

Joint Drinking Water Inspectorate / Environment Agency Guidance



The Contribution of the Water Supply (Water Quality) Regulations to the implementation of the Water Framework Directive in England & Wales

18 June 2012

Contents

1. Introduction & purpose of this document	3
Section A – Background information	4
2. The Water Supply (Water Quality) Regulations 2000 (as amended in 2007 and 2010) and the Water Supply (Water Quality) Regulations 2010 (Wales)	4
3. The Water Framework Directive 2000/60/EC (“WFD”)	4
4. WFD Reporting requirements - The Water Information System for Europe (WISE)	7
5. Common areas associated with the implementation of the Regulations and the WFD	8
Section B – Guidance on specific issues	12
6. Introduction	12
7. Risk assessments of catchments	12
8. Raw water monitoring	13
9. Submission of data to the DWI	15
10. Analysis (QA/QC Directive)	16

1. Introduction and purpose of this document

- 1.1. The purpose of this document is to provide clarity and guidance on how the implementation of the Water Supply (Water Quality) Regulations 2000 (as amended) in England and the Water Supply (Water Quality) Regulations 2010 in Wales contributes to the implementation of the Water Framework Directive 2000/60/EC (“WFD”). The document also sets out the responsibilities of the Drinking Water Inspectorate for England and Wales in relation to the drinking water regulations and those of the Environment Agency in relation to the WFD.
- 1.2. This document is intended as a reference point for water undertakers, licensed water suppliers¹ and Environment Agency staff to clarify where the requirements of the Water Supply (Water Quality) Regulations complement and support the implementation of the WFD and provides guidance on practical steps that can be taken by undertakers/licensed suppliers and Environment Agency staff to ensure appropriate arrangements are in place to identify and plan measures in catchments that ensure the long-term safety of drinking water supplies. **Specifically this document is intended to clarify responsibilities for raw water monitoring and serve as the basis for enhanced local liaison between Water Company staff and local Environment Agency representatives.**
- 1.3. The Drinking Water Inspectorate for England and Wales (DWI) acts for and on behalf of the Secretary of State for Environment, Food and Rural Affairs and Welsh Ministers in fulfilling their statutory duties in terms of drinking water quality. DWI staff are appointed under Section 86 of the Water Industry Act 1991 (WIA91) and their principal role is to apply and enforce the Water Supply (Water Quality) Regulations 2000 (as amended) in England and the Water Supply (Water Quality) Regulations 2010 in Wales. In discharging their functions the DWI issues guidance to water companies regarding the implementation of their statutory duties. These guidance documents are freely available on the Inspectorate’s website (www.dwi.defra.gov.uk). This document is intended to supplement but not replace the DWI’s series of guidance documents, and relates only to linkages with implementation of the WFD.
- 1.4. The Environment Agency (EA) is an executive non-departmental public body responsible to the Secretary of State for Environment, Food and Rural Affairs and an executive Assembly Government Sponsored Public Body responsible to Welsh Ministers for Wales. It has responsibilities in England and Wales for protecting the environment and contributing to sustainable development. It is responsible for drawing up River Basin Management Plans under the Water Framework Directive (WFD) and for planning the implementation of measures to address non-compliance with the WFD.

¹ In line with common practice, water undertakers and licensees are referred to as water companies throughout this Guidance.

SECTION A – BACKGROUND INFORMATION

2. The Water Supply (Water Quality) Regulations 2000 (as amended in 2007 and 2010) and the Water Supply (Water Quality) Regulations 2010 (Wales)

- 2.1. The Council Directive 98/83/EC of 3 November 1998² on the quality of water intended for human consumption (European Drinking Water Directive) sets standards for drinking water quality which apply in all EU member states. Most of these standards are informed by the World Health Organisation’s guidelines on drinking-water quality. The objective of the Drinking Water Directive (DWD) is to protect the health of all citizens in the European Union by making sure drinking water is safe and clean.
- 2.2. The DWD requires that a total of 48 parameters must be monitored and tested regularly. These include bacteria, chemicals such as nitrates and pesticides, metals such as lead and the way water looks and how it tastes. The Directive also specifies additional monitoring (sampling and analysis) requirements and actions that are required when there is a failure to meet a standard, including investigations, improvements and the setting of temporary departures (called authorised departures) from the standards for certain of the chemical parameters.
- 2.3. The DWD was transposed into national legislation by the Water Supply (Water Quality) Regulations 2000 as amended in 2007 and 2010 (the Regulations) in England and the Water Supply (Water Quality) Regulations 2010 in Wales. The Regulations require drinking water to be wholesome the definition of which includes the standards set out in the DWD and other requirements to secure the safety of drinking water.
- 2.4. The Regulations require water companies in England and Wales to carry out a risk assessment of every treatment works and associated supply system. The DWI has provided guidance to companies that they should use the principles of the World Health Organisation’s drinking water safety plan (WSP) approach to assessing and managing risks to the safety of drinking water. This risk assessment activity (as defined by Regulation 27 of the English Regulations and Regulation 28 of the Welsh Regulations) should be informed by, and in turn should inform, the company’s statutory raw water monitoring programme. Regulation 16A sets out the specific requirements for the collection and analysis of samples of raw water. The primary purpose of this raw water monitoring programme is to ensure the safety of treated drinking water through an understanding of the hazards and challenges posed by the nature of the source (raw) water.
- 2.5. In many cases the raw water regulatory monitoring data will be of value to the delivery of the requirements of Article 7 of the WFD. Where the Environment Agency judges it is not adequate for WFD purposes it will arrange for the gathering of further data and information as required.

