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Foreword

My Department aims to ensure that those who rely on private drinking water supplies, or those who consume food in which the water from a private supply is part of the production process, can be assured of the quality and safety of the water.

Private water supplies can be drawn from a variety of surface and groundwater sources. Surface sources include streams and rivers as well as private impoundment reservoirs. Groundwater sources, which constitute the majority of private supplies in Northern Ireland, include wells, boreholes and springs.

There are about 4,000 to 5,000 private water supplies in Northern Ireland. The majority of these are domestic supplies serving single private dwellings. The main scope of the proposed Regulations, however, covers:

- private supplies which are used in food production; and
- other commercial supplies serving the public e.g. guest houses;

The current regulatory framework for such supplies is set out in the Private Water Supplies Regulations (Northern Ireland) 1994. These Regulations are administered by the Drinking Water Inspectorate for Northern Ireland, which works closely with the District Councils in the outworking of the Regulations. However, this regulatory framework needs to be updated to meet the requirements of the 1998 EU Drinking Water Directive, which sets some new and some improved standards for drinking water quality, as recommended by the World Health Organisation's guidelines.

For public water supplies in Northern Ireland, the Directive has been transposed by the Water Supply (Water Quality) Regulations (Northern Ireland) 2007. However for private water supplies, these draft Private Water Supplies Regulations (Northern Ireland) 2009 are intended to transpose the Directive, the objective being to improve the quality standards of our private supplies and to protect the health of consumers of food prepared from those private supplies.

The purpose of this consultation document is to set out my Department's draft proposals for new Regulations and to seek views on the proposed changes to the regulatory framework arising from the implementation of the 1998 Directive.

I encourage you to respond to this public consultation, as your views will help the Department put in place a structure to improve the quality of our private drinking water and ensure the provision of a wholesome water supply for all.

Minister for the Department of the Environment

Consultation Arrangements

Comments on the issues and proposals raised in this paper should reach the Department by 09/09/2009

Comments may be made as follows:

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Further copies of this paper may be obtained from the above address on written request or by telephoning 028 9025 4924. The paper can also be accessed online at: http:/www.doeni.gov.uk

Further Information

Should you require a copy of this paper in an alternative format it can be made available on request in large print, disc, Braille, audiocassette, or text phone for the hearing impaired. The document may also be made available on request in minority ethnic languages to those who are not proficient in English. The Department will translate executive summaries of key publications into Irish or Ulster Scots upon request. Information and additional copies of the document can be requested by text – phone on: 028 9054 0642.

A list of the consultees that we have contacted directly for this exercise is attached at Appendix E. This list is not exhaustive and we welcome views from all interested parties.

Freedom of Information Act 2000 – confidentiality of consultations

Please note that the Department of the Environment may in due course wish to publish responses to this consultation document. The Department will publish a summary of responses following completion of the consultation process. Your response and all other responses to the consultation may be disclosed on request. The Department can only refuse to disclose information in exceptional circumstances. Before you submit your response, please read the paragraphs below on the confidentiality of consultations as they will give you guidance on the legal position about any information given by you in response to this consultation.

The Freedom of Information Act gives the public a right of access to any information held by a public authority, namely, the Department in this case. This right of access to information includes information provided in response to a consultation. The Department cannot automatically consider as confidential information supplied to it in response to a consultation. However, it does have the responsibility to decide whether any information provided by you in response to this consultation, including information about your identity should be made public or be treated as confidential.

This means that information provided by you in response to the consultation is unlikely to be treated as confidential, except in very particular circumstances. The Lord Chancellor's Code of Practice on the Freedom of Information Act provides that:

- The Department should only accept information from third parties in confidence if it is necessary to obtain that information in connection with the exercise of any of the Department's functions and it would not otherwise be provided;

- The Department should not agree to hold information received from third parties 'in confidence' which is not confidential in nature; and

- Acceptance by the Department of confidentiality provisions must be for good reasons, capable of being justified to the Information Commissioner.

For further information about confidentiality of responses please contact the Information Commissioner's Office or see the web site at http://www.informationcommissioner.gov.uk

Executive Summary

This Consultation Paper describes the Department's proposals for the transposition into Northern Ireland law, and the subsequent implementation of EC Directive 98/83/EC on the quality of water intended for human consumption[1] (the Directive), as it applies to private water supplies. A copy of the Directive is attached at Annex A. New Regulations are needed to fully transpose the obligations of the Directive and will replace the current 1994 Regulations in respect of private water supplies in Northern Ireland.

The Directive has already been transposed for the purposes of public water supplies – the current corresponding Regulations are The Water Supply (Water Quality) Regulations (Northern Ireland) 2007. The Department of Regional Development in Northern Ireland is responsible for policy in relation to the public water supply.

The proposed Regulations are provisionally entitled "The Private Water Supplies Regulations (Northern Ireland) 2009".

The purpose of this paper is to encourage owners and users of private water supplies and others who may have a personal or professional interest in such supplies to comment on the particular proposals and on the other issues highlighted in the paper. The Department will assess all responses carefully and will use them to inform the shape of future policy and the final Regulations.

The proposed Regulations are to be made in exercise of powers conferred by the Water and Sewerage Services (Northern Ireland) Order 2006 in respect of DOE functions in relation to private supplies, and under section 2(2) of the European Communities Act 1972.

The Consultation Paper discusses the meanings of core terms and expressions that are used in the proposed Regulations, for example, the meaning of a 'private water supply', and an explanation of what is meant by 'wholesome'.

It also considers issues such as the purposes and use of risk assessments, sampling and analysis (monitoring) of supplies, investigations to discover the reasons why a supply is unwholesome, and what may happen when an unwholesome supply is a risk to human health.

The Paper explains how important provisions may apply and interact, for example the different options that will be available to the Department either to agree suitable remedial measures informally with owners when a supply is unwholesome but does not pose a significant risk to human health, or to take formal remedial action, such as serving an "improvement notice" or a "restriction notice" on an owner or other responsible person when there is a more serious health risk.

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[1] OJ L 330/32 5.12.98

The Paper describes proposed new offences of failing to comply with the terms of improvement notices and restriction notices, and it explains that a responsible person who is aggrieved by one of these proposed new regulatory notices may appeal to the Water Appeals Commission.

It sets out a proposed new scheme of “authorisations” of different standards that will supersede the current powers contained in the 1994 Regulations. The proposed new powers will enable the Department to issue temporary authorisations (derogations) from the non-microbiological (chemical) standards of wholesomeness whilst the owner or other responsible person takes remedial action. Of course such “authorisations” are time bounded and will not be granted if there is a risk to human health.

The Department will have the power to enforce the Regulations, for example where a failed supply poses a risk to human health and the responsible person has not taken the remedial measures required by an improvement notice or a restriction notice.

The Department already keeps records of private water supplies and publishes an annual report. This Paper specifies additional records the Department will be required to keep in respect of private supplies and the requirement on the Department to continue to publish an annual report about private supplies.

The Schedules attached to the Regulations are concerned with drinking water standards (Schedule 1); requirements for risk assessment (Schedule 2); monitoring (Schedule 3); sampling and analysis (Schedule 4); and records (Schedule 5).

Section 1
Introduction and Background

Directive 98/83/EC

1.1 European Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption ("the Directive") covers all drinking water supplies whether public water supplies provided by Northern Ireland Water (the water undertaker for Northern Ireland) or private supplies used by commercial organisations or private individuals. Member States are required to transpose the Directive into their national law.

1.2 The Directive sets new standards for water intended for human consumption ("drinking water") that Member States are required to meet. It also sets indicator parameter values for monitoring purposes, but Member States are only required to take action when non-compliance of an indicator parameter value is judged to be a risk to human health. The standards for wholesomeness and the indicator parameter values apply at the supply points normally used for human consumption.

Public water supplies

1.3 The Water Supply (Water Quality) Regulations 2002 and the Water Supply (Water Quality) (Amendment) Regulations 2003 transposed the Directive into law in respect of public water supplies provided by the then Water Service. These Regulations were replaced by the Water Supply (Water Quality) Regulations (Northern Ireland) 2007 ("The 2007 Public Water Supply Regulations") in order to reflect the change in delivery of water services from the Department of Regional Development Water Service to Northern Ireland Water Limited.

1.4 The 2007 Public Water Supply Regulations, and the Regulations which preceded them, are primarily concerned with the quality of water supplied for drinking, washing, cooking and food production, and with arrangements for the publication of information about water quality.

Private water supplies

1.5 Private Water Supplies are generally defined as any supplies of water provided otherwise than by Northern Ireland Water Limited - the statutory water undertaker for Northern Ireland.

1.6 Such water supplies may be drawn from a variety of surface and groundwater sources. Surface sources include streams and rivers as well as private impoundment reservoirs. Groundwater sources include wells, boreholes and springs, which utilise water contained in underground aquifers.

The majority of private water supplies within Northern Ireland are drawn from groundwater sources.

