



# Private Drinking Water Monitoring Programme Audit Report

<b>County:</b>	South Dublin	<b>Date of Audit:</b>	23 <sup>rd</sup> August 2018
<b>Location visited:</b>	South Dublin County Council Offices, Tallaght	<b>Date of issue of Audit Report:</b>	29 <sup>th</sup> November 2018
		<b>Auditors:</b>	Ms. Derval Devaney (EPA) Dr. John Gray (Consultant)
<b>Audit Criteria:</b>	<ul style="list-style-type: none"> <li>• The <i>European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended.</i></li> <li>• <i>The EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Private Water Supplies (ISBN: 978-1-84095-349-7).</i></li> </ul>		

## MAIN FINDINGS

- South Dublin County Council's compliance monitoring programme for 2017 was not available for review during the audit and an up-to-date and fully completed register held by South Dublin County Council of private supplies in South Dublin was lacking.
- South Dublin County Council did not list any private water supplies in the EPA's EDEN system for 2017 even though it stated during the audit it was aware of 10 small private water supplies in South Dublin.
- The HSE monitor some private supplies on behalf of the South Dublin County Council but these results are not provided to South Dublin County Council unless there is a failure. Also, these results are not reported annually to the EPA as required. The results of compliance monitoring were not available for review during the audit.
- Three private water supplies (B&Bs) were previously monitored by the HSE. The HSE no longer monitors B&Bs in South Dublin. South Dublin County Council did not make provisions during 2017 to ensure these commercial supplies were being monitored for compliance and assessed and monitoring reported as required.

## 1. INTRODUCTION

Under the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended* the Environmental Protection Agency has a supervisory role in relation to the establishment and implementation of monitoring programmes by the Local Authorities. This audit was carried out to assess the performance of South Dublin County Council in ensuring effective monitoring of private drinking water supplies was undertaken for the provision of clean and wholesome drinking water.

An audit of the 2017 monitoring programmes implemented in South Dublin was carried out at the South Dublin County Council Offices on 23<sup>rd</sup> August 2018. Using a questionnaire as a guide<sup>1</sup>, South Dublin County Council staff were interviewed to ascertain the principles and methodology for establishing monitoring programmes,

<sup>1</sup> The questionnaire was based on those used by the Drinking Water Inspectorate, London, and modified by Dr John Gray for the purpose of this audit.

sample point selection, sample classification, integrity of data reporting and notification procedures. A HSE staff member was also interviewed during the audit.

The audit observations and recommendations are listed in Section 2 and 4 of this report. The following were in attendance during the audit.

Representing South Dublin County Council: (\* indicates that person was also present for the closing meeting)  
 Mr. Derek Sargent – Senior Engineer, Water Services, South Dublin County Council \*

Representing the Health Service Executive: (\* indicates that person was also present for the closing meeting)  
 Mr. David O’Brien – Principal EHO, Health Service Executive\*

Representing the Environmental Protection Agency:  
 Ms. Derval Devaney – Inspector, EPA\*  
 Dr. John Gray – Consultant\*

