



Requirement to carry out a risk assessment

While monitoring is a requirement of the Private Water Supplies (Wales) Regulations 2010, sampling and analysis alone cannot provide assurance about the safety of a private water supply. Hence a key aspect of the Regulations is the requirement placed on each local authority to carry out a risk assessment of each private water supply in its area (other than a supply to a single dwelling not used for any commercial activity) **at least every five years**. In practice some supplies which have previously been adequately risk assessed and were found to be low risk and well managed, this assessment may simply be through correspondence with the relevant person(s) to confirm there have been no significant changes. For other supplies, the local authority may deem it prudent to visit the site and thoroughly reassess the supply again.

Risk assessments are increasingly being used worldwide as an essential part of a drinking water quality surveillance and control programme. The World Health Organisation (WHO) in its latest guidelines¹ states 'the most effective means of consistently assuring the safety of a drinking water supply is through the use of a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment to consumer'. Risk assessment is a proactive approach to identify the risks (potential failures of standards and risks to human health) and to take action to control those risks **through a multi-barrier** approach (for example, through source protection, treatment of the source water and management of the distribution network to prevent contaminants entering the supply system). The primary objectives of a risk assessment in ensuring good drinking water supply practice are to:

- identify the risks in the catchment that affect, or could affect, the quality of the source of the private water supply and any control measures that are practical to reduce the risk (for example fencing to prevent animals contaminating surface water sources and protection to avoid surface water entering a borehole by means of a diversion ditch). In many cases, control measures in the catchment or at the source will not minimise the risks sufficiently;
- identify the hazards that need to be controlled by treatment and, if appropriate treatment is not present (this may be the case for many supplies, particularly small supplies), installing and maintaining appropriate treatment processes to remove or reduce the concentrations of contaminants;
- identify the risks of contamination entering the distribution network (for example through defective tanks and pipework) and taking appropriate action to control those risks (inspections, repairs and maintenance);

¹ www.who.int/entity/water_sanitation_health/publications/2011/dwq_guidelines/en/

Information note on Regulation 6



- identify the risks of contamination within premises (for example, from poor maintenance of pipes and fittings, particularly kitchen taps, and pick up of metals from older plumbing systems (for example, lead) and taking action to minimise these risks (often by providing advice to the owners/occupiers of the properties);
- establish the control measures that are needed and the operational monitoring required (for example operational sampling and analysis for key parameters against warning/alarm limits that are tighter than the standards in the Regulations and routine checks/inspections);
- establish standard operating protocols with appropriate records for treatment and distribution under normal circumstances and protocols for timely remedial action when the monitoring of control measures indicates an operational problem;
- identify any security risks associated with the source, treatment works and distribution network so that measures can be taken to avoid deliberate contamination; and
- verify drinking water quality by establishing routine checks and inspections with appropriate records (e.g. source protection is in place and operating effectively and that disinfection is operational) and by monitoring compliance with the standards and indicator parameter values in the Regulations.

Each local authority is required to carry out a risk assessment of every private water supply (except a supply to a single dwelling that is not used for any commercial activity or a public premises, unless requested to do so by the owner or occupier of the dwelling) every five years. A number of factors determine priority and these could include:

- the number of people supplied;
- the extent of commercial or public activity;
- the nature of the source (variable quality surface water, constant quality ground water);
- the amount of treatment; and
- the management and operation of the supply.

Regulation 6 states that a risk assessment is to establish whether there is a risk of supplying water that would constitute a potential danger to human health. Local authorities must also use the risk assessment to establish whether there is a risk of non-compliance with any of the standards or indicator parameter values in Schedule 1 to the Regulations. The risk assessment should also be used as part of the information to enable local authorities to consider whether it can exclude parameters from the audit monitoring requirements and include any other relevant parameters in addition to those specified in Schedule 1, as informed by the risk assessment.

