



EPA OPENING STATEMENT

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OIREACHTAS JOINT COMMITTEE

ON

HOUSING, PLANNING AND LOCAL GOVERNMENT

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Introduction

Firstly, I would like to thank the Committee for inviting the Environmental Protection Agency (EPA) to assist, as appropriate, in relation to issues affecting the quality of water, boil water notices nationally and the recent boil water notice for parts of Counties Dublin, Kildare and Meath. I am joined by my colleagues from the EPA's Office of Environmental Enforcement, Dr Michelle Minihan (Senior Inspector) and Mr Andy Fanning (Programme Manager).

The EPA is the drinking water quality regulator for public water supplies and works to ensure that drinking water supplied by Irish Water meets the standards of the Drinking Water Regulations so that public water supplies are safe to drink. Local Authorities are the regulators with responsibility for the drinking water quality of private water supplies. As the utility supplying public water, Irish Water is responsible for ensuring that public water supplies meet the standards of the Drinking Water Regulations. Other suppliers including Group Water Schemes and private suppliers are similarly responsible for the drinking water they provide.

The EPA's primary focus is to oversee Irish Water's response to drinking water quality failures; however, EPA also requires Irish Water to take actions to prevent drinking water quality failures from happening in the first place and is working to ensure that investment is prioritised for those water supplies which pose the greatest risk to public health.

Irish Water must notify the EPA of any drinking water quality failures and the EPA then oversees Irish Water's investigation and their actions in response to the failure. As part of the EPA's role in drinking water quality investigations, EPA may:

- Audit drinking water supplies and treatment processes
- Issue legal Directions
- Take legal Prosecutions
- Place a water supply on the EPA Remedial Action List

The Remedial Action List, first prepared by the EPA in January 2008, is a dynamic list of public water supplies that EPA has identified as priorities for remedial action by Irish Water.

Issues affecting the quality of drinking water

In its most recent report on the quality of public drinking water supplied by Irish Water published in September this year, the EPA found that the overall quality of drinking water remains high, with 99.9 per cent compliance with microbiological standards and 99.6 per cent compliance with chemical parameters in 2018. While this indicates that the majority of public water supplies are safe, further measures are necessary to improve the security of our supplies and avoid long term boil water notices into the future.

The 2018 report set out a series of issues affecting the quality of the drinking water supplied by Irish Water that require action namely:

- ensuring adequate disinfection of treated water
- reducing the presence of trihalomethanes (THMs) in treated water
- replacing of Lead water mains and household pipes
- eradicating persistent pesticide failures above the limit set out in the drinking water regulations
- establishing Drinking Water Safety Plans for supplies

These issues have been recognised for a number of years and the EPA has recommended that Irish Water take a strategic national approach to them to prevent further drinking water quality failures. Private supplies including those operated by Group Water Schemes and other private suppliers are subject to the same issues and the EPA publishes a report on the quality of drinking water from private supplies annually. On a national level these private supplies do not achieve the same level of compliance with the standards in the Drinking Water Regulations.

EPA's 2018 report highlighted that *Cryptosporidium* detections have increased in the past three years. It was detected in 25 public water supplies in 2018, up from 17 in 2017 and 12

in 2016. *Cryptosporidium* is a parasite that is found in human or animal waste and, if it is present in drinking water, can cause persistent diarrhoea. Illness is often more severe in small children and elderly people and can be very serious in those people who are immunocompromised. If *Cryptosporidium* might be present in a supply, appropriate treatment processes (referred to as a ‘barrier’) must be put in place. These barriers also serve to address certain other parasites including *Giardia* which can give rise to similar illnesses if consumed.

Adequate treatment is required at all water supplies where *Cryptosporidium* has been identified as a risk. It is not enough to have a barrier in place, it must also be properly operated and maintained. At the end of 2018, the EPA’s Remedial Action List (RAL) included 15 supplies with inadequate treatment for *Cryptosporidium*. The EPA will continue to monitor Irish Water’s progress towards ensuring that all supplies have an adequate barrier to *Cryptosporidium*.

Boil Water Notices

The issuing of a boil water notice is not a statutory function of the EPA but is done by Irish Water or a private water supplier in consultation and agreement with the Health Service Executive. As the environmental regulator of Irish Water, EPA emphasises that there is need for boil water notices and other water restrictions in certain circumstances, to protect human health.

During 2018, 44 boil notices were in place in 14 counties affecting 97,204 people. This is an increase compared to 2017, during which 42 boil notices were in place affecting 21,657 people. The main reason for the increase in the number of people affected is that 65,000 people were on a boil notice for three days in early 2018 when a disinfection failure occurred at the Vartry Reservoir supply. Over 13,500 people were also affected by 12 precautionary boil notices issued due to Storm Emma in March 2018.