3. The Water Framework Directive 2000/60/EC (“WFD”)

- 3.1 The Water Framework Directive 2000/60/EC (WFD)³ came into force on 22 December 2000 and was subsequently transposed into national legislation in England & Wales in December 2003. The Directive will help to protect and enhance the quality of:
 - surface freshwater (including lakes, streams and rivers)
 - groundwaters

² Directive 98/83/EC on the quality of water intended for human consumption

³ Directive 2000/60/EC Establishing a Framework for Community action in the field of water policy

- groundwater dependant terrestrial ecosystems
- estuaries
- coastal waters out to one mile from low-water.

3.2 In establishing a framework for the protection of water, the WFD promotes sustainable water use based on the long term protection of water resources thereby contributing to the provision of sufficient supplies of good quality drinking water intended for human consumption.

Article 7 of the WFD

- 3.3 Requirements for the monitoring and protection of water abstracted for drinking water purposes are set out in several sections of the WFD and within its Groundwater Daughter Directive (GWDD)⁴ but in particular, in Article 7 of the WFD.
- 3.4 Article 7.1 of the WFD requires Member States to identify all water bodies (both surface water and groundwater) from which water is abstracted or intended to be abstracted in the future, for human consumption in excess of 10 m³/day as an average or which serve more than 50 persons. These are called Drinking Water Protected Areas (DrWPAs). As the competent authority for the delivery of the WFD, the EA identifies these based on information available at the time including that provided by water companies.
- 3.5 Article 7.2 of the WFD requires that Member States ensure that, for each water body identified under Article 7.1, taking into consideration the water treatment applied, the resulting water supply complies with the Drinking Water Directive 98/83/EC. The DWI is the competent authority for ensuring the Drinking Water Directive requirements are met in England & Wales.
- 3.6 Under Article 7.3 of the WFD, Member States are required to implement measures in DrWPAs with the aim of preventing further deterioration (from a 2007/8 baseline) in raw water quality due to anthropogenic sources of pollution, so that as a minimum, the need for additional water treatment to meet drinking water standards is avoided and ideally the level of treatment can over time be reduced. The EA puts in place the framework to deliver these measures through River Basin Management Plans (see later). Failure to achieve this Article 7.3 objective does not necessarily mean that the Good Ecological Status objective will not be met for surface water bodies, but does mean that Good Chemical Status cannot be met for groundwater bodies as Article 7.3 is a component of the Good Chemical Status test for groundwater.
- 3.7 Further guidance on assessing whether a 'deterioration' in the quality of the raw water has occurred can be found in the UKTAG⁵.
- 3.8 Safeguard Zones, can, at the discretion of the Member State, be drawn up to assist with achieving the aims of Article 7.3. A safeguard zone can be a catchment or any other defined area within which measures can be implemented in order to protect water abstracted for drinking water purposes. These zones are not statutory but will be used to target measures that can be taken to protect raw water quality and prevent deterioration, so minimising the need for treatment. Whilst there is a specific role for Government and the EA, a wide range of partners including other regulators,

⁴ Directive 2006/118/EC on the protection of groundwater against pollution and deterioration

⁵ UKTAG Guidance. Assessing the achievement of Drinking Water Protected Area Objectives
http://www.wfduk.org/tag_guidance/article_4/drinking_water_objectives/view

businesses, local communities, NGOs and water companies may also have a role in delivering the necessary improvements, depending on the issues in each catchment. This can include the targeting of existing enforcement powers, advice and incentive schemes such as pollution prevention advice, the Pesticides Voluntary Initiative, Environmental Stewardship and other agri-environment initiatives. The EA will seek to work with all relevant stakeholders including water companies in developing action plans for Safeguard Zones. An essential precursor to these plans is the investigations to establish source-pathway-target relationships which provide baseline evidence that supports agreement between the EA and local partners on objectives and measures. Water company monitoring and risk assessment data can make a valuable contribution to this process.