1.7 At present, private water supplies are regulated by The Private Water Supplies Regulations (Northern Ireland) 1994[1] ("the current Regulations"), made under the Water and Sewerage Services (NI) Order 1973 which has recently been repealed and replaced by the Water and Sewerage Services (Northern Ireland) Order 2006[2]. The current Regulations implemented the previous Directive, 80/778/EEC, relating to the quality of water intended for human consumption[3] ("the previous Drinking Water Directive"). The Regulations are supplemented by guidance including information leaflets issued by the Drinking Water Inspectorate (DWI), and the Private Water Supplies Technical Manual[4].

1.8 The new Directive places an absolute obligation on Member States to comply with its standards and other requirements.

1.9 In fulfilling the requirements of the Directive, the proposed Regulations introduce a duty on the Department and enforceable obligations on owners or other responsible persons to ensure that the standards for wholesomeness and other requirements are met.

1.10 It is estimated that there are 4,000 to 5,000 private water supplies in Northern Ireland. However, about 70% of these (approximately 3,000) are individual supplies to single private dwellings, which are not required to be registered with the Drinking Water Inspectorate under the current Regulations. The 1998 Directive continues to allow for exemption of such supplies provided the water is not supplied as part of a commercial or public activity. Of the 1263 supplies registered with the Inspectorate, 7.5% (**93 supplies**) are commercial (i.e. used for food production purposes or in establishments such as hotels or guest houses) and 1.5% (**18 supplies**) are shared domestic supplies. The remaining 91% relate to 1152 supplies on dairy farms.

1.11 Under the current procedures for the implementation of Private Water Supplies Regulations (Northern Ireland) 1994, water used in the cleaning and final rinse process in the milking parlour of a dairy farm is subject to one bacteriological test per annum. The monitoring of dairy farm supplies is carried out by the Quality Assurance Branch of Department of Agriculture and Rural Development. The Food Standards Agency (FSA), as the UK national competent authority for food hygiene, has not determined if using a private water supply for cleaning and final rinsing of dairy equipment could have an adverse effect on the safety of milk for consumers.

1.12 Although Scottish Ministers had proposed to include the use of private water supplies in milking parlours within the enhanced sampling and testing regime of the Private Water Supplies (Scotland) Regulations 2006, in the

[1] SR 1994 No. 237
[2] S.I. 2006/3336 (N.I. 21)
[3] OJ L 229 30.8.1980
[4] http://www.privatewatersupplies.gov.uk/private_water/CCC_FirstPage.jsp (updated)

absence of specific advice from FSA Scottish Ministers have issued an information letter, (Information Letter 1/2008) recommending revised monitoring arrangements for Dairy Farms until further notice. In essence the pre-2006 monitoring regime for Dairy Farms is maintained. The recent DEFRA (Department for Environment, Food and Rural Affairs) consultation on Private Water Supplies Regulations for England referred to the Scottish information letter and proposes to regulate Dairy Farms in England on that basis. In Northern Ireland, it is proposed that the current monitoring procedures for dairy farms will continue, until such time as FSA makes its determination. This means that dairy farm supplies are not included in the scope of the proposed Regulations.

1.13 The current Regulations apply to private supplies which serve more than one household for purely domestic purposes, or are used in commercial food production, that is, the making, processing, preserving, preparing or marketing of food or drink (including water) for sale or for human consumption.

1.14 The Regulations identify water supplies by Category and by class within each Category. Within each Category the class of supply depends on the number of people served or the volume of water used.

1.15 A Category 1 supply is that used for drinking, washing or cooking, by people living in properties receiving the supply: water used solely for domestic purposes. Category 1 supplies are placed in classes A to E depending on the number of people supplied, or volume of water used.

1.16 A Category 2 supply is that used to make food or drink that is sold, or used in properties with a regularly changing population, for example hotels or guest houses. Category 2 supplies are placed in classes 1 to 5 depending on the volume of water used. Table 1 shows the numbers of private water supplies.

1.17 There are no prescribed sampling requirements for supplies serving single dwellings (Category 1, Class F supplies), in accordance with the Judgment of the European Court of Justice (Commission v Kingdom of Belgium C-42/89) in 1989.

Table1

Category	**No. of Supplies**
2.1	1
2.2	14
2.3	31
2.4	42
2.5	5
Small Supplies	18
Dairy Farms	1152

1.18 The quality of the source of a private supply can be highly variable particularly following heavy rain. Some supplies are treated to remove impurities, while others have inadequate or no treatment. At times, some supplies are considered not safe to drink and present a risk to health, particularly for people who do not consume them regularly, such as occasional visitors. Vulnerable groups, such as immunosuppressed people, the very young and older people may be particularly prone to infections from inadequately treated private water supplies.

1.19 The greatest risk is from gastric and other illnesses caused by microbiological contamination of the supply. The most likely source of microbiological contamination in rural areas is animal excreta entering water sources from land where farm or wild animals graze. Another source of microbiological contamination is discharges from cesspits and septic tanks that store and treat domestic sewage. All those who drink water contaminated by micro-organisms are at risk of infection, but the risk is much higher for people who are exposed to the supply irregularly such as visitors, particularly to hotels, guest-houses and bed and breakfast establishments.

1.20 Although microbiological contamination presents the greatest risk to health, in some cases chemical contamination can be a risk. This may come about if pesticides are being used near to inadequately protected private water supplies, and there is also a risk from industrial pollution with chemicals such as chlorinated hydrocarbons which can persist in supplies for long periods. Some supplies may also have naturally occurring levels of chemicals for example arsenic or fluoride which can be found at levels which could pose a health risk if the water is consumed over long periods.

1.21 Private supplies can also become contaminated, after abstraction and any treatment, during distribution to the premises served and within the premises. Common causes of contamination during distribution are ingress of environmental water surrounding the pipe work when there is low pressure or loss of pressure in the distribution system and leaching of chemicals from inappropriate materials used in the pipe work. Common causes of contamination within premises are dissolving of metals from plumbing systems, particularly lead, and microbiological contamination from unhygienic taps.

The proposed Regulations

1.22 It is proposed that the new Regulations should be entitled provisionally "The Private Water Supplies Regulations (Northern Ireland) 2009".

1.23 The proposed Regulations are to be made in exercise of powers conferred by the Water and Sewerage Services (Northern Ireland) Order 2006 ("The Water Order") in respect of DOE functions in relation to private supplies, and under section 2(2) of the European Communities Act 1972[1]. The Water

[1] 1972 c. 68

Order allows for the Department to prescribe requirements in order for water from private supplies to be regarded, or not, as wholesome; to maintain a register of private supplies; and to make provision for obtaining information about the quality of private supplies. The enabling powers of Section 2(2) of the European Communities Act 1972 allow flexibility with regard to other provisions in order to transpose the Directive; including enabling the Department to include in the Regulations self-contained enforcement procedures with provision for appeal to the Water Appeals Commission.

1.24 Section 2(2) will also enable powers to be included in the new Regulations for the Department to put in place risk assessments of private supplies. Taking proactive measures, informed by the findings of risk assessments, will help the Department to reduce the amount of expensive monitoring that would otherwise be required under the Directive. This is wholly consistent with the current thinking and practice in many parts of the world, and with World Health Organisation (WHO) guidance[1], where it is recognised that risk assessment and risk management is the best way to ensure the quality of water supplies from catchment through to consumers' taps, rather than relying solely on extensive monitoring for long lists of parameters.

Liaison between UK administrations

1.25 The Department and its counterparts in England, Scotland, and Wales seek to achieve a broadly consistent approach to policy and to the content of the Regulations across the United Kingdom. The Drinking Water Inspectorate (DWI), a part of the NI Environment Agency within DOE, and the policy team in the Department, have collaborated with their counterparts in Great Britain to prepare the proposed Regulations and associated technical guidance. This guidance, entitled "Private Water Supplies Technical Manual" is available online[2].

1.26 Similar Private Water Supplies Regulations are due to come into force in England and Wales before the end of 2009. In Scotland, Regulations to implement the Directive have been in force since July 2006.

1.27 The Technical Manual is useful to those who are responsible for assessment and treatment of private supplies and anyone who may be called upon to give advice. It will also help others with an interest in private supplies, for example by explaining what may be involved in certain procedures required under the Regulations, in particular how to approach and carry out a risk assessment. The site also provides a number of risk assessment templates and case studies.

[1] http://www.who.int/water_sanitation_health/en/
[2] http://www.privatewatersupplies.gov.uk/private_water/22.html

Section 2
Chapters

The following chapters provide more detail about the contents of the proposed Regulations, and include some specific consultation questions on which views are sought. However, you may have other issues which you wish to raise, and the Department welcomes views or comments on any part of the proposed Regulations during this consultation stage. The corresponding part of the proposed draft Regulations is included in brackets after each heading, for reference.

