

	<h1>Drinking Water Audit Report</h1>
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County:	Leitrim	Date of Audit:	16 th May 2014
Plant(s) visited:	Rossinver PWS spring source and chlorination plant	Date of issue of Audit Report:	17 th June 2014
	Scheme Code 1700PUB5000	File Reference:	DW2014/211
		Auditors:	Ms Ruth Barrington Mr David O'Connor
Audit Criteria:	<ul style="list-style-type: none"> • <i>The European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014).</i> • <i>The EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (ISBN: 978-1-84095-349-7)</i> • <i>The recommendations specified in the EPA Report on The Provision and Quality of Drinking Water in Ireland.</i> 		

MAIN FINDINGS

- i. **The Rossinver public water supply abstraction is from a spring. There is no *Cryptosporidium* barrier.**
- ii. **The audit was carried out following an *Enterococci* exceedance in the supply and subsequent boil water notice. The boil water notice was lifted on the day of the audit.**

1. INTRODUCTION

Under the *European Union (Drinking Water) Regulations 2014* the Environmental Protection Agency is the supervisory authority in relation to Irish Water and its role in the provision of public water supplies. This audit was carried out in response to the notification by Irish Water dated 2nd May 2014 of the failure to meet the *Enterococci* parametric value (as specified in Table A of Part 1 of the Schedule of the Regulations) in the Rossinver PWS on 30th April 2014 and the subsequent boil water notice placed on the supply on 2nd May 2014.

The Rossinver PWS supplies water (50-60 m³/day) to a population of approximately 359. The supply was expanded at the end of 2013 to incorporate two Group Schemes, Eden/Cornagowna and Rossinver/Dooard, and the population of 359 reflects the addition of these two schemes. The source water is taken from a spring which is located in a rural area outside Rossinver. The treatment consists of disinfection only, using hypochlorite, and there is no barrier to *Cryptosporidium* entering supply.

Where the text of the audit report refers to the Water Service Authority this refers to Irish Water in accordance with Section 7 of the Water Services (No. 2) Act 2013.

The opening meeting commenced at 2.30 p.m. at the Rossinver chlorination building. The scope and purpose of the audit were outlined at the opening meeting. The audit process consisted of interviews with staff, review of records and observations made during an inspection of the treatment plant. The audit observations and recommendations are listed in Section 2 and 4 of this report.

The following were in attendance during the audit.

Representing Irish Water: (* indicates that person was also present for the closing meeting)

Mr Justin Doran – Wastewater Engineer, Irish Water*

Ms Maeve Coultry – Executive Technician, Leitrim County Council*

Ms Collette Connolly – Environmental Technician, Leitrim County Council*

Ms Lisa Cronin – Environmental Technician, Leitrim County Council*

Representing the Environmental Protection Agency:

Ms Ruth Barrington – Inspector*

Mr David O'Connor – Inspector*

2. AUDIT OBSERVATIONS

The audit process is a random sample on a particular day of a facility's operation. Where an observation or recommendation against a particular issue has not been reported, this should not be construed to mean that this issue is fully addressed.

1.	<p>Source Protection</p> <ol style="list-style-type: none"> a. The spring source for the Rossinver PWS is located within privately owned land. The water supplier has a wayleave to access the chlorination building and spring. b. The spring is enclosed in a concrete structure with access hatch. c. No <i>Cryptosporidium</i> risk assessment has been done on the source and there has not been any recent catchment work that staff were aware of. d. Land owners have not been written to with regard to their obligations under the <i>European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2014 (SI No.31 of 2014)</i>.
2.	<p>Chlorination and Disinfection</p> <ol style="list-style-type: none"> a. The abstracted water is disinfected using chlorination (hypochlorite). b. There is duty and standby chlorination with automatic switchover and alarmed chlorine residual monitoring. c. The chlorine contact time has not been formally calculated. d. An <i>Enterococci</i> exceedance (1 per 100ml) and the imposition of a boil water notice was notified to the EPA on 2nd May 2014. The chlorine levels in the sample which exceeded appeared to be adequate, at 0.19 mg/l. The location which was sampled was located within one of the former group scheme areas. e. Resampling within the supply was carried out and there was a further <i>Enterococci</i> exceedance at a location in the former group water scheme which is now part of the public water supply. f. Three rounds of scouring had been carried out since the expansion of the supply, as it was evident that little scouring had been previously undertaken in the group scheme networks, which had no active committees. g. The boil water notice had been lifted on the day of the audit following three rounds of clear sampling. h. A high level of turbidity (1.29 NTU) was recorded in sampling carried out on 16/05/2014. i. There has not been a consistent programme of UVT monitoring or of microbiological monitoring of the raw water.

3. AUDITOR'S COMMENTS

Treatment applied to the Rossinver public water supply consists of disinfection only, using chlorination. A *Cryptosporidium* risk assessment has not been done on this spring fed supply.

4. RECOMMENDATIONS

Source Protection

1. The Water Services Authority should use the *Cryptosporidium* Risk Screening Methodology as outlined in *EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (ISBN: 978-1-84095-349-7)* to determine the relative risk of contamination of the supply with *Cryptosporidium*. Following the risk screening the Water Services Authority should identify and implement measures to reduce the risk at the plant.
2. The Water Services Authority should implement the requirements of the *European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2014 (SI No.31 of 2014)* to ensure, unless an alternative setback distance has been set as per Article 17 that:
 - i. Organic fertiliser or soiled water is not applied to land within 100 m of the abstraction point; and
 - ii. Farmyard manure held in a field prior to landspreading is not placed within 250 m of the abstraction point.
3. The Water Services Authority should carry out regular monitoring on the raw water source and should include monitoring for microbiological parameters, turbidity and UVT as an indicator of trends in assessing water quality and to determine the degree of treatment and controls required in the supply. Should microbiological monitoring indicate contamination of the raw water, the Water Services Authority should prepare a programme of *Cryptosporidium* monitoring

Disinfection

4. The Water Services Authority should calculate the contact time for chlorine disinfection to ensure that the correct dose and time (0.5 mg/l for at least 30 mins) is being achieved as recommended by the World Health Organisation and that the first connections are receiving appropriately disinfected drinking water. The Water Services Authority should submit a calculation of the contact time to the Agency.

FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

During the audit the Water Services Authority representatives were advised of the audit findings and that action must be taken as a priority by the Water Services Authority to address the issues raised. This report has been reviewed and approved by Mr Darragh Page, Drinking Water Team Leader.

The Water Services Authority should submit a report to the Agency within one month of the date of this audit report detailing how it has dealt with the issues of concern identified during this audit. The report should include details on the action taken and planned to address the various recommendations, including timeframe for commencement and completion of any planned work.

The EPA also advises that the findings and recommendations from this audit report should, where relevant, be addressed at all other treatment plants operated and managed by Irish Water.

Please quote the File Reference Number in any future correspondence in relation to this Report.

Report prepared by:



Date:

17th June 2014

Ruth Barrington

Inspector