- 3.9 Where deterioration in water quality is identified, and targeted regulatory and non-regulatory measures do not appear to be working, the EA may, as a measure of last resort, seek the designation of a Water Protection Zone (WPZ) to control pollution. This is a revised regulatory mechanism to address water pollution or other factors such as hydro-morphological damage that could lead to a failure of WFD objectives. A WPZ is a defined geographical area (sub-catchment, catchment or a larger area) in which the EA seeks from Government additional powers to manage or prohibit activities which cause or could cause damage or pollution of water – however, WPZs will only be used if other mechanisms such as the various voluntary initiatives are not successful. Proposed WPZs are subject to a three month public consultation, which will detail the regulatory powers and measures sought within the proposed WPZ. The final decision rests with the Secretary of State and Welsh Ministers.

River Basin Management Plans

- 3.10 As previously mentioned, delivery of Article 7.3 objectives will primarily be through measures set out in River Basin Management Plans (RBMPs) drawn up for river basin districts across England and Wales under the WFD.
- 3.11 RBMPs are plans for protecting and improving the water environment and have been developed by the EA in consultation with local partners and stakeholders. They contain the main issues for the water environment and the actions that need to be taken to deal with them. The first RBMPs were published in 2009, having been approved by the Secretary of State for the Department for Environment, Food and Rural Affairs (Defra) and the Welsh Ministers. The second RBMPs are due to be published in final form in December 2015.
- 3.12 In these first RBMPs, DrWPAs and some Safeguard Zones were identified. The process of identifying Safeguard Zones is continuing and further zones will be identified as additional data become available and risks are confirmed. The EA will use the evidence gathered in Safeguard Zones to refine the measures required for Article 7 compliance in current and future River Basin Management Plans.

Article 8 of the WFD

- 3.13 Article 8 of the WFD requires Member States to ensure that a monitoring programme is established in order to provide a comprehensive overview of water status within each river basin district. For surface water bodies, this should include monitoring for ecological and chemical status. For groundwater bodies, this should include monitoring for both the chemical status and to detect the presence of long-term anthropogenic induced upward trends in pollutants. Such monitoring should be in accordance with Annex V of the WFD.

- 3.14 For surface water bodies, Annex V details specific requirements to monitor substances discharged to DrWPAs that may cause deterioration in the status class of the water body.
- 3.15 Annex V additionally requires a map or maps to be provided showing the respective monitoring networks in the RBMPs.

4. WFD Reporting requirements - The Water Information System for Europe (WISE)

- 4.1 Member States are required to report against the actions identified in RBMPs to the European Commission, in line with the River Basin Planning timescales. The reporting requirements include specific elements on DrWPAs such as the provision of a monitoring network that is representative of the DrWPAs identified in the final RBMPs and their associated risks.
- 4.2 The EA as the competent authority for England and Wales is required to report a summary of the risk assessment results of the significant pressures in each river basin district to Defra and Welsh Government in the River Basin Management Plans. The EA completed the first characterisation (risk assessments) on each river basin district on the 22 December 2004. Summaries of the characterisation reports, known as the Article 5 reports, were submitted by Defra to the European Commission on the 22 March 2005. There is one report for each of the 11 River Basin Districts, and they can be found on Defra's website.
- 4.3 The monitoring network was initially required to classify water bodies. Subsequent monitoring is required to re-assess classification, improve risk assessments and assess the effectiveness of programmes of measures. The monitoring programme covers all surface waters, groundwaters and protected areas and should cover a range of parameters, including:
- for surface waters:
- physico-chemical (including pollutants);
 - priority substances and priority hazardous substances.
- for groundwater:
- hazardous substances and non-hazardous pollutants.
- 4.4 Data from the monitoring programme will be used in all stages of subsequent river basin planning cycle to:
- re-assess classification of all water bodies according to their ecological and chemical status
 - refine the risk assessments to improve our understanding of possible threats to the environment
 - drive programmes of measures to identify why a water body is failing its objective and determine what action is needed.
- 4.5 The timetable for UK reporting can be found via <http://www.wfduk.org/implementation/4-2/view>.
- 4.6 The EA reported its first WFD monitoring programme to the European Commission through the Water Information System for Europe (WISE) website in March 2007 and the final first RBMPs were published in 2009. The EA will be required to review by 2013 the first RBMPs, in particular, the characterisation assessments and the

economic analysis carried out, and then publish, for consultation, an interim overview of significant water management issues for second RBMPs.

- 4.7 By 2015, the EA will aim to have achieved the desired environmental objectives of the first RBMPs, and publish the second RBMPs.