2.1 Exemptions (regulation 4)

2.1.1 Member States may exempt from the provisions of their national law an individual drinking water supply that provides less than 10 m^3 per day on average or serves fewer than 50 persons, unless the water is supplied as part of a commercial or public activity. Where a Member State has recourse to this exemption, it must ensure that users of the supply are informed that the supply is not regulated and are given advice on any action they should take to protect their health. The Department proposes to exempt single private dwellings and will only offer advice to the owners and users of such supplies, in accordance with the Directive. (This is detailed in draft regulation 11). It is proposed to include a discretionary power within the Regulations (draft regulation 10) to monitor 18 small shared domestic supplies (i.e. those domestic supplies which serve more than one dwelling) within the scope of the Regulations. More detail is provided later in this paper.

2.1.2 The Directive does not apply to natural mineral waters. These waters are regulated by the Natural Mineral Water, Spring water and Bottled Drinking Water (Northern Ireland) Regulations 2007. Furthermore, because the requirements of the 1998 Directive are transposed by these Regulations in respect of spring water and bottled drinking water, all three types of water are exempt from the proposed Regulations. However, this exemption only covers the volume of water which is actually bottled. There are potential situations where water in a bottling plant is used for a range of tasks, including cleaning, wash-down and for the supply of potable drinking water throughout the factory at sanitary stations and catering facilities. In this case, bottled water suppliers which use their private water supply for the aforementioned tasks would be monitored under the proposed Private Water Supplies Regulations in respect of the volume of water used for these activities.

2.1.3 Waters that are medicinal products or water that is used solely for washing a crop after it has been harvested are also exempt from the proposed Regulations.

Consultation Question 1: Do you agree with the proposed exemptions from the Private Water Supplies Regulations?

2.2 Wholesomeness (regulation 5 & schedule 1)

2.2.1 The current Regulations transpose the requirements of the previous Drinking Water Directive, which referred to concentrations of parameters that the Member State had to monitor in water supplies. The Member State had to take the steps necessary to ensure that water intended for human consumption at least met those requirements.

2.2.2 The new Directive requires Member States to ensure that drinking water supplies are wholesome and clean and it also defines these terms by reference to quality standards and other requirements (Articles 4 and 5, and Annex I of the Directive). Water that is not wholesome could constitute a risk to human health.

2.2.3 The World Health Organisation guideline values of which the Directive takes account represent the concentration of a parameter that does not result in any significant risk to the health of a consumer, usually over a lifetime of consumption. Where scientific research demonstrated that it was necessary, some new parameters were added to the Directive, but the overall total of parameters was reduced from 62 to 48 to include only those considered essential at the level of the European Union to ensure a continued high level of health protection.

2.2.4 As well as referring to the quality standards set down in the Directive, schedule 1 of the proposed Regulations also refers to some "national requirements." This is because the Directive instructs that Member States set values for additional parameters where the protection of human health within its territory so requires.

2.2.5 The Water Supply (Water Quality) Regulations (Northern Ireland) 2007 already include national standards for certain parameters because in public supplies they are a risk to human health when regularly present at concentrations consistently above the standards. The proposed Private Water Supplies Regulations therefore also include the same national parameters because it is the Department's policy that consumers of private supplies, or of food and drink prepared from private supplies, are entitled to the same degree of health protection as consumers of public supplies.

Consultation Question 2: Do you agree with the parameters included in the definition of wholesomeness, in particular with the inclusion of "national parameters"?

2.3 New Installations (regulation 6)

2.3.1 Under the current Regulations, there is no requirement in respect of substances or products used for private water supplies. Article 10 of the Directive requires that no substances or materials for new installations used in the preparation or distribution of drinking water, or impurities associated with such substances, or materials for new installations remain in the water in concentrations higher than is necessary for the purpose of their use and do not, either directly or indirectly, reduce the health protection provided for in the Directive.

2.3.2 All substances and materials used by statutory water undertakers in the treatment and distribution of public water supplies have to satisfy the requirements of regulation 30 of the 2007 Public Water Supply Regulations. The requirements specify that substances and products used must conform to appropriate European harmonised standard or European technical approval, or appropriate British Standard providing an equivalent level of protection and performance in accordance with Council Directive 89/106/EEC on the approximation of laws, regulations and administrative provision of the Member States relating to construction products.[1] A list of approved products is posted on the Drinking Water Inspectorate UK website, and is revised on a regular basis.[2]

2.3.3 The Department considers that new private water supplies should be constructed with substances and materials that do not adversely impact water quality. Consequently, the proposed Regulations include a requirement that only substances and products that conform to appropriate European standards are used for new installations. The DWI UK approved list provides details on some such products which may be used in private water supplies but it should be noted that this list is directed mainly towards products used within the public water supply. Generally, any products used for new installations for the preparation and distribution of private supplies to premises should conform to the specification given within regulation 30 of the 2007 Public Water Supply Regulations.

Consultation Question 3: Do you agree that for new installations for the preparation and distribution of private supplies, only substances and products which conform to the specification within regulation 30 of the Water Supply (Water Quality) Regulations (Northern Ireland) 2007 for the purposes of public water supplies may be used?

2.4 Risk Assessments (regulation 7 & schedule 2)

2.4.1 The World Health Organisation (WHO) in its latest Guidelines for Drinking Water Quality (3rd edition, published in 2004[3]), recommends that the most effective means of consistently ensuring the safety of a drinking water supply is through the use of a comprehensive risk assessment and risk management approach. The WHO calls this proactive approach a “water safety plan”. The water safety plan framework consists of four elements (catchment, treatment, distribution, buildings) and is being adopted by Governments in many parts of the world. The Water Safety Plan approach has been adopted in the corresponding 2007 Regulations for public water supplies in Northern Ireland, and the recent amendment to these Regulations widens the scope of risk assessment.

2.4.2 This proactive approach moves away from monitoring supplies, by rote, for a long list of parameters to the control and monitoring of supplies for parameters only where there is an identified risk that those parameters are present. The Department may adopt the same approach on a reduced scale to carry out risk

[1] O.J. No. L40, 11.2.89, p.12
[2] http://www.dwi.gov.uk/31/approvedproducts/soslist.shtm
[3] Guidelines for Drinking Water Quality, Third Edition, Volume 1, Recommendations, World Health Organisation, Geneva, 2004

assessments of private supplies, encompassing all steps in the water supply chain from catchment through collection, treatment and distribution to consumers' taps.

2.4.3 The primary objectives of this approach are to minimise the contamination of source water, to reduce or remove contaminants by treatment, and to prevent contamination during storage and distribution to consumers' taps.

2.4.4 The Directive does not include any specific requirement for Member States to carry out and have regard to the findings of a water safety plan/risk assessment. However, the Department considers that the use of risk assessments will not only assist it to fulfil functions and to discharge duties conferred on it under the proposed Regulations but will, over time, also where appropriate allow for a reduction in the extensive list of parameters to be monitored under the Regulations. Identifying potential risks will also enable owners and managers of private supplies to take steps to prevent or minimise the risk of those supplies becoming contaminated.

2.4.5 The Department will also be able to refer to risk assessments when providing general advice to local owners and occupiers about remedial measures that they may take to improve the quality of their private water supply. This advice would also take into account known local variations in the condition of the soil and geology, and factors such as farming or other land uses that may affect both ground and surface water sources.

2.4.6 The Private Water Supplies Technical Manual provides comprehensive guidance on how to carry out risk assessments and the factors to take into account in respect of each part of the water supply chain.

2.4.7 Regulation 7 proposes that the Department will put in place risk assessments at each private water supply to which the Regulations apply (except for supplies to single private dwellings) within eighteen months of the coming into operation of the Regulations, and subsequently every five years. This regulation also proposes that the Department will have only a discretionary power to carry out risk assessments on small domestic supplies which serve more than one dwelling, if it is considered appropriate to do so. The proposed requirements for risk assessments are detailed in schedule 2.

Consultation Questions 4 & 5:

Do you agree that the Department should put in place risk assessments of private supplies to assist it in carrying out its duties under the proposed Regulations?

Do you agree that the Department should put in place risk assessments of each supply within eighteen months of the coming into operation of the Regulations?

2.5 Monitoring (regulation 8 & 9 and schedule 3)

2.5.1 The current procedure for monitoring (including frequency of sampling and parameters analysed) is dependent on whether a private water supply is classified as a category 1 or category 2 supply under the current Regulations. As stated above, a category 1 supply is used solely for domestic purposes, whereas a category 2 supply is used to make food or drink that is sold, or is used in for example hotels or guest houses. Within each category the class of supply depends on the number of persons served or the volume of water used.

2.5.2 In terms of the proposed Regulations, the Directive sets out detailed requirements for sampling and analysis (monitoring). Part 2 of the proposed Regulations and schedules 3 (Monitoring) and 4 (Sampling and analysis) transpose the requirements of Articles 6 and 7 of, and Annexes II and III to the Directive. The provisions concerned with monitoring are explained below.

