



# Drinking Water Audit Report

<b>County:</b>	Donegal	<b>Date of Audit:</b>	28 <sup>th</sup> March 2018
<b>Plant(s) visited:</b>	Greencastle PWS	<b>Date of issue of Audit Report:</b>	26 <sup>th</sup> April 2018
		<b>File Reference:</b>	DW2009/169
		<b>Auditors:</b>	Ms Derval Devaney
<b>Audit Criteria:</b>	<ul style="list-style-type: none"> <li>• The <i>European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014), as amended.</i></li> <li>• <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></li> <li>• The recommendations specified in the <i>EPA Drinking Water Report.</i></li> <li>• EPA Drinking Water Advice Notes No's 1 to 15.</li> <li>• The recommendations in any previous audit reports.</li> <li>• The Regulation 10(4) Direction issued by the EPA on 11<sup>th</sup> December 2014 and associated Action Programme.</li> </ul>		

## MAIN FINDINGS

- i. **Irish Water has not met the requirement of the EPA's Regulation 10(4)(c) Direction issued on 11<sup>th</sup> December 2014 and associated agreed Action Programme to address THMs failures in the Greencastle public water supply by 11<sup>th</sup> February 2017, as there is insufficient treatment at Greencastle Water Treatment Plant to prevent THMs formation.**
- ii. **The connection of East Inishowen PWS to Pollen Dam PWS, which is the long-term solution to address the THMs failures at Greencastle PWS, commenced during 2017. This network project will enable decommissioning of the Greencastle WTP. However, construction works ceased on 20<sup>th</sup> February 2018 as the contractor entered administration.**
- iii. **Irish Water is currently reviewing options to recommence works at the earliest opportunity and remain confident that the anticipated completion date of Q4 2018 will be met.**

## 1. INTRODUCTION

Under the *European Union (Drinking Water) Regulations 2014, as amended* 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 the performance of Irish Water in providing clean and wholesome drinking water and to determine compliance with the EPA's Regulation 10(4) Direction issued to Irish Water on 11<sup>th</sup> December 2014 and subsequent Action Programme approved by the EPA on 11<sup>th</sup> February 2015 in accordance with Regulation 10(4) and 10(6) regarding compliance with the trihalomethanes (THMs) parametric value in Greencastle public water supply as soon as possible, and no later than the 11<sup>th</sup> February 2017.

The Greencastle Public Water Supply (PWS) is on the EPA's Remedial Action List (RAL), as the supply has continuous THMs failures dating back to November 2009. The source of the supply is Ballymacarthur Stream.

Treatment at the plant consists of filtration (via three slow sand filters (SSFs); two duty and one standby) and chlorination.

The opening meeting commenced at 10 am at the Greencastle Water Treatment Plant (WTP). 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:**

Yvonne McMonagle, Drinking Water Compliance; Natalie Patton, Drinking Water Compliance Graduate.

**Representing Donegal County Council:**

Michael Ryan, Waterworks Inspector; Kevin Lake, Senior Executive Engineer.

**Representing the Environmental Protection Agency:**

Derval Devaney, 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><b>Interim Solution</b></p> <p>The interim solution as outlined in Irish Water’s first progress report dated 28<sup>th</sup> April 2015 proposed:</p> <p>To continue the supply and blending of water from East Inishowen PWS with water from the Greencastle WTP. This measure has been in place since August 2013 to reduce water being supplied by the Greencastle WTP. This action is to assist in the reduction of THMs in the Greencastle PWS until the long-term solution is in place.</p> <p>During the audit the Greencastle WTP was operating two slow sand filters (SSF 1 and 3) and SSF 2 was undergoing cleaning. The filter media was refurbished to include granular activated carbon (GAC) in all three filters since the EPA’s audit in April 2017. This successfully reduced THMs in the final water however, the GAC expired within 6 - 8 weeks due to high organic matter in the raw water quality. Irish Water stated that 50% of the Greencastle PWS continues to be supplied from the East Inishowen PWS and is blended with treated water from the Greencastle WTP at a reservoir onsite. However, due to the limited capacity at East Inishowen PWS, this interim measure has not rectified the THMs issue at Greencastle PWS.</p>
2.	<p><b>Long-term Solution</b></p> <p>The long-term solution as outlined in the approved Irish Water Action Programme dated 11<sup>th</sup> February 2015 included:</p> <ol style="list-style-type: none"> <li>1. Providing a new distribution main and reservoir linking the Illies WTP at Pollen Dam to East Inishowen PWS;</li> <li>2. Decommissioning the existing Greencastle WTP;</li> <li>3. Commence construction in Q2, 2016;</li> </ol>