5. Common areas associated with the implementation of the Regulations and the WFD

- 5.1 There is a substantial alignment of purpose and to a lesser extent monitoring requirements between the WFD and the Regulations with respect to the protection of raw water quality where the water is abstracted for drinking water purposes.
- 5.2 As part of the risk assessment process required by Regulation 27 (in England) and Regulations 28 (in Wales) of the Regulations, water companies should have identified any actual or potential risks to human health within the catchments of raw water sources and established a raw water monitoring programme accordingly. However, it should be noted that the raw water monitoring required under Regulation 16A only needs to address substances, properties and organisms at levels, either currently or in the future, that may pose a risk to human health or where they may have an impact on treatment.
- 5.3 Risks to raw water quality used for abstraction for drinking water supply should also have been identified through a variety of other mechanisms, including information and data gathered by the EA. The EA is committed to providing water companies with the data and information it holds that would support the water company risk assessments.
- 5.4 The water company raw water monitoring data are collected under Regulation 16A to comply with Regulations 26 – 28 (in England) and 27 - 29 (in Wales). However, this data may also provide the EA with a substantial amount of the information required to fulfil the requirements for the WFD, in particular, Article 7.3. The data will also supply a significant amount but by no means all of the information that is required to fulfil the requirements of Article 8 with respect to DrWPAs and thereby support the implementation of WFD Article 7.3.
- 5.5 The water companies' raw water monitoring will also be useful in establishing Safeguard Zones and as evidence to support measures that are considered necessary in those Safeguard Zones.
- 5.6 It is for the EA to make arrangements for any additional monitoring necessary to fulfil wider WFD requirements, supplementing the regulatory data provided by the water companies.
- 5.7 Data gathered by water companies for operational purposes i.e. operational raw water monitoring, is not required to be submitted to the DWI. However, this data may be of use to the EA for DrWPA purposes and should be shared where appropriate. Therefore, the EA will seek to make arrangements with water companies for this operational data to be made available where this would be useful and in particular, where it is agreed that such monitoring will form part of the DrWPA raw water monitoring network reported under WISE.
- 5.8 Figure 1 provides an overview of the flow of data to support the identification of Safeguard Zones and the appraisal of measures to manage and reduce risks to raw water quality. The diagram also shows the key areas where close liaison between the

EA and water companies is needed to assess and manage the risk to raw water quality.

- 5.9 Figure 2 explains the broad relationships between the River Basin Planning cycle and water companies' risk assessment process (Water Safety Plan cycle). It highlights that for both processes to work effectively there must be sharing of data and good communication between all stakeholders but particularly the EA and water companies.
- 5.10 In summary, the water companies' risk assessments, catchment risk assessments carried out by the EA and the raw water monitoring carried out by both the water companies and the EA all contribute to identifying DrWPAs and associated Safeguard Zones. The collation of relevant information should enable medium to long term catchment-based solutions to be established that will mitigate the risks in the long term so that as a minimum, the need for additional water treatment is avoided and ideally the level of treatment can over time be reduced. All relevant local partners should be engaged to find long-term sustainable solutions to priority issues that may compromise future water supplies.

Figure 1: Information Flow to Support Identification of Safeguard Zones and Appraisal of Measures to Manage and Reduce Risks to Raw Water Quality