2.5.3 The monitoring programme for commercial supplies is in accordance with schedule 3. Parts 1 and 2 of this schedule specify the minimum annual sampling frequencies, by volume m^3/day, for "check" monitoring and "audit" monitoring respectively. This monitoring programme also applies to large shared domestic supplies (i.e. which supply more than $10m^3$ of water a day or serve more than 50 persons). There are currently no such supplies in Northern Ireland – any shared private supplies to dwellings are smaller than this specification.

Check Monitoring

2.5.4 Check Monitoring must be carried out at least once a year to confirm that the water in a supply is wholesome. Some parameters will only be monitored in certain circumstances (aluminium, clostridium perfringens (including spores), iron, manganese, nitrate, nitrite, and disinfection residual) but the suite of parameters under check monitoring (which also includes ammonium, coliform bacteria, colour, conductivity, *E.coli,* hydrogen ion (pH value), odour, taste and turbidity) cannot be reduced even if compliance is met.

2.5.5 The Directive sets the minimum check monitoring frequencies for supplies of more than $100m^3$ per day. However it leaves Member States to decide the frequencies for supplies equal to or less than $100m^3$/day (see Annex II, Table B1, Notes 4 and 6 of the Directive). The Department considers it appropriate that commercial supplies which provide between $10m^3$ per day and $100m^3$ per day should be monitored twice annually and those which provide less than $10m^3$ per day should be monitored once every year.

2.5.6 Although the suite of parameters under check monitoring cannot be reduced, the frequency of sampling for a parameter may be reduced under certain circumstances in line with the Directive. The Department may also set a higher sampling frequency for any parameter, if it considers it appropriate, after taking into account the findings of a risk assessment.

Audit Monitoring

2.5.7 Audit Monitoring provides further detail about the quality of a water supply. Parameters from audit monitoring may be excluded, according to the Directive, if

it can be established that a parameter is not likely to be present in a given supply in concentrations which could lead to the risk of a breach of the relevant parametric value. The Directive does not specify how Member States should reach that decision. Hence paragraph 3(2) of Schedule 3 to the proposed Regulations gives the Department power to exclude a parameter from the audit monitoring of a particular supply, taking into account the findings of a risk assessment.

2.5.8 The Directive specifies a minimum frequency for audit monitoring of once per year for supplies of between 100m³ per day and 1000m³ per day plus one extra annual sample for each 3,300m³ per day provided for supplies of between 1,000 and 10,000m³ per day. The Directive leaves Member States to decide the frequencies for supplies of <100m³ per day. It is proposed that supplies of below this volume will be monitored annually.

2.5.9 It is proposed that the Department may set a higher frequency for any parameter if it considers it appropriate taking into account the findings of any risk assessment.

Consultation Questions 6 & 7:

Do you agree with the minimum check and audit monitoring frequencies?

Do you agree that the Department should take into account the findings of risk assessments when deciding whether to exclude parameters from audit monitoring?

2.6 Small Shared Domestic Supplies (regulation 10)

2.6.1 There is a discretionary exemption in Article 3.2(b) of the Directive in relation to small supplies of less than 10m³/day (or serving fewer than 50 people) that are used in dwellings solely for domestic purposes and not as part of any commercial or public activity. The Department proposes to take advantage of this exemption in respect of supplies to single private dwellings. There are currently 18 small shared domestic supplies in Northern Ireland i.e. serving more than one dwelling. These supplies are monitored for a small suite of bacteriological parameters once every year and for a full suite of chemical and bacteriological parameters every five years, under the current Regulations.

2.6.2 Under the proposed Regulations, it is not intended to continue with mandatory testing of these small shared supplies, and to apply the available exemption under the Directive. It is proposed to ensure the quality of water in the case of small shared private supplies through monitoring and testing by the Department where deemed appropriate. In such cases, these small shared supplies would be monitored on a decreased suite of parameters (conductivity, enterococci, E. coli, hydrogen ion and turbidity) and may also be monitored in accordance with a risk assessment.

2.6.3 The frequency of monitoring and range of parameters to be monitored may be higher if informed by the results of a risk assessment, or if additional

monitoring is required on a case by case basis where the Department considers that the supply is a risk to human health.

Consultation Question 8: Are you content that rather than engaging in mandatory testing of small shared domestic supplies, the Department may carry out monitoring and testing where deemed appropriate?

2.7 Supplies to single private dwellings (regulation 11)

2.7.1 Domestic supplies to single private dwellings are exempt from the current Regulations and, as such, the Department does not register these supplies or have a monitoring programme in place for them. The Department does however provide advice for owners and users of such supplies, including information leaflets and advice on the DWI Website[1].

2.7.2 As has been stated, Member States may continue to exempt from the provisions of their national law an individual drinking water supply that provides less than $10m^3$ per day on average or serves fewer than 50 persons, unless the water is supplied as part of a commercial or public activity. The Directive also states that Member States shall ensure that the population concerned is informed of this and of any action that can be taken to protect human health from the adverse effects resulting from any contamination of water intended for human consumption. In addition, when a potential danger to human health arising out of the quality of water is apparent, the population concerned should promptly be given appropriate advice.

2.7.3 The Department proposes to take recourse to the exemption in respect of supplies to single private dwellings. However, as per the Directive, regulation 11 proposes that the Department shall offer appropriate advice to the owner or occupier of a single private dwelling which has a private water supply.

Consultation Question 9: Are you content with the approach proposed in respect of private supplies to single private dwellings?

2.8 Sampling and Analysis (regulation 12 & Schedule 4)

2.8.1 Article 6.1 (Point of compliance) and Article 7 (Monitoring) of the Directive along with the provisions of Annex III set out requirements for taking and analysing samples. Regulation 12 of the proposed regulations identifies the points of compliance (sampling points) where the Department must take samples from private supplies, and schedule 4 (Sampling and analysis) sets out detailed requirements for taking and analysing samples to determine whether the supplies are wholesome.

2.8.2 In accordance with the Directive, schedule 4 of the proposed Regulations consists of general requirements for taking and analysing samples to ensure that they are representative. It depicts methods which should be used to analyse certain parameters but allows for authorisation of alternative methods of analysis

[1] http://www.ni-environment.gov.uk/water/drinkwater/private_water.htm

if it can be demonstrated that those methods are at least as reliable as the methods prescribed.

2.8.3 Some of the requirements in schedule 4 are more stringent than those specified in the Directive. This is because they are accepted good practice and have been included in the 2007 Public Water Supply Regulations. For example, the Department is required to ensure that each sample is representative of the quality of the water at the sampling point when the sample is taken and must also ensure that samples do not become contaminated and that they are kept at a temperature and in conditions that ensure there is no material alteration in the concentration or value of a parameter.

2.8.4 As specified in the Directive, the Department must ensure that any laboratory used has a system of analytical quality control that is subject from time to time to checking by a person who is not under the control of the laboratory and who is approved by the Department for that purpose.

Consultation Question 10: Do the proposed requirements for sampling and analysis seem appropriate?

2.9 Maintenance of Records: (regulation 13 and schedule 5)

2.9.1 DWI presently holds a register of private water supplies which fall within the current private water supplies Regulations. This includes information on the size, nature and use of supplies which is obtained through a registration form that owners or users are asked to complete[1].

2.9.2 Whilst there are no specific details regarding maintenance of records in the Directive, the Water and Sewerage Services (Northern Ireland) Order 2006 (Article 118) states that the Department shall maintain a register of private supplies. The Department shall also prescribe the particulars to be recorded. Regulation 13 and schedule 5 of the proposed Regulations require the Department to keep, review and update records in respect of all monitored private supplies in its area. Schedule 5 sets out the information that the records must include, by when the Department must compile them, and for how long it must retain them.

2.9.3 The Department proposes that the records include details regarding the location, description, use and size of each supply. Details of the monitoring programme, any risk assessment carried out and information on investigations into the supply are also proposed to be kept.

2.9.4 The Department intends that information that will assist with epidemiological studies on quality of private supplies and health will be held for 30 years and other information for 10 years. The Department will be required to review and up-date their records at least once each year.

[1] http://www.ni-environment.gov.uk/new_pws_registration_form.pdf

Consultation Question 11: Are the requirements for the information that the Department should include in their record of private supplies satisfactory?

2.10 Publication of Information (regulation 14)

2.10.1 The Drinking Water Inspectorate within the Department currently publishes an annual report containing an overview of drinking water quality in Northern Ireland. This includes details about private drinking water supplies. The current and previous drinking water quality reports are available on their Website[1].

2.10.2 The Directive instructs that Member States shall take the measures necessary to ensure that adequate and up-to-date information on the quality of drinking water is available to consumers.

2.10.3 Regulation 14 proposes that the Department continue to produce annual reports about private water supplies, including the number of private supplies and other information (which will take the form of information about the water quality of such supplies).

Action in the Event of failure

The Directive sets a specific framework for investigation and remedial action when there is a failure to meet the drinking water standards that apply. This includes immediate investigation and possible remedial action including derogations, improvement notices and restriction notices. This is explained in more detail below.