## 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.*

<p><b>1.</b></p>	<p><b>Compliance Monitoring Programme</b></p> <ul style="list-style-type: none"> <li>a. Although the 2017 compliance monitoring programme for private water supplies was not available for assessment at the time of the audit, the auditors were told it is prepared by the Principal Environmental Health Officer (EHO) and submitted to South Dublin County Council (SDCC) with whom there is a close working relationship. Supplies were classified by the HSE according to risk and included consideration of the size of the population which is considered to be &lt; 500 persons for all private water supplies. Data is held electronically by the HSE. Population figures and volume outputs are not recorded or subject to regular review.</li> <li>b. Although SDCC confirmed the existence of 10 private supplies during the audit, SDCC’s register of these supplies was not available to view during the audit. In addition, the EPA’s EDEN system had no private water supply registered for SDCC and there were no monitoring results submitted to the EPA 2017. SDCC stated during the audit that it had difficulty uploading monitoring results to the EDEN system.</li> <li>c. SDCC and the HSE stated they were not aware of the type of treatment in place at some of these private water supplies but confirmed that nine audits had been carried out in 2017 by SDCC.</li> <li>d. Three B&amp;B properties were identified through food standards examinations by the HSE as having a private water supply, Samples were not taken at these premises by the HSE during 2017. The HSE had written to each B&amp;B requiring the water supplier to carry out their own monitoring once per year and to submit the results to the HSE. The HSE stated that this monitoring data is still awaited. SDCC did not make alternative provisions to ensure compliance monitoring was carried out at these commercial premises during 2017 at the required monitoring frequency.</li> <li>e. A nursing home is on the HSE’s list of private water supplies and currently carries out a self-monitoring programme. Monthly bacteriological data is submitted to HSE. Two audit samples and an additional four bacteriological samples were also taken at this premises during 2017 by the HSE. These results were not reported to SDCC or the EPA during 2017 and were not made available for review during the audit. It was stated that the HSE only reports failures to SDCC for action.</li> <li>f. It was not clear during the audit what check and audit parameters were monitored during 2017 by the HSE on behalf of SDCC. It was suggested that one private water supply was</li> </ul>
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	<p>“probably monitored once in 2017”. There was no evidence of a risk assessment being completed by SDCC in accordance with Section 3 of the EPA’s Handbook for Private Water Supplies to determine what check and audit parameters were to be monitored. SDCC stated during the audit it will in future take two samples per annum for all private supplies and ensure the results are uploaded to EDEN.</p>
<b>2.</b>	<p><b>Operational Monitoring Programme</b></p> <p>a. SDCC does not undertake operational monitoring of the private water supplies but it does carry out investigative sampling as the need arises.</p>
<b>3.</b>	<p><b>Monitoring Programmes for Specific Parameters</b></p> <p>a. No specific monitoring programmes were in place for pesticides, trihalomethanes, lead or radioactivity. It was not evident if a risk assessment was carried out to determine that these parameters were not required as part of the audit compliance monitoring requirements.</p>
<b>4.</b>	<p><b>Sampling Procedures</b></p> <p>a. SDCC does not have a dedicated drinking water sampler and relies on the HSE to undertake compliance monitoring on its behalf. The HSE does not share compliance monitoring data with SDCC for assessment and reporting, unless there is a failure with the Drinking Water parametric value.</p> <p>b. Although there is no sampling manual, the HSE uses a “Direction for taking water samples for analysis” issued in 2008 by the HSE’s Public Analyst’s Laboratory. Criteria for sampling drinking water are outlined together with specific instructions for sampling from taps and pumps or from raw water sources. The HSE was unable to state if this was a controlled document.</p> <p>c. Samples taken by the HSE for bacteriological and chemical analysis are sent to Sir Patrick Dun’s Hospital, Lower Canal Street, Dublin. Samples for microbiology and pathogens, usually associated with outbreaks, are sent to Cherry Orchard Public Health Laboratory, Ballyfermot, Dublin. Both are accredited laboratories.</p> <p>d. Any investigative sampling that SDCC undertakes is sent to Dublin City Council Laboratory for analysis. This is an accredited laboratory.</p>
<b>5.</b>	<p><b>Data Handling</b></p> <p>a. Monitoring undertaken by the HSE during 2017 for compliance purposes at private water supplies was recorded on the HSE’s Environmental Health Information System (EHIS). However, this monitoring data is not made available to the SDCC unless a failure is detected. The 2017 monitoring data was not provided to the EPA via EDEN.</p> <p>b. No information was available during the audit regarding the data handling procedures of the laboratories used by the HSE.</p> <p>c. The HSE stated an internal audit team had assessed data handling within the laboratories in 2018 and had no adverse comments.</p>
<b>6.</b>	<p><b>Exceedances of Parametric Values</b></p> <p>a. There is no formal documented procedure in place between the HSE and SDCC, outlining the actions to be taken where a sample result shows an exceedance of the microbiological or chemical parametric values outlined in the <i>European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended</i>. It was stated that instead the latest version (Revision 1.8 January 2018) of the Drinking Water Incident Response Plan would be used.</p> <p>b. In September 2017 a large crèche in South Dublin served by a small private water supply (a well source) was contaminated by <i>E.coli</i> VTEC0157 bacteria which originated from a septic tank on-site. This supply was not on SDCC’s private water supply register and was not included for compliance monitoring as it was thought the crèche was served from a public water mains which ran outside the premises. The HSE became aware of this private water supply as a number of VTEC illnesses were reported to it for that area and the cause was traced to the private drinking water supply serving the crèche. The HSE notified SDCC of the private supply’s existence and SDCC undertook sampling at the well. The crèche was shut down for a period and the well was isolated. Once cleaning of the distribution system serving the crèche was complete it was connected to the public water supply. SDCC did not</p>

	list this supply as a private water supply on EDEN after the event nor did it report the monitoring results to the EPA via EDEN for 2017 and instead submitted the results to the EPA via email, once prompted to do so.
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### 3. AUDITORS' COMMENTS

This EPA audit found South Dublin County Council was lacking a fully completed private water supplies register and 2017 compliance monitoring programme as required under Regulation 8(3) and Regulation 7(5) respectively of the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended*.

The monitoring results of the programme being implemented by the HSE for some of the private water supplies that fall within the remit of South Dublin County Council were not being made available in their entirety to the South Dublin County Council or the EPA. The lack of sharing monitoring data means that there is no oversight by the Council or the EPA on the water quality that is being provided by these public and commercial businesses such as crèches, nursing homes, golf clubs, food premises in South Dublin. This is of concern to the EPA as some small private water supplies may not be monitored at the frequency required and could pose a risk to public health.