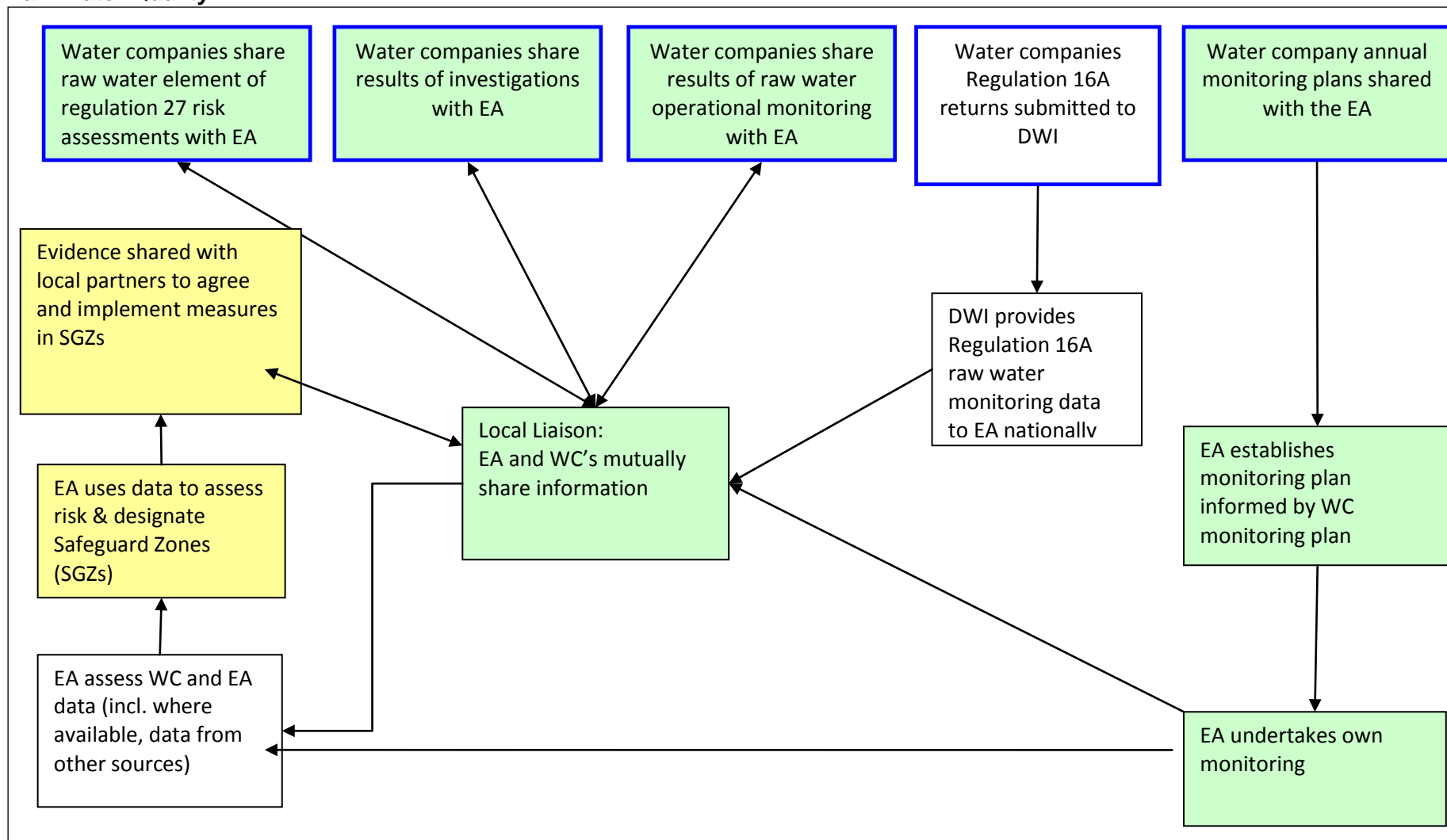
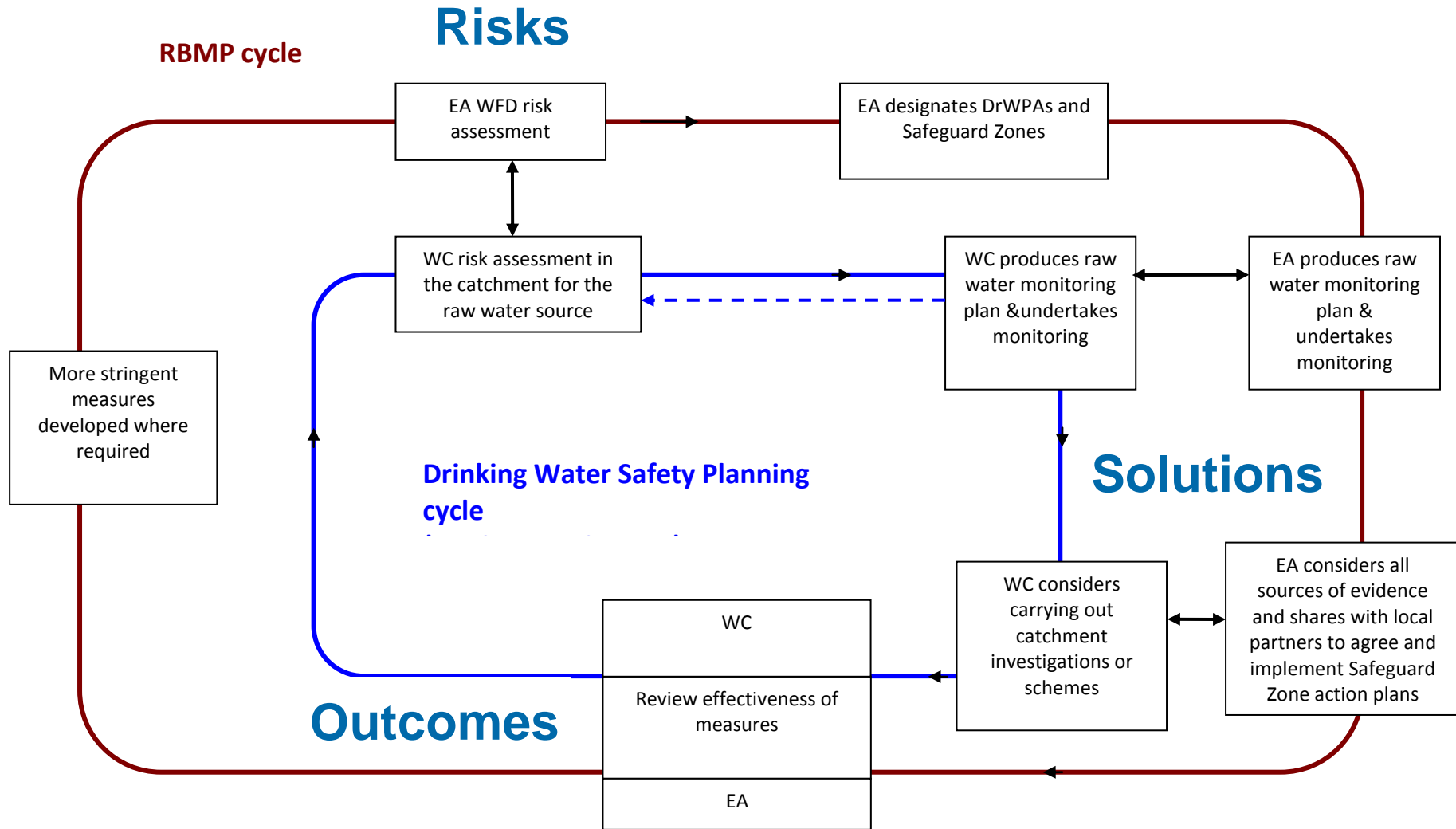