2.11 Provision of information (regulation 15)

2.11.1 The Department may discover that a private supply is unwholesome during routine sampling, or it may have other reasons to believe that a private supply might be unwholesome, for example, where it has information that there has been a contamination event in the catchment, or a failure of treatment, or ingress during distribution. Regulation 15 proposes general requirements for the Department to carry out whenever it has reason to believe that a private supply is a risk to human health. These include informing those affected and giving advice to minimise any risk. In accordance with the Water and Sewerage Services (Northern Ireland) Order 2006, the Department also proposes to notify the district council for the district, and the Health and Social Care Board for Northern Ireland.

2.12 Investigation (regulation 16)

2.12.1 Article 8 of the Directive specifies actions that Member States must take when drinking water fails to meet a standard of wholesomeness or an indicator parameter value or specification. Member States must ensure that there is an immediate investigation to determine the cause of the failure.

[1] http://www.ni-environment.gov.uk/water-home/drinkwater/annual_reports.htm

2.12.2 Regulation 16 requires the Department to immediately investigate when a sample taken from any private supply fails to meet a standard of wholesomeness or when an indicator parameter value exceeds the limits set. The Department, where appropriate will consult with the relevant District Council and health authorities, in considering whether any failure of parameter poses a risk to human health.

2.13 Failure due to domestic distribution system (regulation 17)

2.13.1 Article 6.2 of the Directive provides that Member States are deemed to have met their obligations under the Directive "where it can be established that non-compliance with the parametric values set in accordance with Article 5 of the Directive is due to the domestic distribution system or its maintenance thereof". However, Article 6.2 also states that this proviso does not apply to water that is supplied to the public in premises and establishments such as schools, hospitals and restaurants -- public premises. As a consequence Member States must take remedial action to restore the quality of water in such premises.

2.13.2 Although Member States do not have to enforce the standards where a failure is due to the domestic distribution system in non-public premises, they must ensure that property owners are advised of any remedial action that they can take and other measures that can be taken such as appropriate treatment techniques.

2.13.3 These requirements are prescribed in regulation 17, which also gives the Department discretion to serve an improvement notice in these circumstances if it is necessary, for example if the problem cannot be solved informally and there is a wider risk to human health.

2.14 Authorisations (regulations 17 & 18)

2.14.1 Article 9 of the Directive permits Member States to grant temporary derogations, in the form of authorisations, from the chemical (non-microbiological) parameter values in Annex 1, Part B, whilst remedial action is taken. Article 9 only permits an authorisation if it is not a risk to human health and a supply of water cannot otherwise be maintained by any other reasonable means. An authorisation has to specify the grounds on which it is sought, the parameter that has failed and its maximum value permitted under the authorisation, details of the supply, a monitoring scheme, a remedial action plan and the duration. The authorisation must be limited to as short a period of time as possible and must not exceed three years.

2.14.2 Where any authorisation is granted Article 9 requires the Member State to ensure that the population affected is informed of the authorisation and its conditions, and that, where necessary, advice is given to particular population groups for which it may present a special risk. Member States are required to inform the European Commission of any non-trivial authorisations for a supply exceeding 1000m^3/day.

2.14.3 Regulations 17 and 18 of the proposed regulations enable the Department to negotiate with the responsible person of the private supply to attempt to solve a problem informally. If the informal approach does not succeed, in accordance with the Directive, the Department may grant an authorisation for a derogated standard under the Regulations on application by the responsible person.

2.14.4 In accordance with Article 9 of the Directive, the Department may only grant an authorisation for a derogation of the standard for a non-microbiological (chemical) parameter in Table B of Schedule 1, including the national standards and Part II of Table B for some parameters that are generally shown as indicator parameters in Part C of Annex I to the Directive. The Department will also consult with all those who will be affected by the authorisation, and where necessary with the relevant District Council and health authorities.

2.14.5 Article 9.4 of the Directive allows Member States to introduce a simpler derogation procedure when a failure to comply with a chemical parameter value is judged to be trivial and that less than 30 days is sufficient time to take the action needed to remedy the problem. This 'trivial failure' procedure requires a derogation to specify only the maximum permissible value and the time required to complete the remedial action.

2.14.6 However, the procedure is not available if the failure to comply with any one parametric value has occurred on more than 30 days on aggregate during the previous 12 months. The Department takes the view that it would not be able to follow this procedure without frequent sampling and that it would be both impracticable to operate and an inappropriate use of resources.

2.14.7 Therefore, the Department does not propose to include any provisions to grant authorisations for trivial failures. Instead, regulation 17 gives the Department the opportunity to try to solve a problem informally by negotiation. This is particularly appropriate when the problem is a failure of a chemical parameter value that is not a risk to human health and can be remedied within 30 days. But if the authority cannot solve the problem informally and it considers that it would be appropriate to grant an authorisation, it may do so in accordance with the procedures set out above.

2.15 Improvement Notices (regulation 17 & 19)

2.15.1 Article 8 of the Directive states that if drinking water fails to meet a standard of wholesomeness or an indicator parameter value or specification (and if this is not due to a domestic distribution system in non-public premises as above), the Member State must ensure that the necessary remedial action is taken as soon as possible to restore the quality of the water and that priority should be given to enforcement action where necessary. The corresponding remedial action in the proposed Regulations is referred to as an improvement notice.

2.15.2 If the Department cannot solve the problem informally it will be required to take formal remedial action under the proposed new powers. If an authorisation is not an appropriate or available option, the Department must serve an

improvement notice under regulation 19. An improvement notice will specify the grounds for the notice and the steps which should be taken to improve the water quality of the supply. It is an offence to fail to comply with an improvement notice.

2.16 Restriction Notices (regulation 20)

2.16.1 When the Department considers that a private supply is a risk to human health, it must serve a "restriction notice" on one or more of the responsible persons. This new regulatory power to prohibit or restrict use of water from a private supply is required to comply with the requirements of Article 8.3 of the Directive. This Article directs that Member States shall ensure that any supply of drinking water which constitutes a potential danger to human health is prohibited or its use restricted or such other action is taken as is necessary to protect human health. Within the proposed Regulations, it is an offence to fail to comply with a Restriction Notice.

2.16.2 In deciding whether to serve a restriction notice, the Department will, in consultation with the relevant District Council and health authorities, weigh the risk to human health arising from the failure against the risk to human health that would be caused if the water supply were interrupted or its use restricted.

2.16.3 Regulation 15 also requires the Department to take steps to inform all the consumers of the risk and, if possible, the degree of risk, and give them advice to allow them to minimise the risk.

2.17 Change in persons (regulation 21)

2.17.1 Regulation 21 of the proposed Regulations applies when there is a change in ownership of the land, or the supply, or the premises. Any requirement that is imposed on a person or premises by an authorisation, an improvement notice or a restriction notice and that is expressed to bind premises in relation to a particular person is also binding on that person's successors and is registered as a statutory charge.

2.18 Appeals (regulations 22 & 23)

2.18.1 Regulations 22 and 23 prescribe details for appeal by any person who is aggrieved by a notice under the proposed Regulations. Under draft regulation 22, any person who is aggrieved by an improvement notice or a restriction notice may appeal to the Appeals Commission within 28 days of the serving of the notice. Regulation 23 stipulates that the Appeals Commission has the power to either cancel the notice, or confirm it with or without modification.

Consultation Question 12: Do you agree with the proposals for investigation and remedial action when there is a failure to meet the drinking water standards? In particular:

- **Do you agree that the Department should negotiate with owners in an attempt to solve problems informally, and if that does not work that they**

- **should grant authorisations, or serve improvement notices or restriction notices, as appropriate?**
- **Do you agree that it is unnecessary for the Department to have specific powers to grant authorisations for less than 30 days for trivial failures of chemical parameter values?**
- **Do you agree that any person aggrieved by an improvement notice or a restriction notice should be able to appeal to the Water Appeals Commission against the notice?**

Enforcement

Regulations 24 – 26 detail further powers to enable the Department to fulfil their functions and discharge their duties under the proposed Regulations. These include provisions to enter premises and obtain information. Each proposed regulation is detailed below.

2.19 Power to enter premises (regulation 24)

2.19.1 Regulation 24 gives the Department the power to authorise a person in writing for the purposes of the Regulations to enter any premises at all reasonable hours. The authorised person may take with him or her other persons including a constable and any necessary equipment and materials. In an emergency the authorised person may enter at any time and may use reasonable force if necessary. If the sole use of premises is as a private dwelling, the Department must give the occupier 24 hours notice. An authorised person must leave unoccupied premises effectively secured after entry.

2.20 Powers of authorised persons (regulation 25)

2.20.1 Regulation 25 provides that when an authorised person has entered premises, the person may take samples, take photographs, make recordings, and carry out inspections, surveys and tests. He or she may also carry out experimental borings or other works and take and analyse such samples of water, land, articles, documents or records as is considered necessary.

