REFERENCE

2425247 & 2425248

RELEASE DATE

August 2024

SUBJECT

Wastewater Emissions to Lough Erne

REQUEST

I am writing to request information under the Freedom of Information Act concerning the discharge of sewage/ wastewater into the Lough Erne system since the beginning of this year. Specifically, I am requesting the following information:

1. The volume, in tonnes, of sewage/wastewater that has been discharged into the Lough Erne system from January 1, 2024, to July 25, 2024, from both Wastewater Treatment Works (WWTW) and Combined Sewer Overflows (CSO).

   Please provide the information in a table format, detailing:

   - Location
   - Spill frequency (since January 1, 2024)
   - Spill volume (tonnes, since January 1, 2024)
2. Any photographic or video evidence of overflows/discharges at Enniskillen DA Wastewater Treatment Works (WWTW) and Combined Sewer Overflows (CSO) from January 1, 2024, to July 25, 2024.

   This should include:

   - Photographs or videos taken by NI Water staff for the purposes of record-keeping or incident reporting.
3. The volume, in tonnes, of sewage/wastewater that has been discharged into the Lough Erne system from January 1, 2023, to December 31, 2024, from both Wastewater Treatment Works (WWTW) and Combined Sewer Overflows (CSO) to include:

   a. Location
   b. Spill frequency (from January 1, 2023, to December 31, 2024)
   c. Spill volume (tonnes, from January 1, 2023, to December 31, 2024)

4. Any photographic or video evidence of overflows/discharges at Enniskillen DA Wastewater Treatment Works (WwTW) and Combined Sewer Overflows (CSO) from January 1, 2023, to December 31, 2024, to include photographs or videos taken by NI Water staff for the purposes of record-keeping or incident reporting.

RESPONSES

As of July 2024, there are 2,444 operational storm overflows deployed across the whole of Northern Ireland's public wastewater network, at pumping stations and at treatment works. Details of these are available on our Storm Overflow web page.

Actual, measured, recorded spill counts

Of NI Water's 2,444 operational storm overflows, 82 (signified by a red pin on NI Water's Storm Overflow map) have EDMs1 which are operational and returning information on when a spill is occurring (count) and for how long (duration).

NI Water is taking a phased approach to EDM installation. Our initial focus has been to install EDMs on storm overflows which spill into Northern Ireland's 26 designated bathing waters. To date, we have EDMs located in 22 of the 26 designated bathing waters. NI Water is committed to improving our EDM coverage of bathing waters; by Summer 2025, we anticipate EDMs at most designated bathing and shellfish waters.
None of NI Water's Storm Overflows which discharge to the Lough Erne system currently has verifiable EDMs. Therefore, measured, recorded spill counts (or spill frequencies) are not held for both Wastewater Treatment Works (WwTW) and Storm Overflows that discharge into the Lough Erne system for either of the periods specified above, i.e., January 1, 2024, to July 25, 2024 (reference 2425047), or January 1, 2023, to December 31, 2024 (reference 2425048). Annex A details the relevant exception - Regulation 12(4)(a) of the EIR (Information not held).

Actual, measured, recorded spill volumes

None of NI Water's Storm Overflows has meters to record the volume of spills. Flow meters are very expensive to install and maintain. NI Water endorses the assessment made by Water UK that the cost to install EDMs across the entire network is already significant, and the investment required to upgrade this technology to monitor spillage

volumes would be more effectively spent fixing the problems, rather than improving their measurement. There may be exceptions to this rule, depending on circumstances, and NI Water will remain open to these and alert to the application of any lower cost new technologies that may help. As such, Annex A and Regulation 12(4)(a) again refer, i.e., measured, recorded spill volumes are not held for both Wastewater Treatment Works (WwTW) and Storm Overflows that discharge into the Lough Erne system for either of the periods specified above.

Actual, measured, recorded spill event durations

As detailed above, as of July 2024, 82 EDMs are operational and returning information on frequency and duration of spill (signified by a red pin on NI Water's Storm Overflow map). However, none of NI Water's Storm Overflows that discharge to the Lough Erne system currently has verifiable EDMs. Therefore, measured, recorded spill event durations from both Wastewater Treatment Works (WwTW) and Storm Overflows for that geographic area, for either of the periods specified above are not held. Annex A again refers.

Predictive, modelled, non-recorded spill data

NI Water relies on the analysis and findings of industry standard hydraulic models to simulate observed flows and predict spills across the wastewater networks. As agreed with our Regulators, we have been investing in developing integrated suites of models to understand more accurately the spill performance of storm overflows and their impact on the receiving aquatic environment. Our Drainage Area Study (DAS) models are built and calibrated to industry best practice (Chartered Institute of Water and Environmental Management) and approved by the NIEA. The models are typically simulated using 20 years of historical rainfall data to generate an annual average for frequency and volume of spills.

The models, supported by some flow meters that measure the rate of wastewater flow at various points, give indicative performance predictions, but have some limitations. They cannot, for example, take account of operational conditions in the actual network, such as the build-up of silt and blockages, which can result from the disposal of inappropriate materials to sewer.

The results of the models consider average performance in a typical year. Spill performance during years when Northern Ireland experiences abnormally low or high rainfall is not represented in the models.

Although accuracy has improved, predictive modelling still relies on assumptions, which mean that it will not be 100% correct. Despite their limitations, models are important in helping us and the NIEA to understand what is happening in our system and where upgrades are required to better protect the environment.

The coverage of our models has expanded following significant investment and now covers over 80% of our network and 50% of our storm overflows.

Predictive, modelled, non-recorded spill data for all NI Water Storm Overflows is available on our website.

Specific to the Lough Erne system

Storm Overflows discharging to the Lough Erne can either be viewed on NI Water's Storm Overflow map, by zooming into the geographic area in question, or using our modelled spills spreadsheet and filtering results by receiving waterbody (Aghavea River, Colebrooke River (Maguiresbridge), Lacky River, Kesh River, Upper Lough Erne, Ballinamallard River (Ballinamallard), Erne River (Belleek), Blackslee Burn, Many Burns River, Ballinamallard River (Magheracross), Colebrooke River (Ashbrooke), Lough-a-hache River, St Angelo Stream, Lower Lough Erne Devenish, Ballycassidy River, Newtownbutler River, Swanlinbar River, Glendurragh River, Hollow River, Hollybrook River, Finn River (Rosslea), Tamlaght Tributary, Tempo River (Tempo), Trillick Tributary and Ballinamallard River (Keenogue) and Erne River (Enniskillen). Using this, you will be able to extrapolate predictive, modelled results for both predicted spill frequency and predicted spill volume for associated assets discharging to the Lough Erne.

As previously stated, none of NI Water's Storm Overflows which discharge to the Lough Erne system currently have verifiable EDMs so actual, recorded results are not held.

Photographic or video evidence

Most pollution incidents relate to the sewer network (caused by blockages or sewer defects) as opposed to the WwTWs or Storm Overflows and, having checked with both our Wastewater Assets Senior Manager and our Wastewater Business Unit Officer, I can confirm that NI Water holds no photographic or video evidence of overflows/discharges at Enniskillen DA Wastewater Treatment Works (WwTW) and Storm Overflows for the purposes of record-keeping or incident reporting, for the periods requested. Annex A again refers.

It would be worth checking with the NIEA who may retain same in their Environmental Regulator role.

https://www.daera-ni.gov.uk/contacts/northern-ireland-environment-agency-contact

It is important to understand that the regulatory reporting of the sewer monitoring datasets is likely to be a requirement for the next Price Control period, i.e., PC27 (2027/28- 2032/33), and not the current PC21 Period.