Figure 2: Broad Relationships between the River Basin Management and Drinking Water Safety planning cycles



SECTION B – GUIDANCE ON SPECIFIC ISSUES

6. Introduction to this section

6.1 The EA and the DWI are committed to achieving an integrated approach to drinking water protection in England and Wales that will deliver statutory requirements of both the WFD and the relevant parts of the drinking water regulations. This section of the guidance sets out how this may be achieved in the context of the Regulations. If the processes outlined in this document are followed in practice, the likelihood of achieving improvements in the quality of raw water used for drinking water abstraction purposes should be increased and help to secure a safe clean drinking water in the longer term.

7. Risk assessments of catchments

7.1 Regulation 27 (in England) and Regulation 28 (in Wales) requires water companies to carry out a comprehensive risk assessment for each treatment works and its connected supply system [from source to tap] covering all hazards and hazardous events. The intention of the risk assessment is to establish whether there is a significant risk of supplying water from those works and associated supply system that would constitute a potential danger to human health. The DWI has specified that the risk assessment methodology used by the water companies must be based on the water safety plan approach published by WHO in the Drinking Water Guidelines 2004⁶ taking account of any updates and associated guidance manuals published by the WHO.

7.2 Water companies are not required to carry out Regulation 27 (in England) and Regulation 28 (in Wales) risk assessments uniformly i.e. using a consistent approach and the same risk scoring system. This would not be consistent with the principles of a water safety plan approach. It is for the water companies to define their own risk assessment methodology and risk characterisation process.

7.3 The risk assessment should identify individual substances or parameters (e.g. nitrate) in addition to the identification of generic risks (e.g. agricultural pollution). The risk assessment should also identify any parameter or substance that may represent new or emerging future risks to the supply system of clean drinking water i.e. the quality of the raw water in the catchment, the treatment process, the distribution and supply at consumers' taps.

7.4 For each current and future risk identified, water companies should formulate an Action Plan of short, medium and long term measures required to mitigate the risk.

7.5 Regulation 28 (Regulation 29 in Wales) requires water companies to provide to the DWI a report of each Regulation 27 (Regulation 28 in Wales) risk assessment and any subsequent review of the risk assessment. The information required from companies by the DWI is set out in Information letter 07/2008⁷.

7.6 The DWI does not specify the format of the report as it needs to be able to suit the risk assessment methodology of each water company. However, Annex A to the IL 07/2008 outlines the minimum information requirements that should be included. It is not the intention that water companies provide the DWI with all the detailed underpinning information gathered during the course of preparation and maintenance

⁶ Guidelines for Drinking Water Quality Volume 1: Recommendations - 2004

⁷ DWI IL 07/2008 – Guidance on the requirement to submit a risk assessment under regulations 27 and 28 of the Water Supply (Water Quality) Regulations 2000 (2001 in Wales Amendment Regulations 2007)

of each risk assessment. This is because there is a significant amount of data and information that comprises a water safety plan and it would not be possible to assimilate into an easily readable and informative format. Additionally, water safety plans could contain potentially commercially sensitive information. Therefore, for the purposes of Regulation 28 (in England) or Regulation 29 (in Wales), the reports should contain essential information on where there are actual or potential risks to human health from a water supply system.