2.21 Provision of information (regulation 26)

2.21.1 Regulation 26 gives the Department a power to serve a notice on any person requiring him or her to supply information that the Department may reasonably require for the purposes of the proposed Regulations.

Consultation Question 13: Do the powers of enforcement detailed in draft regulations 24 to 26 seem appropriate?

2.22 Obstruction (regulation 27)

2.22.1 It is necessary that the Department is able to carry out its functions and duties without obstruction and to obtain information to enable it to carry out its

functions. Regulation 27 makes it an offence for a person to intentionally obstruct any person acting in the execution of the Regulations. It is also an offence if a person fails, without reasonable cause, to give assistance or information that is reasonably required, gives information that he or she knows to be false or misleading, or fails to produce a record, when required, to a person acting in the execution of the Regulations.

2.23 Penalties (regulation 28)

2.23.1 Regulation 31 sets out the maximum penalties that will apply if a person is found guilty of an offence under the proposed Regulations. These are, on summary conviction, a fine not exceeding the statutory maximum (currently £5000) or a term of imprisonment not exceeding three months or both a fine and imprisonment; and on conviction on indictment, a fine or imprisonment for a term not exceeding two years, or both a fine and imprisonment.

2.23.2 Where an offence has been committed by a body corporate, this also means that any person who at the time was a director, general manager, secretary or other similar officer of that body or was purporting to act in any such capacity shall also be liable.

Section 3
Issues for Consultation

As stated above, the consultation questions included in this paper are not meant to be exhaustive; the Department welcomes views or comments on any part of the proposed Regulations during this consultation stage.

Summary of consultation questions:

1. Do you agree with the proposed exemptions from the Private Water Supplies Regulations?

2. Do you agree with the parameters included in the definition of wholesomeness, in particular with the inclusion of “national parameters”?

3. Do you agree that for new installations for the preparation and distribution of private supplies, only substances and products which conform to the specification within regulation 30 of the Water Supply (Water Quality) Regulations (Northern Ireland) 2007 for the purposes of public water supplies may be used?

4. Do you agree that the Department should put in place risk assessments of private supplies to assist it in carrying out its duties under the proposed Regulations?

5. Do you agree that the Department should put in place risk assessments of each supply within eighteen months of the coming into operation of the Regulations?

6. Do you agree with the minimum check and audit monitoring frequencies?

7. Do you agree that the Department should take into account the findings of risk assessments when deciding whether to exclude parameters from audit monitoring?

8. Are you content that rather than engaging in mandatory testing of small shared domestic supplies, the Department may carry out monitoring and testing where deemed appropriate?

9: Are you content with the approach proposed in respect of private supplies to single private dwellings?

10. Do the proposed requirements for sampling and analysis seem appropriate?

11. Are the requirements for the information that the Department should include in their record of private supplies satisfactory?

12. Do you agree with the proposals for investigation and remedial action when there is a failure to meet the drinking water standards? In particular:

- Do you agree that the Department should negotiate with owners in an attempt to solve problems informally, and if that does not work that they should grant authorisations, or serve improvement notices or restriction notices, as appropriate.
- Do you agree that it is unnecessary for the Department to have specific powers to grant authorisations for less than 30 days for trivial failures of chemical parameter values?

- Do you agree that any person aggrieved by an improvement notice or a restriction notice should be able to appeal to the Water Appeals Commission against the notice?

13. Do the powers of enforcement detailed in draft regulations 24 to 26 seem appropriate?

Annex A: Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption

COUNCIL DIRECTIVE 98/83/EC

of 3 November 1998

on the quality of water intended for human consumption

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community and, in particular, Article 130s(1) thereof,

Having regard to the proposal from the Commission [1],

Having regard to the opinion of the Economic and Social Committee [2],

Having regard to the opinion of the Committee of the Regions [3],

Acting in accordance with the procedure laid down in Article 189c [4],

(1) Whereas it is necessary to adapt Council Directive 80/778/EEC of 15 July 1980 relating to the quality of water intended for human consumption [5] to scientific and technological progress; whereas experience gained from implementing that Directive shows that it is necessary to create an appropriately flexible and transparent legal framework for Member States to address failures to meet the standards; whereas, furthermore, that Directive should be re-examined in the light of the Treaty on European Union and in particular the principle of subsidiarity;

(2) Whereas in keeping with Article 3b of the Treaty, which provides that no Community action should go beyond what is necessary to achieve the objectives of the Treaty, it is necessary to revise Directive 80/778/EEC so as to focus on compliance with essential quality and health parameters, leaving Member States free to add other parameters if they see fit;

(3) Whereas, in accordance with the principle of subsidiarity, Community action must support and supplement action by the competent authorities in the Member States;

(4) Whereas, in accordance with the principle of subsidiarity, the natural and socio-economic differences between the regions of the Union require that most decisions on monitoring, analysis, and the measures to be taken to redress failures be taken at a local, regional or national level insofar as those differences do not detract from the establishment of the framework of laws, regulations and administrative provisions laid down in this Directive;

(5) Whereas Community standards for essential and preventive health-related quality parameters in water intended for human consumption are necessary if minimum environmental-quality goals to be achieved in connection with other Community measures are to be defined so that the sustainable use of water intended for human consumption may be safeguarded and promoted;

(6) Whereas, in view of the importance of the quality of water intended for human consumption for human health, it is necessary to lay down at Community level the essential quality standards with which water intended for that purpose must comply;

(7) Whereas it is necessary to include water used in the food industry unless it can be established that the use of such water does not affect the wholesomeness of the finished product;

(8) Whereas to enable water-supply undertakings to meet the quality standards for drinking water, appropriate water-protection measures should be applied to ensure that surface and groundwater is kept clean; whereas the same goal can be achieved by appropriate water-treatment measures to be applied before supply;

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[1] OJ C 131, 30.5.1995, p. 5 and OJ C 213, 15.7.1997, p. 8.
[2] OJ C 82, 19.3.1996, p. 64.
[3] OJ C 100, 2.4.1996, p. 134.
[4] Opinion of the European Parliament of 12 December 1996 (OJ C 20, 20.1.1997, p. 133), Council common position of 19 December 1997 (OJ C 91, 26.3.1998, p. 1) and Decision of the European Parliament of 13 May 1998 (OJ C 167, 1.6.1998, p. 92).
[5] OJ L 229, 30.8.1980, p. 11. Directive as last amended by the 1994 Act of Accession.

(9) Whereas the coherence of European water policy presupposes that a suitable water framework Directive will be adopted in due course;

(10) Whereas it is necessary to exclude from the scope of this Directive natural mineral waters and waters which are medicinal products, since special rules for those types of water have been established;

(11) Whereas measures are required for all parameters directly relevant to health and for other parameters if a deterioration in quality has occurred; whereas, furthermore, such measures should be carefully coordinated with the implementation of Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market [1] and Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market [2];

(12) Whereas it is necessary to set individual parametric values for substances which are important throughout the Community at a level strict enough to ensure that this Directive's purpose can be achieved;

(13) Whereas the parametric values are based on the scientific knowledge available and the precautionary principle has also been taken into account; whereas those values have been selected to ensure that water intended for human consumption can be consumed safely on a life-long basis, and thus represent a high level of health protection;

(14) Whereas a balance should be struck to prevent both microbiological and chemical risks; whereas, to that end, and in the light of a future review of the parametric values, the establishment of parametric values applicable to water intended for human consumption should be based on public-health considerations and on a method of assessing risk;

(15) Whereas there is at present insufficient evidence on which to base parametric values for endocrine-disrupting chemicals at Community level, yet there is increasing concern regarding the potential impact on humans and wildlife of the effects of substances harmful to health;

(16) Whereas in particular the standards in Annex I are generally based on the World Health Organisation's 'Guidelines for drinking water quality', and the opinion of the Commission's Scientific Advisory Committee to examine the toxicity and ecotoxicity of chemical compounds;

(17) Whereas Member States must set values for other additional parameters not included in Annex I where that is necessary to protect human health within their territories;

(18) Whereas Member States may set values for other additional parameters not included in Annex I where that is deemed necessary for the purpose of ensuring the quality of the production, distribution and inspection of water intended for human consumption;

(19) Whereas, when Member States deem it necessary to adopt standards more stringent than those set out in Annex I, Parts A and B, or standards for additional parameters not included in Annex I but necessary to protect human health, they must notify the Commission of those standards;

(20) Whereas Member States are bound, when introducing or maintaining more stringent protection measures, to respect the principles and rules of the Treaty, as they are interpreted by the Court of Justice;

(21) Whereas the parametric values are to be complied with at the point where water intended for human consumption is made available to the appropriate user;

(22) Whereas the quality of water intended for human consumption can be influenced by the domestic distribution system; whereas, furthermore, it is recognised that neither the domestic distribution system nor its maintenance may be the responsibility of the Member States;

(23) Whereas each Member State should establish monitoring programmes to check that water intended for human consumption meets the requirements of this Directive; whereas such monitoring programmes should be appropriate to local needs and should meet the minimum monitoring requirements laid down in this Directive;

(24) Whereas the methods used to analyse the quality of water intended for human consumption should be such as to ensure that the results obtained are reliable and comparable;

[1] OJ L 230, 19.8.1991, p. 1. Directive as last amended by Commission Directive 96/68/EC (OJ L 277, 30.10.1996, p. 25).

