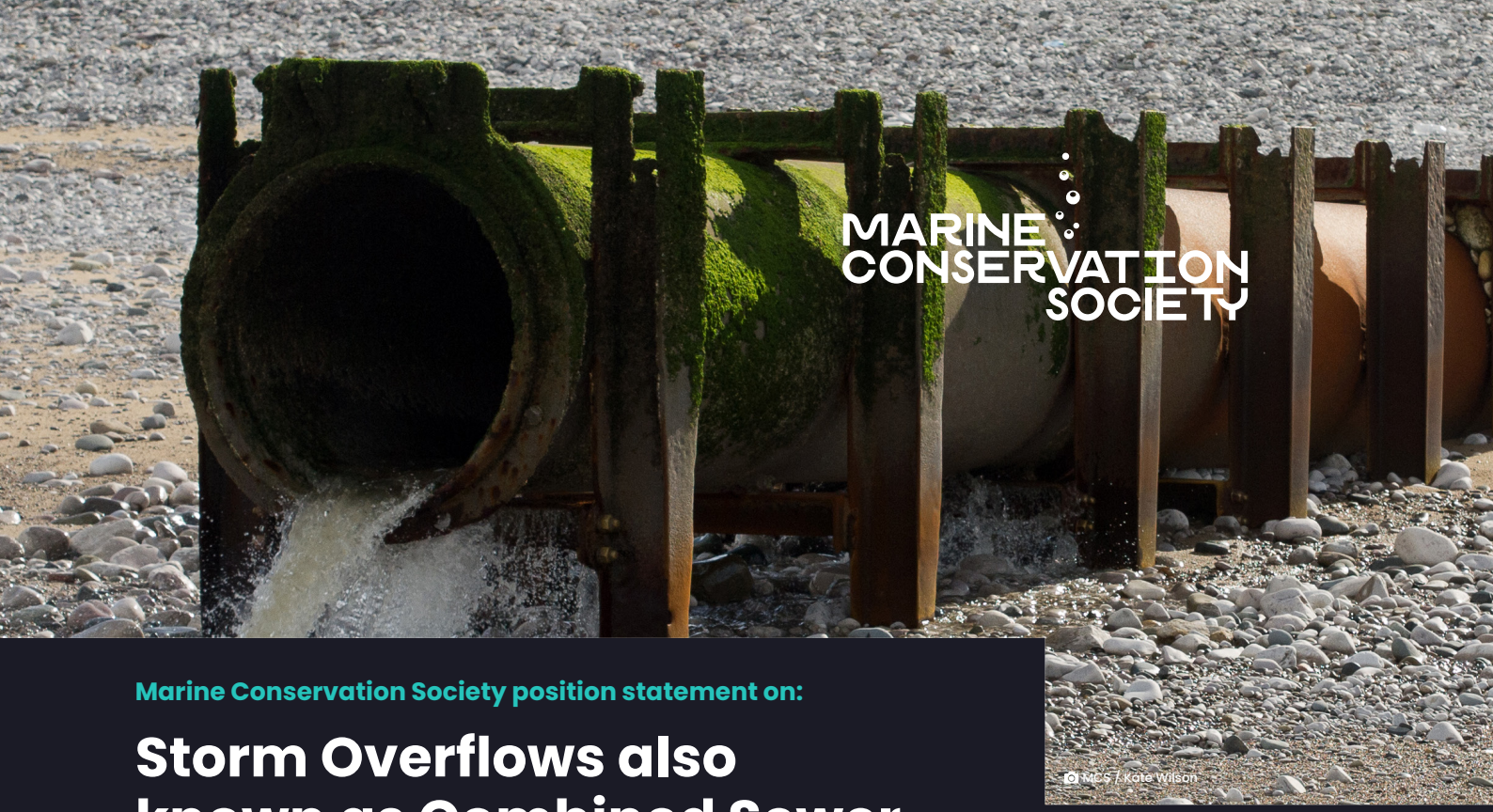

Marine Conservation Society position statement on:

Storm Overflows also known as Combined Sewer Overflows (CSOs)

Drafted: February 2023

Good water quality is essential for a healthy marine ecosystem, and for our enjoyment of the coast. Yet, our estuarine and coastal waters are being forgotten when it comes to reducing pollution and many are failing to meet water quality targets. For example, in England, only 19% of estuaries and 45% of coastal waters are at Good Ecological Status, with 0% at good chemical status, and 75% of shellfish waters fail water quality standards.[1] Despite this, recent plans to reduce storm overflow discharges in England[2] do not cover all estuarine and coastal waters.

Although much of our sewage is treated to remove contaminants before being discharged back to the environment, some sewage is discharged untreated into our rivers, estuaries and seas through storm overflows (also known as, combined sewer overflows, 'CSOs', sewer overflows, or, intermittent discharges). The majority of our sewer pipes are combined, collecting both rainwater and sewage in the same pipes. There are a variety of measures that can help reduce the severity of the impact on sewerage from (heavy) rainfall events- these include improved planning regulations and requirements as well as nature-based solutions.

Storm overflows were designed to reduce the chance of sewage flooding homes, gardens and streets during periods of heavy rainfall when the sewage network reaches capacity. They are operated by water and sewerage companies in England, Wales, Scotland and Northern Ireland and permits for their use are issued by the environmental regulator.

As our population has grown and our climate has changed, and without adequate investment in the sewer network, these storm overflows are being used far too often as a way of routinely dealing with sewage, even during dry weather. Recent monitoring data from water companies and regulators confirms this, and we know that without immediate action the situation will continue to get worse.