- 7.7 Information on the catchment element of water company risk assessments, together with any other local evidence will be pivotal when identifying DrWPAs (and associated Safeguard Zones) at risk of failing Article 7.3. This should ensure close alignment between water companies, regulators and local partners in tackling risks to drinking water supplies identified in the raw water sources. Water companies should therefore be prepared to share the relevant findings on their risk assessments as part of engaging local partners.
- 7.8 There is an expectation that water companies, in carrying out their risk assessments, will have liaised with all relevant stakeholders. In respect of the catchment element of the risk assessments, this should, as a minimum, include an initial exchange of information between the water companies and the EA at a local or regional level to understand the potential risks to the raw water sources and help inform the process of establishing DrWPAs (and associated Safeguard Zones). Once local relationships have been established, regular dialogue on all areas associated with the actual or potential risks to the raw water quality should continue.
- 7.9 Water companies are not required to provide updates of each risk assessment on a routine basis (e.g. annually). Instead it is the duty of each water company to keep each risk assessment under continual review and provide an updated report to the DWI whenever there is a significant change in circumstances within the whole water supply chain i.e. any material change to risk categorisation following a drinking water compliance failure or events, or completion of any specified action relating to risk mitigation. However, it would be prudent for water companies to ensure their risk assessments have been updated [and key changes highlighted to the relevant stakeholders such as the EA] as necessary at specific planning milestones such as those associated with RBMP reviews and price setting reviews.

8. Raw water Monitoring

Point of monitoring

- 8.1 Regulation 16A(1) requires water companies to identify every abstraction point from which water is drawn for drinking water quality purposes and to carry out monitoring of raw water to support their duties relating to treatment and risk assessment. As part of the Regulation 27 (in England) and Regulation 28 (in Wales) risk assessment the DWI expects companies to document every licensed abstraction point irrespective of whether a source is used continuously, intermittently or as standby and emergency sources.
- 8.2 The Water Companies' raw water monitoring point should be capable of identifying parameters and substances that are representative of the risks to deterioration of the raw water quality and that could influence (now or in the future) treatment to meet the requirements of the Drinking Water Directive.
- 8.3 The DWI's guidance on the Regulations sets out that for the purpose of collecting Regulation 16A(2) samples of raw water, water companies may use a sample point

located at the treatment works end of any pipe or set of pipes conveying water from the abstraction point(s) (usually such a sample point is known as the combined inlet to the works). For the purposes of the monitoring of sources at risk only raw water from a single source or mixed water from sources of uniform quality is acceptable. If a single combined inlet sample point is not located so as to be representative of all the water that may enter the treatment works then the water company will need to use more than one sample point i.e. sample each source of varying quality. These may be located either at the individual abstraction point(s) or at the treatment works end of each pipe that conveys water from an abstraction point to the treatment works.

- 8.4 When selecting sample points, water companies must ensure that they are located upstream of any treatment intended to modify water quality in respect of any parameter, substance, micro-organism or parasite. Treatment in this context includes blending where this is undertaken to modify the quality of water e.g. blending of high nitrate water with water from a low nitrate source. It also includes dosing to adjust the concentration of fluoride or alter the pH.
- 8.5 The water companies' regulatory raw water monitoring and sampling locations will be a substantial component of the DrWPA monitoring network for the purposes of WISE reporting. The intention is that these would be representative of the raw water entering the treatment works to confirm any deteriorating trends in raw water quality that may impact on drinking water treatment. Where a DrWPA is confirmed as 'at risk' of failing Article 7.3 of the Water Framework Directive the EA will then work with the water company and other local parties to investigate the cause and put in place a safeguard zone and action plans, as appropriate.
- 8.6 It should be noted that in some situations, although water company raw water monitoring will be representative for drinking water supply purposes, they may not be representative of the water body for other WFD purposes. In these cases, the EA will take steps to implement any additional sampling necessary for the wider WFD purposes.

Parameters

- 8.7 The Regulations do not include a prescriptive list of the parameters that are required to be monitored. It is for each water company to assess the risks within its catchments as part of its requirements under Regulation 27 (in England) and Regulation 28 (in Wales) and establish monitoring programmes accordingly. This assessment should include a review of all information available from a variety of sources including the local or regional EA.
- 8.8 The Regulations only require monitoring for parameters where they may be present in levels that may pose a risk to human health or where they may have an impact on treatment. There is some debate over what parameters constitute a risk to human health and it is ultimately for the water companies to decide based on the knowledge and understanding of their own supply systems [and in line with a water safety plan approach]. However, monitoring for Regulation 16A purposes should include substances that could be a precursor of the formation of compounds considered a potential risk to human health once in the water supply distribution systems e.g. colour which could lead to THM formation after treatment at a water treatment works.
- 8.9 The Regulations do not specifically cover monitoring [in surface waters] for priority substances and specific pollutants where a risk to Good Status exists - unless these substances are identified in the Regulation 27 (in England) and Regulation 28 (in Wales) risk assessments. However, water companies should, as a minimum, consider

the parameters listed in Annex X of the WFD, the Environmental Quality Standards for which are set out in the daughter directive known as the [Priority Substances Directive](#) (2008/105/EC).