[2] OJ L 123, 24.4.1998, p. 1.

(25) Whereas, in the event of non-compliance with the standards imposed by this Directive the Member State concerned should investigate the cause and ensure that the necessary remedial action is taken as soon as possible to restore the quality of the water;

(26) Whereas it is important to prevent contaminated water causing a potential danger to human health; whereas the supply of such water should be prohibited or its use restricted;

(27) Whereas, in the event of non-compliance with a parameter that has an indicator function, the Member State concerned must consider whether that non-compliance poses any risk to human health; whereas it should take remedial action to restore the quality of the water where that is necessary to protect human health;

(28) Whereas, should such remedial action be necessary to restore the quality of water intended for human consumption, in accordance with Article 130r(2) of the Treaty, priority should be given to action which rectifies the problem at source;

(29) Whereas Member States should be authorised, under certain conditions, to grant derogations from this Directive; whereas, furthermore, it is necessary to establish a proper framework for such derogations, provided that they must not constitute a potential danger to human health and provided that the supply of water intended for human consumption in the area concerned cannot otherwise be maintained by any other reasonable means;

(30) Whereas, since the preparation or distribution of water intended for human consumption may involve the use of certain substances or materials, rules are required to govern the use thereof in order to avoid possible harmful effects on human health;

(31) Whereas scientific and technical progress may necessitate rapid adaptation of the technical requirements laid down in Annexes II and III; whereas, furthermore, in order to facilitate application of the measures required for that purpose, provision should be made for a procedure under which the Commission can adopt such adaptations with the assistance of a committee composed of representatives of the Member States;

(32) Whereas consumers should be adequately and appropriately informed of the quality of water intended for human consumption, of any derogations granted by the Member States and of any remedial action taken by the competent authorities; whereas, furthermore, consideration should be given both to the technical and statistical needs of the Commission, and to the rights of the individual to obtain adequate information concerning the quality of water intended for human consumption;

(33) Whereas, in exceptional circumstances and for geographically defined areas, it may be necessary to allow Member States a more extensive timescale for compliance with certain provisions of this Directive;

(34) Whereas this Directive should not affect the obligations of the Member States as to the time limit for transposition into national law, or as to application, as shown in Annex IV,

HAS ADOPTED THIS DIRECTIVE:

Article 1

Objective

1. This Directive concerns the quality of water intended for human consumption.

2. The objective of this Directive shall be to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.

Article 2

Definitions

For the purposes of this Directive:

1. 'water intended for human consumption' shall mean:

   (a) all water either in its original state or after treatment, intended for drinking, cooking, food preparation or other domestic purposes, regardless of its origin and whether it is supplied from a distribution network, from a tanker, or in bottles or containers;

   (b) all water used in any food-production undertaking for the manufacture, processing, preservation or marketing of products or substances intended for human consumption unless the competent national authorities are satisfied that the quality

of the water cannot affect the wholesomeness of the foodstuff in its finished form;

2. 'domestic distribution system' shall mean the pipework, fittings and appliances which are installed between the taps that are normally used for human consumption and the distribution network but only if they are not the responsibility of the water supplier, in its capacity as a water supplier, according to the relevant national law.

Article 3

Exemptions

1. This Directive shall not apply to:

(a) natural mineral waters recognised as such by the competent national authorities, in accordance with Council Directive 80/777/EEC of 15 July 1980 on the approximation of the laws of the Member States relating to the exploitation and marketing of natural mineral waters [1];

(b) waters which are medicinal products within the meaning of Council Directive 65/65/EEC of 26 January 1965 on the approximation of provisions laid down by law, regulation or administrative action relating to medicinal products [2].

2. Member States may exempt from the provisions of this Directive:

(a) water intended exclusively for those purposes for which the competent authorities are satisfied that the quality of the water has no influence, either directly or indirectly, on the health of the consumers concerned;

(b) water intended for human consumption from an individual supply providing less than 10 m^3 a day as an average or serving fewer than 50 persons, unless the water is supplied as part of a commercial or public activity.

3. Member States that have recourse to the exemptions provided for in paragraph 2(b) shall ensure that the population concerned is informed thereof and of any action that can be taken to protect human health from the adverse effects resulting from any contamination of water intended for human consumption. In addition, when a potential danger to human health arising out of the quality of such water is apparent, the population concerned shall promptly be given appropriate advice.

Article 4

General obligations

1. Without prejudice to their obligations under other Community provisions, Member States shall take the measures necessary to ensure that water intended for human consumption is wholesome and clean. For the purposes of the minimum requirements of this Directive, water intended for human consumption shall be wholesome and clean if it:

(a) is free from any micro-organisms and parasites and from any substances which, in numbers or concentrations, constitute a potential danger to human health, and

(b) meets the minimum requirements set out in Annex I, Parts A and B;

and if, in accordance with the relevant provisions of Articles 5 to 8 and 10 and in accordance with the Treaty, Member States take all other measures necessary to ensure that water intended for human consumption complies with the requirements of this Directive.

2. Member States shall ensure that the measures taken to implement this Directive in no circumstances have the effect of allowing, directly or indirectly, either any deterioration of the present quality of water intended for human consumption so far as that is relevant for the protection of human health or any increase in the pollution of waters used for the production of drinking water.

Article 5

Quality standards

1. Member States shall set values applicable to water intended for human consumption for the parameters set out in Annex I.

2. The values set in accordance with paragraph 1 shall not be less stringent than those set out in Annex I. As regards the parameters set out in Annex I, Part C, the values need be fixed only for monitoring purposes and for the fulfilment of the obligations imposed in Article 8.

3. A Member State shall set values for additional parameters not included in Annex I where the protection

[1] OJ L 229, 30.8.1980, p. 1. Directive as last amended by Directive 96/70/EC (OJ L 299, 23.11.1996, p. 26).

[2] OJ 22 9.2.1965, p. 369. Directive as last amended by Directive 93/39/EEC (OJ L 214, 24.8.1993, p. 22).

of human health within its national territory or part of it so requires. The values set should, as a minimum, satisfy the requirements of Article 4(1)(a).

Article 6

Point of compliance

1. The parametric values set in accordance with Article 5 shall be complied with:

(a) in the case of water supplied from a distribution network, at the point, within premises or an establishment, at which it emerges from the taps that are normally used for human consumption;

(b) in the case of water supplied from a tanker, at the point at which it emerges from the tanker;

(c) in the case of water put into bottles or containers intended for sale, at the point at which the water is put into the bottles or containers;

(d) in the case of water used in a food-production undertaking, at the point where the water is used in the undertaking.

2. In the case of water covered by paragraph 1(a), Member States shall be deemed to have fulfilled their obligations under this Article and under Articles 4 and 8(2) where it can be established that non-compliance with the parametric values set in accordance with Article 5 is due to the domestic distribution system or the maintenance thereof except in premises and establishments where water is supplied to the public, such as schools, hospitals and restaurants.

3. Where paragraph 2 applies and there is a risk that water covered by paragraph 1(a) would not comply with the parametric values established in accordance with Article 5, Member States shall nevertheless ensure that:

(a) appropriate measures are taken to reduce or eliminate the risk of non-compliance with the parametric values, such as advising property owners of any possible remedial action they could take, and/or

other measures, such as appropriate treatment techniques, are taken to change the nature or properties of the water before it is supplied so as to reduce or eliminate the risk of the water not complying with the parametric values after supply;

and

(b) the consumers concerned are duly informed and advised of any possible additional remedial action that they should take.

Article 7

Monitoring

1. Member States shall take all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to check that the water available to consumers meets the requirements of this Directive and in particular the parametric values set in accordance with Article 5. Samples should be taken so that they are representative of the quality of the water consumed throughout the year. In addition, Member States shall take all measures necessary to ensure that, where disinfection forms part of the preparation or distribution of water intended for human consumption, the efficiency of the disinfection treatment applied is verified, and that any contamination from disinfection by-products is kept as low as possible without compromising the disinfection.

2. To meet the obligations imposed in paragraph 1, appropriate monitoring programmes shall be established by the competent authorities for all water intended for human consumption. Those monitoring programmes shall meet the minimum requirements set out in Annex II.

3. The sampling points shall be determined by the competent authorities and shall meet the relevant requirements set out in Annex II.

4. Community guidelines for the monitoring prescribed in this Article may be drawn up in accordance with the procedure laid down in Article 12.

5 (a) Member States shall comply with the specifications for the analyses of parameters set out in Annex III.