Information note on Regulation 6



In August 2014, the Drinking Water Inspectorate (DWI) made available to all local authorities on their website a non-commercial government licensed risk assessment tool, with guidance and accompanying explanatory notes (see the *Competency to risk assess* section). Local authorities may commission an external organisation or individuals to carry out the risk assessments on its behalf, and where this is the case, it will need to be satisfied that the external persons doing the risk assessments are appropriately trained and competent to do so. A local authority using external persons should audit a small number of the risk assessments to be satisfied that they have been carried out competently and in accordance with the guidance. An external organisation contracted to carry out risk assessments on behalf of a local authority may be authorised by the local authority to use the DWI risk assessment tool for this purpose, on the proviso that the tool WILL NOT be used by that organisation to make any commercial gain outside the contract that has been agreed.

A local authority is not required to carry out a risk assessment of a private water supply to a single dwelling, provided it is not used for a commercial activity or offered to the public. However, if the owner or occupier of a single dwelling asks the local authority to carry out a risk assessment, the Regulations require the local authority to do it, but the local authority can make a charge to the person making the request for this service up to the maximum specified in Schedule 5 to the Regulations. Where a private water supply serves premises in more than one local authority's area, to avoid duplication of effort the local authorities should agree that one of them (normally the local authority where most of the premises served are situated) should prepare the risk assessment in consultation with the other authorities and copy the risk assessment to the other authorities.

The local authority should keep a full record of each risk assessment, including those carried out on its behalf. In addition to the requirement to carry out each risk assessment at least every five years, the local authority should review a risk assessment whenever there is any significant change in circumstances in respect of the supply system (such as the deterioration of raw water quality, installation of new treatment process etc).

Competency to risk assess

The risk assessment tool, which has been developed by DWI and made available for local authorities, guides those risk assessing private water supplies (PWS) through the process of hazard identification, risk assessment and developing subsequent action plans. Competency to carry out this task is at the discretion of the local authority. The Inspectorate advises that local authorities specify as part of their procedures suitable criteria to determine the competency of their staff for this

Information note on Regulation 6



task. For example, the development of a mechanism for checking staff with regard to their PWS regulatory background knowledge, the authority's enforcement and charging policy for PWS, and also that a signing-off process is introduced to demonstrate that staff had read and understood the risk assessment questions, the explanatory notes and the guidance notes on the tool. Local authorities should also consider an individual's experience.

Risk assessments of Regulation 8 supplies

(See Information note on Regulation 8)

Water supplied to all Regulation 8 supplies will, by their derivation, originate from public supplies. The assets (pipes, tanks etc) through which this water is supplied to consumers of Regulation 8 supplies, must be compliant with the Water Supply (Water Fittings) Regulations 1999. The regulator for this is the local water company.

Local authorities are not required to be fully qualified fittings inspectors in order to be competent in risk assessing Regulation 8 supplies. They should however, ensure that relevant staff have gained an appropriate practical level of awareness of the application of these Regulations from qualified water company water fittings practitioners prior to carrying out risk assessment. This should form part of the general competency training and development programme for those staff required to carry out risk assessments under Regulation 6. Where actual or suspected water fittings contraventions that present a risk to human health are suspected on a Regulation 8 supply local authorities are advised to contact their local water company for advice, and where agreed to arrange a joint visit. Both parties should work together to ensure any risks identified are mitigated, using relevant enforcement measures under their respective regulatory powers where applicable. Contraventions of Water Fittings Regulations should be recorded as hazards in the supply risk assessment and therefore contribute to the supply risk rating and development plan of that assessment. In these instances enforcement to mitigate such risks is the responsibility of the water company.

It should be noted that monitoring requirements (analysis parameters and sampling frequency) for Regulation 8 supplies should be based on the risk assessment. The Regulations do not make any provision for check and audit monitoring of Regulation 8 supplies.

Temporary events

There is no requirement for local authorities to carry out a Regulation 6 risk assessment on a supply for a temporary event that is fed from a public supply – either through pipes or via tankers, unless it is a Regulation 8 supply, or supplied by other sources such as borehole, wells, springs etc.

Information note on Regulation 6



However, as part of their general duties in protecting public health, we suggest that for all temporary events, local authorities ensure that any supply intended for domestic purposes are provided in accordance with BS8551 and that the organisers of the event apply a risk-based approach with respect to water supplies.

It is the duty of water companies to regulate and enforce where necessary the Water Supply (Water Fittings) Regulations 1999 at temporary events where there is a physical connection to a public mains supply. Local authorities should alert water companies to any pending temporary events in a timely manner.