Sewage contains a cocktail of bacteria, viruses, nutrients, harmful chemicals, macroplastics (greater than 5mm e.g. wet wipes and sanitary products) and microplastics (less than 5mm e.g. sources from clothing, cosmetics and tyres). These pollutants impact on marine wildlife, including the fish we eat. Crucially, many of these pollutants are highly persistent and therefore will accumulate over time, meaning if we release them into the environment they will pass, or may have already passed, a threshold of harm.

Therefore, it is vital that urgent action is taken to stop pollution from storm overflows.

Our asks for governments, environmental regulators and water companies:

- **Water companies must not use storm overflows as a way of routinely dealing with sewage**
  - Discharges from all storm overflows must be absolutely minimised and only operate during unusually heavy rainfall and most not impact the environment.
  - There must be appropriate ecological monitoring put in place to assess any acute or long-term impacts.
  - The above actions must be done for all storm overflows, including all of those in estuaries and coastal waters.
- **Governments must set progressive reduction targets for spills** (including frequency, duration and harm) for all storm overflows (including those in estuaries and coastal waters). As a minimum, reduction targets should include reducing all discharges to a level where they are only used in unusually heavy rainfall and their use is not impacting the environment.
- **Governments should require all storm overflows to have real-time electronic monitoring installed by 2024** and share this data in real-time.
- **Governments should require screens to be installed on all storm overflows by 2030** to stop solid debris from being released.
- **Governments and environmental and water industry regulators must properly enforce existing laws and regulations to prevent sewage pollution.** These laws must not be weakened as part of the Retained EU Law Bill.
- **Targets should be set for governments to implement upstream solutions to stop harmful chemicals and microplastics at source** so that the amount entering the wastewater system in the first place is absolutely minimised. Specifically, actions should be taken to address items which are mis-flushed directly into sewers, such as wet wipes and other sanitary items See our separate policy on this issue.
- **Monitoring and research programmes must be extended to include a wider range of emerging contaminants and microplastics**, to provide an accurate picture of environmental status. This should cover all pathways and sinks, including, sewage discharges and storm overflows.We therefore call on the Scottish Government to ban disposable vapes to help move Scotland toward a sustainable circular economy and protect children and young people from risks to their long-term health.

Key statistics

There are around 20,800 storm overflows in England, Wales and Scotland[3,4,5]. Monitoring in each country, which records the number of times and duration of spills, varies widely. Almost all storm overflows are monitored in Wales, around 89% in England and only 9.5% of storm overflows are monitored in Scotland, although data is only available for around half of those monitored (4%). In recent years this data has been made publicly available and is summarised in the table below. Although the data in Scotland may be skewed by the low percentage of storm overflows with monitoring, the data that is available shows that in general storm overflows are being used far too frequently in each country, with an average of 29 spills per overflow annually in England, 44 in Wales and almost double this amount, 81, in Scotland[3,4,5]. The average duration of spills is also highest in Scotland, at 11 hours per recorded spill event and Scotland has the highest percentage (25%) of storm overflows with more than 100 spills annually[5].

Over 2022, the Marine Conservation Society's Beachwatch programme, found that sewage related debris comprised 15% of the total litter items recorded on surveyed beaches throughout the UK. An average of 3 sewage related debris items were recorded per 100m of beach surveyed, with averages of 3.8, 2.5, and 2.2 items per 100m on English, Scottish and Welsh beaches respectively. Some areas in Scotland's central belt saw averages as high as 88 items per 100m in Renfrewshire and 274 items per 100m in West Lothian. This data underlines the need to take urgent action to tackle sewage related debris both at source, preventing it from reaching sewers in the first place, and by reducing the occurrence of storm overflows and preventing the release of debris from any that remain.

Although screens can be installed on storm overflows to reduce the amount of sewage related debris being discharged, results from a survey of UK water companies conducted by the Marine Conservation Society in 2021 found that many storm overflows are not screened, and that there was wide variability between water companies. In England, on average (based on 5 water companies who responded to our survey), less than half of overflows (46%) had screens, ranging from just 12% for the lowest amount screened to 62%, with 54% screened in Wales.

2021 Storm Overflow Summary Statistics[3,4,5]	**England**	**Wales**	**Scotland**
Total number of Storm Overflows	14,470	2,202	3,576
%age of storm overflows monitored and reported	89%	99%	4%*
Total number of monitored spill events	372,533	94,033	10,763
Total duration (hrs) of monitored spill events	2,667,452	785,576	10,763
Average spills per overflow with spill data	29	44	81
Average duration (hrs) per monitored spill event	7	8	11
%age with at least one spill	87%	88%	80%
%age with more than 10 spills	60%	67%	65%
%age with 100 or more spills	5%	13%	25%

* The percentage of overflows with monitors which are reported annually.

References

[1] https://www.gov.uk/government/publications/state-of-the-water-environment-indicator-b3-supporting-evidence/state-of-the-water-environment-indicator-b3-supporting-evidence

[2] https://www.gov.uk/government/publications/storm-overflows-discharge-reduction-plan

[3] https://www.data.gov.uk/dataset/19f6064d-7356-466f-844e-d20ea10ae9fd/event-duration-monitoring-storm-overflows-annual-returns

[4] https://www.dwrcymru.com/en/our-services/wastewater/river-water-quality/combined-storm-overflows

[5] https://www.scottishwater.co.uk/Your-Home/Your-Waste-Water/Sewer-Overflow-Spill-Data