



Drinking Water Audit Report

County:	Mayo	Date of Audit:	20 February 2014
Plant(s) visited:	Treannagleragh PWS (2200PUB1038)	Date of issue of Audit Report:	25 February 2014
		File Reference:	DW2013/103
		Auditors:	Mr. Darragh Page Ms. Derval Devaney
Audit Criteria:	<ul style="list-style-type: none"> • The <i>European Communities (Drinking Water) (No. 2) Regulations, 2007</i>. • The <i>EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (ISBN: 978-1-84095-349-7)</i> • The recommendations specified in the EPA Report on <i>The Provision and Quality of Drinking Water in Ireland</i>. • EPA Drinking Water Advice Notes. 		

MAIN FINDINGS

- i. **The Treannagleragh PWS is untreated and Mayo County Council (and since 1st January 2014, Irish Water) has not installed an appropriate disinfection system as required by the EPA Direction dated 8 October 2013.**
- ii. **Mayo County Council and Irish Water have not submitted an adequate action programme for the installation of an appropriate treatment system capable of 3 log removal of *Cryptosporidium* as required by the EPA Direction dated 8 October 2013 and did not commit to an action programme on the day of the audit.**

1. INTRODUCTION

Under the *European Communities (Drinking Water) (No. 2) Regulations 2007* 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 to assess compliance with the Direction issued under Regulation 9 on 8 October 2013 in respect of the Treannagleragh Public Water Supply.

The Treannagleragh PWS was identified to the EPA in August 2013 and subsequent monitoring indicated the presence of *E. coli* and Coliform Bacteria. The supply has been on a boil water notice since 6 September 2013. The source is the Treannagleragh Mountain Stream and there is currently no treatment of the water prior to supply to consumers (approx. 45 persons).

Photographs taken by Darragh Page during the audit are attached to this report and are referred to in the text where relevant.

The opening meeting commenced at 4:45 pm at the source of the Treannagleragh Public Water Supply. 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 audits 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. Anthony Skeffington* – Service Level Agreement Manager, Irish Water

Mr. Declan Dempsey* – Senior Resident Engineer, Mayo County Council

Mr. Ger Keegan* – Caretaker, Mayo County Council

Representing the Environmental Protection Agency:

Mr. Darragh Page* – Inspector

Ms. Derval Devaney* – Inspector

2. AUDIT OBSERVATIONS

The audit process is a 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 source of the Treannagleragh PWS is a mountain stream which originates from a spring. The area around the spring was enclosed and the initial flow from the spring was culverted. The flow then enters a small drain (Photo 1) from which it zig zags down the slope until it enters the reservoir. There are several small cascades along the drain (Photo 2). b. The area around the stream is boggy land and the adjacent land is used for grazing. c. There was an orange colour in the drain which is due to iron in the raw water. d. The local authority stated that the supply had been built over 100 years ago and was the original supply for the town of Kiltimagh. However, its use was ceased in the 1950's. It was reinstated as a supply for a group water scheme approx. 30 years ago according to the local authority and was extended in use subsequently for the public water supply.
2.	<p>Chlorination and Disinfection</p> <ol style="list-style-type: none"> a. There was no disinfection of the supply at the time of the audit nor was there any other treatment on the supply. b. Irish Water stated that chlorination had not been installed due to concerns over THM formation as outlined in the correspondence from Mayo County Council to the EPA dated 29 November 2013. The auditors highlight that the Regulations require that microbiological quality of the water must take precedence over THM compliance and that concerns over THM is not sufficient reason to fail to disinfect a supply. c. Irish Water and Mayo County Council explained that the locals had objected to disinfection of the supply.
3.	<p>Treated Water Storage</p> <ol style="list-style-type: none"> a. The raw water is gravity fed into an open water reservoir (Photo 3) which supplies consumers of the public water supply and subsequently the group water scheme which is at the end of the public main.

	<p>b. The water in the reservoir appeared muddy (Photo 4). The water is not treated subsequent to this reservoir.</p>
<p>4</p>	<p>Compliance with the Direction</p> <p>a. A Direction was issued to Mayo County Council on 8 October 2013 requiring a disinfection system to be installed and operated no later than 2 December 2013 and for an action programme to be submitted for the installation of an appropriate treatment system capable of 3 log removal or inactivation of <i>Cryptosporidium</i>. On the day of the audit the disinfection system had not been installed and the action programme submitted did not outline definitively what actions were to be taken nor did it include a timetable for the implementation of the action programme.</p> <p>b. Irish Water stated that a proposal had been submitted by Mayo County Council to connect the supply with the Kiltimagh PWS substantial cost. Irish Water stated that this proposal was under assessment but could not indicate when a decision was to be made concerning this proposal. Irish Water expressed concern at the cost and stated that this would have to be weighed up against other priorities in the investment plan.</p> <p>c. The EPA stated that the response to the Direction up to now was inadequate and the EPA required that disinfection, as a minimum, is in place in all public water supplies while surface water supplies must have further treatment in place. The EPA stated that the Direction must be complied with and that it was unacceptable that consumers were receiving an untreated water supply.</p>

3. AUDITORS COMMENTS

A Direction was issued to Mayo County Council on 8 October 2013 requiring the a disinfection system to be installed and operated no later than 2 December 2013 and for an action programme to be submitted for the installation of an appropriate treatment system capable of 3 log removal or inactivation of *Cryptosporidium*. On the day of the audit the disinfection system had not been installed and the action programme submitted did not outline definitively what actions were to be taken nor did it include a timetable for the implementation of the action programme.

Irish Water did not provide any evidence on the day of the audit that it was going to install the disinfection system or ensure that consumers receive an adequately treated water supply.

It is unacceptable that consumers are receiving an untreated water supply that is vulnerable to contamination.

4. RECOMMENDATIONS

1. Irish Water shall install and operate and appropriate disinfection system where the efficiency of the disinfection system is capable of being verified continuously on water being distributed from the Treannaglearagh PWS.
2. Irish Water shall submit an action programme for the installation of an appropriate treatment system capable of 3 log removal or inactivation of *Cryptosporidium* in the Treannaglearagh PWS.

FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

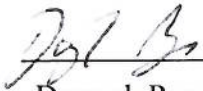
During the audit the Irish Water representatives were advised of the audit findings and that action must be taken as a priority by Irish Water to address the issues raised. This report has been reviewed and approved by Mr. David Flynn, Programme Manager.

Irish Water is recommended to put such measures in place as are necessary to implement the recommendations listed in this report. The actions by the Irish Water to address the recommendations taken will be verified by the Agency during any future audits.

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:**


Darragh Page
Inspector

Date:

25/2/14
25 February 2014



Photo 1. Source of the Treannagleragh PWS.



Photo 2. Cascades along the channelled stream prior to entry into the reservoir.



Photo 3. Open untreated reservoir supplying water to consumers of the Treannagleragh PWS.



Photo 4. Open untreated reservoir supplying water to consumers of the Treannagleragh PWS.