

Storm overflows

What are they and when do they operate?

On behalf of the public:

- We collect wastewater from **736,000 households & businesses**.
- Treat and return wastewater safely to the environment through **1,029 Wastewater Treatment works**.
- Maintain and operate **16,856km of pipes** and **515,094 manholes** in Northern Ireland's sewer network.

Why do we have overflows?

Most modern houses have separate sewerage systems, where foul water from toilets, washing machines etc. goes to a foul sewer and flows onwards to a Wastewater Treatment works. Storm water from roofs and driveways goes to a storm sewer and into a watercourse. However, many older houses are served by combined sewers which take both foul water and storm water to a Wastewater Treatment works. With increased development and less green areas, more foul water and storm water is entering the combined sewers, pushing them to or beyond their capacity. During periods of extreme rainfall these combined sewers can become overloaded.

What is an overflow?

Overflows are emergency spill points designed to prevent sewers from becoming overloaded. They act as a pressure release point. During extreme rainfall, they allow water to escape into a watercourse, preventing flooding of homes, businesses and schools. There are overflows within the network, these are called Combined Sewer Overflows (CSOs) and also at Wastewater Pumping Stations, these are called Emergency Overflows (EOs).

When do they operate?

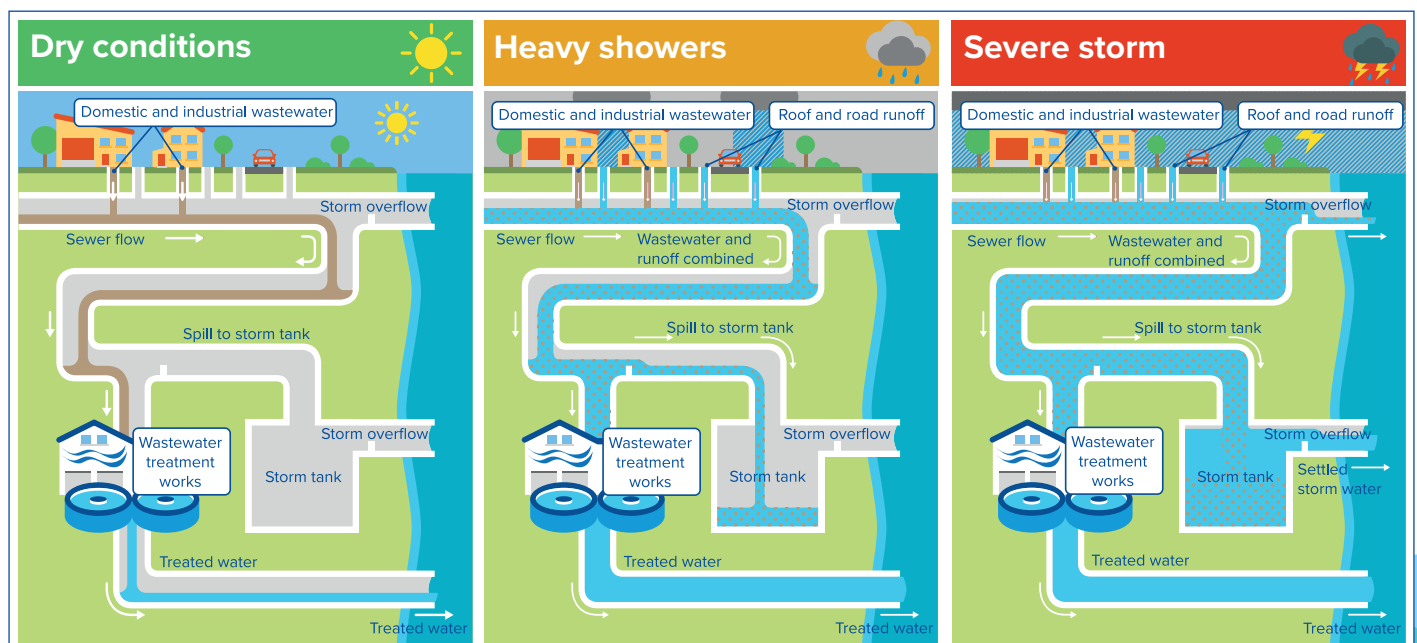
CSOs operate during periods of extreme rainfall when large amounts of rain water enter the combined sewer. EOs may also operate during these periods, or in the event of a mechanical breakdown.

Did you know?

Parts of NI Water's sewer network date back to Victorian times, particularly around Belfast. Many networks around the world are built in the same way, making this a global challenge.



How combined sewers are impacted by different types of weather.



What is an Unsatisfactory Intermittent Discharge?

When an overflow operates more often than it was originally designed to, it is classified by the Northern Ireland Environment Agency (NIEA) as an Unsatisfactory Intermittent Discharge (UID).

How can UIDs be removed?

The sustainable way to reduce the number of unsatisfactory discharges is to remove storm water from combined sewers and provide additional storage in NI Water's sewer network. This will require significant investment, the removal of UIDs will be an ongoing programme over several Price Control periods.

Are overflows discharging raw sewage?

During periods of heavy rainfall, the sewage discharged is heavily diluted and will be further diluted when it enters the watercourse/sea.

Why is this allowed?

Overflows operate to prevent flooding of homes and businesses. The NIEA regulates NI Water and gives consent for overflows to operate under certain conditions.

What would happen if storm overflows were banned?

During heavy or prolonged rainfall, the network would become overloaded, this would cause out of sewer flooding and possibly flood homes. This could also contribute to flooding of public highways and environmental pollution.

Are overflow discharges monitored?

To accurately record all spills, Event Duration Monitors (EDMs) and flow meters would need to be installed across NI Water's sewer network. These require power and increased technology. NI Water does not have the necessary funding required to fully roll out this technology.

EDM monitors already installed

During our Price Control 15 period (2015 - 2021), 279 EDMs were installed on CSOs and EOs discharging within 2km of bathing water or shellfish water. A programme of work during Price Control 21 (2021 - 2027) will see installation of circa a further 650 EDMs - an investment of ca. £14.35m.

Is NI Water responsible for bathing water quality?

DAERA is responsible for monitoring bathing water quality. Several factors impact bathing water quality including agricultural run-off, road run-off, animal waste and marine activity. We must all play our part in protecting rivers and seas with DfI Rivers, NIEA, DAERA and other stakeholders.

PC21 Funding

Even if the current level of investment is maintained we will continue to face difficult choices between economic growth, and damage to the environment.