REFERENCE

2526678

RELEASE DATE

28 April 2026

SUBJECT

Requested information about NI Water's sampling and precautions in relation to antibiotics in the public water supply.

RESPONSE

NI Water replies to each of your queries in turn as follows.

1. ***Details of any testing, monitoring, or analysis carried out by Northern Ireland Water in relation to the presence of antibiotics in raw or treated water abstracted from.***

There is no regulatory standard for antibiotics in the drinking water regulations in Northern Ireland [Water Quality (Water Supply) Regulations (NI) 2017]. As such, NI Water has not undertaken analysis for antibiotics in the raw or treated drinking water.

NI Water uses the drinking water safety planning process encouraged by the WHO. This uses the 'source to tap' approach for the assessment and management of risks to drinking water quality. Applying these principles,
NI Water assesses:

- the risk for contaminants in the raw water sources used for the abstraction to our water treatment works (WTWs),
- the effectiveness of the multibarrier treatment processes in place at our WTWs to remove the contaminants and reduce the risk and,
- the risk, after the treatment control measures, to the quality of the treated drinking water supply to consumers.

NI Water has not carried out specific analysis for antibiotics in raw or treated drinking water. However, NI Water is aware of published material from the World Health Organisation and the Drinking Water Inspectorate indicating that treatment

processes such as ozonation and activated carbon can be effective in reducing many pharmaceuticals in drinking water.

The World Health Organisation (WHO) study into the human health risk assessment for pharmaceuticals in drinking water concluded that the analysis of results indicated that appreciable adverse health impacts to humans are very unlikely from exposure to the trace concentrations of pharmaceuticals that could potentially be found in drinking water.

Concentrations of pharmaceuticals in drinking water are generally more than 1000-fold below the minimum therapeutic dose (MTD), which is the lowest clinically active dosage. The WHO also concluded that, as the trace levels of pharmaceuticals in drinking water are very unlikely to pose risks to human health, the development of formal health-based guideline values for pharmaceuticals in the WHO Guidelines for Drinking-water Quality is unwarranted and, therefore, it would not currently be a requirement for routine monitoring for these compounds in the treated drinking water.

Additionally, research carried out for the Drinking Water Inspectorate (England & Wales) on the toxicological evaluation for pharmaceuticals in drinking water and the risk for pharmaceuticals in drinking water concluded that the levels of these pharmaceuticals measured in drinking water are not anticipated to pose an appreciable risk to public health.

2. ***Copies of any reports, data, or internal communications confirming or assessing measurable levels of antibiotics in Lough Neagh.***

NI Water does not hold recorded information falling within this part of your request. NI Water has not undertaken sampling for antibiotics in Lough Neagh and, on the basis of the searches undertaken for this request, has not identified any reports, data, or internal communications held by NI Water confirming or assessing measurable levels of antibiotics in Lough Neagh. NI Water is therefore relying on Regulation 12(4)(a) of the EIR in relation to this part of your request.

By way of assistance, the Northern Ireland Environment Agency (NIEA) may hold relevant information about water quality monitoring in Lough Neagh. Its contact details are available at the following link:

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

3. ***A clear description of any precautionary measures, treatment adjustments, or additional processes currently in place (or introduced in the past 3 years) specifically in response to the detection or risk of antibiotics in the water supply.***

No changes to drinking water treatment have been made in relation to antibiotics.

4. ***Confirmation of whether existing water treatment processes are considered sufficient to remove antibiotics, including any supporting evidence, studies, or risk assessments relied upon.***

As detailed above, studies on drinking water treatment for the removal of pharmaceuticals show that water treatment processes such as ozonation and activated carbon, which are treatment processes used by NI Water, are effective for removal of pharmaceuticals to ensure there is low risk for pharmaceuticals to be present in the treated drinking water supply.

You may find the studies detailed at the links to the WHO and the DWI (England & Wales) sites below of interest.

WHO - Pharmaceuticals in drinking water:
https://iris.who.int/server/api/core/bitstreams/484c2eae-2b81-49f3-9be3-c6e297a52eeb/content

DWI -Toxicological evaluation for pharmaceuticals in drinking water:
https://dwi-production-files.s3.eu-west-2.amazonaws.com/wp-content/uploads/2020/10/27111256/DWI70-2-295.pdf

5. ***Details of any guidance, directives, or communication received from regulators or government departments regarding antibiotics in Lough Neagh.***

NI Water has not identified any separate recorded guidance, directives, or communications held by NI Water that fall within this part of your request, other than the public material referred to below.

The Department of Agriculture, Environment and Rural Affairs' (DAERA) Lough Neagh Action Plan includes an action in relation to Microbial Source Tracking to strengthen understanding of antimicrobial resistance in the environment (Action 2).

https://www.daera-ni.gov.uk/publications/lough-neagh-report-and-action-plan

6. ***If no specific precautions are being taken, please explicitly confirm this***.

No specific treatment changes or additional precautionary measures have been introduced by NI Water in response to antibiotics. NI Water continues to keep relevant published research and wider scientific developments under review.

NI Water works closely with DAERA, including a number of science oversight groups, to understand the issues within Lough Neagh, through monitoring and collaboration. Scientific innovation and monitoring results are shared between NI Water and DAERA.

NI Water is also represented on a number of NIEA-led forums, which seek to protect Drinking Water Protected Areas (DWPAs) and specifically Lough Neagh. NI Water is an active member of 'Forever Lough Neagh', which aims to develop a Lough Neagh Road Map to Recovery, in collaboration with Lough Neagh Stakeholders.