A long-term boil notice is one that is in place on a supply for longer than 30 days. Of the 44 boil notices in place during 2018, nearly two-thirds (26 notices) were short-term notices and were lifted within one month. Five were long-term notices that were in place for longer than one year.

Recent Boil Water Notice affecting parts of Counties Dublin, Kildare and Meath

Irish Water informed the EPA at 11am on Tuesday 22nd October of a mechanical failure at Leixlip water treatment plant which had occurred on Monday 21st October. EPA participated in a meeting between HSE and Irish Water on the afternoon of Tuesday 22nd October to assess the risk this incident posed to consumers. Irish Water and Fingal County Council, following consultation and agreement with the Health Service Executive, issued a Boil Water Notice. The Boil Water Notice was a preventative measure and was necessary to ensure that public health was protected and consumers were not at risk from *Cryptosporidium*/*Giardia* (microscopic parasites) that can cause illness.

On Thursday 24th October, EPA inspectors conducted an audit at Leixlip water treatment plant. The purpose of the audit was to establish the full facts of the incident and corrective actions taken; to verify the performance of Leixlip Water Treatment plant and to assist in gathering the information to facilitate the lifting of the Boil Water Notice. EPA Inspectors also reviewed the recommendations of the EPA's previous audit of 22nd March 2019 and assessed the implementation of the actions taken to address those recommendations.

The EPA inspectors found that:

- the incident began at 3 pm on Monday 21st October and ended at 5 am on Tuesday 22nd October when remedial works restored the affected production line.
- the water treatment plant appears to have been operating satisfactorily since 5 am on Tuesday 22nd October. There was sampling of treated water for *Cryptosporidium*/*Giardia* in the critical period before, during and after this incident. These samples indicate that the quality of water supplied was satisfactory.
- a blockage in the coagulant dosing line resulted in operational difficulties with the water treatment processes and gave rise to elevated turbidity levels in treated water.
- the elevated turbidity levels in treated water indicated a significant risk to the safety of the water supply because the treatment barrier for removal of *Cryptosporidium* & *Giardia* was compromised, and there was a risk of breakthrough of microscopic parasites into the water supply.

- there was a failure to respond to multiple alarms that activated in response to the elevated turbidity.
- Irish Water and Fingal County Council implemented automatic plant shutdown for the whole plant when turbidity alarms are not responded to within 15 minutes from 24th October 2019, the day of the audit.
- while the Leixlip Water Treatment plant is now operating satisfactorily, the level of treatment at this plant is not sufficient to manage the risk posed by the River Liffey source water. In particular, there is currently a deficit for treatment of parasites such as *Cryptosporidium* and *Giardia*. Filter upgrade works are underway to reduce this deficit but will not be sufficient to confirm adequate treatment.
- The EPA, in its October audit report, recommended that ultraviolet disinfection be considered by Irish Water as an additional treatment barrier to inactivate *Cryptosporidium/Giardia* at Leixlip water treatment plant. As an ultimate failsafe, ultraviolet disinfection will inactivate any *Cryptosporidium/Giardia* parasites in the water supply, to ensure the protection of public health.

The Boil Water Notice was lifted by Irish Water at 4.30pm following meetings on Friday afternoon 25th October between HSE and Irish Water and between HSE, Irish Water and the EPA.

The EPA highlighted the risk of this type of incident occurring, during an audit of Leixlip water treatment plant in March 2019, following a mechanical failure of chemical (polyelectrolyte) dosing pumps at the plant and recommended that plant operators respond immediately to any alarms generated and that if an operator fails to respond to an alarm, that Irish Water should ensure that the plant automatically shuts down, to prevent inadequately treated water being supplied to consumers.

Irish Water in response to that audit in May confirmed that the plant would automatically shut down when an operator fails to respond to an alarm. The EPA audit on 24th October found that the automatic plant shutdown arrangement was implemented on one production line at Leixlip water treatment plant in April 2019 and was only implemented on the remaining two production lines at the plant on the day of the audit.

The EPA's report following the audit on Thursday 24th October was published on the 30th October to the EPA website.

Closing remarks

Chair, I would like to assure the Committee that the EPA will continue to provide regulatory oversight of Irish Water, and work closely with the HSE, Local Authorities and the Department of Housing, Planning and Local Government with the primary objective of ensuring the protection of human health and the environment. Specifically, the EPA will work to ensure that all recommendations of both audits of Leixlip Water Treatment Plant are addressed by Irish Water and Fingal County Council without delay.

Thank you for your attention.