	<p>4. Completion date is Q2, 2017.</p> <p>In accordance with Regulation 10(4) and 10(6), the Action Programme submitted by Irish Water dated 30<sup>th</sup> January 2015 was amended and approved by the EPA on 11<sup>th</sup> February 2015 and directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Greencastle PWS as soon as possible, but no later than 11<sup>th</sup> February 2017.</p> <p>During the audit, Irish Water stated that a contractor was appointed and works commenced in 2017. Construction works continued on-site until 20<sup>th</sup> February 2018. At that time, Irish Water were advised that the contractor was entering administration in Northern Ireland and work ceased on site immediately. Irish Water state it is currently reviewing the options to recommence works at the earliest opportunity and remain confident that the anticipated completion date of Q4, 2018 will still be met.</p> <p>This network project is proposed to address the THMs issue in the Greencastle PWS but goes beyond the Direction timeframe of 11<sup>th</sup> February 2017.</p>
<p><b>3.</b></p>	<p><b>Water Quality - THMs Monitoring</b></p> <ol style="list-style-type: none"> <li>1. The audit found that THMs continue to fail to comply with the parametric value of 100 µg/l as set out in the <i>European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014), as amended.</i></li> <li>2. THMs are monitored monthly by Irish Water and the most recent THMs results for 2017 and 2018 were reviewed during the audit. The THM results were 126 µg/l on 06/11/17, 67 µg/l on 04/12/17 and 172 µg/l on 08/01/18.</li> </ol>

### 3. AUDITORS COMMENTS

The EPA issued a Direction to Irish Water on 11<sup>th</sup> December 2014 requesting it to submit an Action Programme to address the persistent THMs failures in the Greencastle PWS.

In accordance with Regulation 10(4) and 10(6), the Action Programme submitted by Irish Water dated 30<sup>th</sup> January 2015 was amended and approved by the EPA on 11<sup>th</sup> February 2015 and directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Greencastle PWS as soon as possible, but no later than 11<sup>th</sup> February 2017.

Irish Water's most recent progress report dated 26<sup>th</sup> March 2018 outlines that to tackle the THMs issue in the Greencastle PWS it is extending the water network infrastructure from Pollen Dam PWS via East Inishowen PWS to allow capacity for the supply of treated water to Greencastle PWS, thereby making the current water treatment plant at Greencastle redundant. However, the completion date for the proposed works provided in this report and during the audit is Q4 2018, which goes beyond the Direction deadline of 11<sup>th</sup> February 2017.

During the audit, Irish Water stated that while the Direction timeframe was not met, it had hoped that the works would be complete by the end of March 2018 as the contractor was making good progress with the pipelaying works. However, issues with the contractor have now resulted in a delay of completion of the long-term works, but Irish Water expect that the projected timeframe of Q4 2018 can still be met.

Irish Water's monitoring reports, which were reviewed during the audit, show THMs continuing to fail to comply with the parametric value of 100 µg/l as set out in the *European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014), as amended.*

#### 4. RECOMMENDATIONS

1. Irish Water shall carry out the proposed upgrade works as soon as practicable to ensure that the Greencastle public water supply is compliant with the THMs parametric value of 100 µg/l as set out in the *European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014)*, as amended and shall notify the EPA when complete.
2. Irish Water shall carry out monitoring for THM following the decommissioning of the Greencastle WTP to verify the effectiveness of the actions undertaken and submit the results to the EPA.

#### FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

During the audit, Irish Water representatives were advised of the audit findings and that there was a breach in meeting the legal requirements of the Regulation 10(4)(c) Direction issued by the EPA on 11<sup>th</sup> December 2014 and as a result further enforcement action would follow. This report has been reviewed and approved by Ms Aoife Loughnane, Drinking Water Team Leader.

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

**Report prepared by:**



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Derval Devaney  
Inspector

**Date:**

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26<sup>th</sup> April 2018