In addition, it was apparent that B&Bs were not included by the HSE or South Dublin County Council for compliance monitoring during 2017 and South Dublin County Council did not take any action to ensure these businesses were included in its monitoring programme once the HSE had decided not to monitor this sector.

The audit team was unable to assess if the 10 private water supplies it was told existed in South Dublin were monitored at the required check and audit frequency for the correct parameters, as monitoring data was not made available for review during the audit and this data was not submitted by South Dublin County Council to the EPA, as required, for any private water supply as part of its annual returns for 2017.

Finally, it is of concern to the EPA that there may be other private water supplies in South Dublin County Council's functional area that are not on its register and therefore are not being monitored for compliance to ensure that its water is safe to drink.

### 4. RECOMMENDATIONS

#### Compliance Monitoring Programme

1. South Dublin County Council should develop a procedure on how to identify all regulated private supplies within its functional area of responsibility. The procedure should include a process for reviewing the register annually so that any changes to the population figures, supply output volumes, new or redundant private water supplies etc. are identified. This procedure should be put in place and acted upon without delay.
2. South Dublin County Council should ensure all regulated private supplies are included on its register and compliance monitoring programme. All relevant information pertaining to each private water supply should be recorded for the purposes of the register and the compliance monitoring programme as required by Regulation 8(3) and Regulation 7(5) respectively of the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended*.

For example, the register should contain details including (a) the name and address of the water supplier, (b) the volume of water supplied per day (expressed either in m<sup>3</sup> or a population equivalent), (c) the type of water treatment in place, (d) the source of the water supply, and (e) the supply zone code allocated by SDCC under the Drinking Water National Monitoring Programme. The yearly compliance monitoring programme should specify the water supply and its sampling points which should represent the water supply zone and number of check (Group A) and audit (Group B) samples and parameters to be monitored as per the risk assessment carried out by SDCC. The private water supplies register and

compliance monitoring programme should be held by SDCC and made available to the EPA, upon request, for inspection.

3. South Dublin County Council should ensure all private supplies that fall within its remit are monitored for compliance at their required check and audit frequencies. All compliance monitoring data should be reviewed by South Dublin County Council without delay for compliance purposes and prompt action should be taken where failures are observed.
4. South Dublin County Council should ensure that the results of compliance monitoring carried out by the private water supplier or the HSE are reported to South Dublin County Council without delay for assessment and action, if necessary, and in turn are reported to the EPA via EDEN on an annual basis.
5. South Dublin County Council, when completing its risk assessment to identify those parameters requiring analysis, should be mindful of the requirements of the *European Union (Drinking Water) (Amendment) Regulations 2017 (S.I. 464 of 2017)*, and specifically Part C of these regulations in its determination of a derogation from sampling frequencies. It should also have regard to Section 3, Paragraph 2.6 the EPA's Handbook for Private Supplies.
6. South Dublin County Council should ensure all regulated private water supplies are entered into the EPA's database, EDEN, and each water supply is given a scheme code as required under the Drinking Water National Monitoring Programme. SDCC's list of regulated private water supplies should be updated annually on EDEN. The results of all check and audit compliance samples required to be taken should be uploaded to EDEN by the 28<sup>th</sup> February each year under the private water supply's scheme code and linked to the monitoring station code that the sampling relates to.

#### **Sampling Procedures**

7. If South Dublin County Council is to carry out compliance sampling of the private water supplies, it should develop its own sampling manual to include the taking, transport and labelling of samples. SDCC should ensure anyone taking compliance samples on its behalf (e.g. the HSE, a contractor) does so in accordance with a sampling manual which is a controlled document.

#### **Data Handling**

8. Should the HSE continue to carry out compliance sampling for some private water supplies on behalf of SDCC, a robust system of transferring all sample results to South Dublin County Council's LIMS system should be put in place where automatic data transfer cannot be achieved, as manually entering HSE sample results to LIMS is vulnerable to transcription errors and is resource intensive.
9. South Dublin County Council should put in place, without delay, an agreed protocol with the HSE to allow for the sharing of information regarding private water supplies (e.g. the HSE alerts SDCC of private water supplies that the HSE become aware of via its inspections and the results of all compliance monitoring data taken at private water supplies and vice versa) to ensure water supplies are being adequately monitored in accordance with the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended* and do not pose a risk to human health.

#### **Exceedances of Parametric Values**

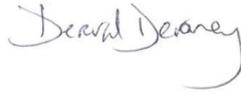
10. South Dublin County Council should put in place a procedure for dealing with sample results that exceed the parametric values outlined in the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended*. The procedure should include actions to be taken to investigate the exceedance and report the exceedance to the HSE, the Water Supplier and any other relevant party.

## **FOLLOW-UP ACTIONS REQUIRED BY SOUTH DUBLIN COUNTY COUNCIL**

This report has been reviewed and approved by Emer Cooney, EPA.

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

**Report prepared by:**



**Date:**

29<sup>th</sup> November 2018

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EPA Inspector

John Gray, Consultant