Drinking Water Audit Report

County:	Wexford	**Date of Audit:**	10/08/16
Plant(s) visited:	Fardystown Water Treatment Plant (WTP) Scheme Code: 3300PUB1497	**Date of issue of Audit Report:**	22/08/2016
		File Reference:	DW2016/137
		Auditors:	Ms Michelle Roche Ms Pauline Gillard
Audit Criteria:	• The *European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014).* • *The EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (ISBN: 978-1-84095-349-7)* • The recommendations specified in the EPA *Drinking Water Report*. • EPA Drinking Water Advice Notes Nos. 1 to 15.		

MAIN FINDINGS

i. **The Fardystown plant was found to be well run with excellent management in place.**
ii. **Landowners within 200m of the Churchlands borehole had not been written to regarding their obligations under the GAP Regulations. Wexford County Council have agreed to write out as necessary.**

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 to assess the performance of Irish Water in providing clean and wholesome drinking water.

The Fardystown public water supply (PWS) is served by ten boreholes in total at eight locations. Two boreholes are operational constantly. The supply serves approximately 21,000 people from Wexford Creamery to Rosslare and produces approximately 750m^3/day. A water tower, which cannot be bypassed, provides storage in the network.

The opening meeting commenced at 10.47 a.m. at Fardystown Drinking Water Treatment Plant. 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:
Ms Catherine Rice, Compliance Analyst, Irish Water
Mr Pat Duggan, Compliance Monitor Liaison Analyst, Irish Water

Mr Liam Brett, Water Operations Engineer, Irish Water
Mr Paul Delahunty, Executive Engineer, Wexford County Council.
Mr Mark Collins, Area Engineer, Wexford County Council.
Mr Enda Lambert, Caretaker/GSI, Wexford County Council.

Representing the Environmental Protection Agency:

Ms Michelle Roche, Inspector.
Ms Pauline Gillard, 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.	**Source Protection** a. There are ten Boreholes on this scheme. b. A source protection zone has been developed including all boreholes and landowners within a 200m buffer zone of the boreholes, with the exception of the Churchlands borehole, have been written to under the *European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2014 (SI No.31 of 2014).* c. All boreholes are fully capped and located in sealed chambers. All chamber vents were sealed to prevent vermin access.
2.	**Filtration** a. There were three rapid gravity filters on site for purposes of manganese removal. Filter media is manganese dioxide and sand. b. Filter backwash is triggered on each filter every 72 hours and the caretaker observes one every morning. EPA Inspectors observed Filter 1 backwash in operation at the audit. The air scour was observed to be even during the operation and the media settled uniformly. The filters are tested twice yearly. c. Sludge from the backwash process is directed to a settling tank. Sludge supernatant is drained to an adjacent field, owned by the council and the remaining sludge is removed from site every couple of years.
3.	**Disinfection** a. The filtered water is treated with 14% sodium hypochlorite with a flow proportional dose. Duty and standby chlorine dosing pumps are installed and there is automatic switchover in the event of pump failure. b. The caretaker checks the online chlorine monitor daily with handheld chlorine analyser. The chlorine alarm is triggered with a low alarm of 0.25mg/l and a high alarm of 0.8mg/l and responded to via a cascade system. c. Chlorine residuals in the network are measured and recorded every week.

4.	**Chemical storage and bunds** a. All chemicals were adequately bunded in locked chemical stores. Procedures for stock control are in place and undertaken by the caretaker.
5.	**Hygiene and Housekeeping** a. The plant was clean, secure and well maintained

3. AUDITORS COMMENTS

The Fardystown Water Treatment Plant was found to be very well managed by a dedicated team of staff. Process documentation was up to date and available at the plant and record keeping was of an excellent standard. Irish Water should ensure that all landowners within the zone of contribution of all the boreholes have been informed of their obligations under the GAP Regulations.

4. RECOMMENDATIONS

Source Protection

1. Irish Water should liaise with the relevant local authority in relation to 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 200 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.

    This action should be undertaken specifically in relation to the Churchlands borehole.

Sludge Management

2. Irish Water should examine the sludge supernatant (including the method of discharge) to ensure that is it not giving rise to environmental pollution.

FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

During the audit 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 Ms Ruth Barrington, Drinking Water Inspector.

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

Report prepared by:  **Date:** 22/08/16

Pauline Gillard

Inspector