Frequency

- 8.10 Regulation 16A(5) sets minimum frequencies for surface water [which provide more than 100m³ a day as an average] which derive from the WFD but do not fully represent the requirements for WFD. The monitoring frequencies in the Regulations are set for the purposes of informing the Regulation 27 (in England) and Regulation 28 (in Wales) risk assessments (to comply with Regulations 26 to 28 in England and Regulations 27 to 29 in Wales).
- 8.11 The Regulations do not specify a minimum sampling frequency for raw waters from groundwater sources. Water companies are expected to take into consideration established practice for determination of sampling programmes to indicate changes or trends in raw water quality (in particular the technical guidance produced by the United Kingdom Technical Advisory Group (UKTAG)⁸ that supports the implementation of the WFD. They should also take into account historical water quality trends and monitoring data available from other bodies (such as the Environment Agency).
- 8.12 The Regulations do not require uniformity of sampling throughout the year. Water companies may choose to monitor for certain parameters at different times of the year depending on when there is greatest risk of them occurring in the raw water e.g. certain pesticides may only be monitored in Spring and Autumn when rainfall is high. Where seasonal and other short-term effects are likely to be encountered, monitoring should be suitable for trend assessment and it may be appropriate for sampling to take place at the same time(s) each year.

Monitoring plan

- 8.13 The Regulations do not require water companies to provide an annual monitoring plan for raw water monitoring to the DWI. However, the EA would find it useful if the water companies were able to share their monitoring plans at an agreed period annually in order to understand the extent to which the regulatory raw water monitoring for the Regulations meets the Article 7 WFD requirements. This would enable the EA to make arrangements for the implementation of their own sampling programme which will run in tandem with those of the water companies. Local discussions between water companies and the local EA officers should take place to establish the best mechanism for sharing relevant information.

9. Submission of data to the DWI

- 9.1 Arrangements are in place for water companies to submit their raw water monitoring data for Regulation 16A purposes to the DWI, the details of which are outlined in Information Letter 06/2007⁹. The DWI will share the water companies' raw water data with the EA in line with the principles of Better Regulation for the purposes of contributing to the UK monitoring under Article 7 WFD. Water companies should ensure that they have in place local arrangements for the sharing of other [operational]

⁸ UK Technical Advisory Group on the WFD 'UKTAG Task 12(a) Guidance on Monitoring Groundwater'
http://www.wfduk.org/tag_guidance/Article_08/monitiring_gw/view

⁹ DWI Information letter 06/2007 – Outcome of the consultation exercise on amendment to the Water Supply (Water Quality) Regulations 2000 – Requirements for Raw Water monitoring

data and information required for the assessment of risks as part of their Regulation 27 (in England) and Regulation 28 (in Wales) risk assessments.

- 9.2 A Memorandum of Understanding has been set up between the EA and the DWI nationally to confirm the arrangements for the transfer of the regulatory raw water monitoring data.

10. Analysis (QA/QC Directive)

- 10.1 Given the generality of raw water monitoring activities that water companies are required to undertake (i.e. parameters and frequencies as determined by risk assessment), the Regulations do not specify any analytical performance characteristics for raw water analysis undertaken by water companies. However in order to be appropriate for use under the WFD, monitoring is required to comply with the requirements of the UK transposition of the QA/QC¹⁰ directive (2009/90/EC). Whilst these requirements are specific, unlike those for regulatory raw water monitoring by water companies, in many cases the analytical methods in use in water company laboratories are likely to be as advanced as those used by the EA for their monitoring. Water companies are therefore asked to indicate, as part of their annual monitoring plan whether or not their raw water analysis meets the requirements of the QA/QC Directive. Where this is not the case then the results are unlikely to be appropriate for use under the WFD and further monitoring may need to be arranged by the EA.
- 10.2 A key concern was that water companies may be expected to analyse raw water samples taken under Regulation 16A to the environmental based limits required by the QA/QC Directive. However, since the monitoring is intended to support the treatment and risk assessment requirements, water companies will only need to monitor to detect a risk to human health. Where a compound has a more stringent environmental standard than a health standard, water companies will not be required to monitor to the more stringent environmental standard under Regulation 16A.

¹⁰ Commission Directive 2009/90/EC of 31 July 2009 laying down, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, technical specifications for chemical analysis and monitoring of water status