(b) Methods other than those specified in Annex III, Part 1, may be used, providing it can be demonstrated that the results obtained are at least as reliable as those produced by the methods specified. Member States which have recourse to alternative methods shall provide the Commission with all relevant information concerning such methods and their equivalence.

(c) For those parameters listed in Annex III, Parts 2 and 3, any method of analysis may be used provided that it meets the requirements set out therein.

6. Member States shall ensure that additional monitoring is carried out on a case-by-case basis of substances and micro-organisms for which no parametric value has been set in accordance with Article 5, if there is reason to suspect that they may be present in amounts or

numbers which constitute a potential danger to human health.

Article 8

Remedial action and restrictions in use

1. Member States shall ensure that any failure to meet the parametric values set in accordance with Article 5 is immediately investigated in order to identify the cause.

2. If, despite the measures taken to meet the obligations imposed in Article 4(1), water intended for human consumption does not meet the parametric values set in accordance with Article 5, and subject to Article 6(2), the Member State concerned shall ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action, having regard *inter alia* to the extent to which the relevant parametric value has been exceeded and to the potential danger to human health.

3. Whether or not any failure to meet the parametric values has occurred, Member States shall ensure that any supply of water intended for human consumption which constitutes a potential danger to human health is prohibited or its use restricted or such other action is taken as is necessary to protect human health. In such cases consumers shall be informed promptly thereof and given the necessary advice.

4. The competent authorities or other relevant bodies shall decide what action under paragraph 3 should be taken, bearing in mind the risks to human health which would be caused by an interruption of the supply or a restriction in the use of water intended for human consumption.

5. Member States may establish guidelines to assist the competent authorities to fulfil their obligations under paragraph 4.

6. In the event of non-compliance with the parametric values or with the specifications set out in Annex I, Part C, Member States shall consider whether that non-compliance poses any risk to human health. They shall take remedial action to restore the quality of the water where that is necessary to protect human health.

7. Member States shall ensure that, where remedial action is taken, consumers are notified except where the competent authorities consider the non-compliance with the parametric value to be trivial.

Article 9

Derogations

1. Member States may provide for derogations from the parametric values set out in Annex I, Part B, or set in accordance with Article 5(3), up to a maximum value to be determined by them, provided no derogation constitutes a potential danger to human health and provided that the supply of water intended for human consumption in the area concerned cannot otherwise be maintained by any other reasonable means. Derogations shall be limited to as short a time as possible and shall not exceed three years, towards the end of which a review shall be conducted to determine whether sufficient progress has been made. Where a Member State intends to grant a second derogation, it shall communicate the review, along with the grounds for its decision on the second derogation, to the Commission. No such second derogation shall exceed three years.

2. In exceptional circumstances, a Member State may ask the Commission for a third derogation for a period not exceeding three years. The Commission shall take a decision on any such request within three months.

3. Any derogation granted in accordance with paragraphs 1 or 2 shall specify the following:

(a) the grounds for the derogation;

(b) the parameter concerned, previous relevant monitoring results, and the maximum permissible value under the derogation;

(c) the geographical area, the quantity of water supplied each day, the population concerned and whether or not any relevant food-production undertaking would be affected;

(d) an appropriate monitoring scheme, with an increased monitoring frequency where necessary;

(e) a summary of the plan for the necessary remedial action, including a timetable for the work and an estimate of the cost and provisions for reviewing;

(f) the required duration of the derogation.

4. If the competent authorities consider the non-compliance with the parametric value to be trivial, and if action taken in accordance with Article 8(2) is sufficient to remedy the problem within 30 days, the requirements of paragraph 3 need not be applied.

In that event, only the maximum permissible value for the parameter concerned and the time allowed to remedy the problem shall be set by the competent authorities or other relevant bodies.

5. Recourse may no longer be had to paragraph 4 if failure to comply with any one parametric value for a given water supply has occurred on more than 30 days on aggregate during the previous 12 months.

6. Any Member State which has recourse to the derogations provided for in this Article shall ensure that the population affected by any such derogation is promptly informed in an appropriate manner of the derogation and of the conditions governing it. In addition the Member State shall, where necessary, ensure that advice is given to particular population groups for which the derogation could present a special risk.

These obligations shall not apply in the circumstances described in paragraph 4 unless the competent authorities decide otherwise.

7. With the exception of derogations granted in accordance with paragraph 4 a Member State shall inform the Commission within two months of any derogation concerning an individual supply of water exceeding 1 000 m^3 a day as an average or serving more than 5 000 persons, including the information specified in paragraph 3.

8. This Article shall not apply to water intended for human consumption offered for sale in bottles or containers.

Article 10

Quality assurance of treatment, equipment and materials

Member States shall take all measures necessary to ensure that no substances or materials for new installations used in the preparation or distribution of water intended for human consumption or impurities associated with such substances or materials for new installations remain in water intended for human consumption in concentrations higher than is necessary for the purpose of their use and do not, either directly or indirectly, reduce the protection of human health provided for in this Directive; the interpretative document and technical specifications pursuant to Article 3 and Article 4 (1) of Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products [1] shall respect the requirements of this Directive.

[1] OJ L 40, 11.2.1989, p. 12. Directive as last amended by Directive 93/68/EEC (OJ L 220, 30.8.1993, p. 1).

Article 11

Review of Annexes

1. At least every five years, the Commission shall review Annex I in the light of scientific and technical progress and shall make proposals for amendments, where necessary, under the procedure laid down in Article 189c of the Treaty.

2. At least every five years, the Commission shall adapt Annexes II and III to scientific and technical progress. Such changes as are necessary shall be adopted in accordance with the procedure laid down in Article 12.

Article 12

Committee procedure

1. The Commission shall be assisted by a committee composed of representatives of the Member States and chaired by a Commission representative.

2. The Commission representative shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 148(2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the committee shall be weighted in the manner set out in that Article. The chairman shall not vote.

3. The Commission shall adopt measures which shall apply immediately. However, if those measures are not in accordance with the committee's opinion, the Commission shall communicate them to the Council forthwith. In that event:

(a) the Commission shall defer application of the measures which it has adopted for a period of three months from the date of communication;

(b) the Council, acting by a qualified majority, may take a different decision within the time limit referred to in point (a).

Article 13

Information and reporting

1. Member States shall take the measures necessary to ensure that adequate and up-to-date information on the

quality of water intended for human consumption is available to consumers.

2. Without prejudice to Council Directive 90/313/EEC of 7 June 1990 on the freedom of access to information on the environment [1], each Member State shall publish a report every three years on the quality of water intended for human consumption with the objective of informing consumers. The first report shall cover the years 2002, 2003 and 2004. Each report shall include, as a minimum, all individual supplies of water exceeding 1 000 m^3 a day as an average or serving more than 5 000 persons and it shall cover three calendar years and be published within one calendar year of the end of the reporting period.

3. Member States shall send their reports to the Commission within two months of their publication.

4. The formats and the minimum information for the reports provided for in paragraph 2 shall be determined having special regard to the measures referred to in Article 3(2), Article 5(2) and (3), Article 7(2), Article 8, Article 9(6) and (7) and 15(1), and shall if necessary be amended in accordance with the procedure laid down in Article 12.

5. The Commission shall examine the Member States' reports and, every three years, publish a synthesis report on the quality of water intended for human consumption in the Community. That report shall be published within nine months of the receipt of the Member States' reports.

6. Together with the first report on this Directive as mentioned in paragraph 2, Member States shall also produce a report to be forwarded to the Commission on the measures they have taken or plan to take to fultil their obligations pursuant to Article 6(3) and Annex I, Part B, note 10. The Commission shall submit, as appropriate, a proposal on the format of this report in accordance with the procedure laid down in Article 12.

Article 14

Timescale for compliance

Member States shall take the measures necessary to ensure that the quality of water intended for human consumption complies with this Directive within five years of its entry into force, without prejudice to Notes 2, 4 and 10 in Annex I, Part B.

[1] OJ L 158, 23.6.1990, p. 56.

Article 15

Exceptional circumstances

1. A Member State may, in exceptional circumstances and for geographically defined areas, submit a special request to the Commission for a period longer than that laid down in Article 14. The additional period shall not exceed three years, towards the end of which a review shall be carried out and forwarded to the Commission which may, on the basis of that review, permit a second additional period of up to three years. This provision shall not apply to water intended for human consumption offered for sale in bottles or containers.

2. Any such request, grounds for which shall be given, shall set out the difficulties experienced and include, as a minimum, all the information specified in Article 9(3).

3. The Commission shall examine that request in accordance with the procedure laid down in Article 12.

4. Any Member State which has recourse to this Article shall ensure that the population affected by its request is promptly informed in an appropriate manner of the outcome of that request. In addition, the Member State shall, where necessary, ensure that advice is given to particular population groups for which the request could present a special risk.

Article 16

Repeal

1. Directive 80/778/EEC is hereby repealed with effect from five years after the entry into force of this Directive. Subject to paragraph 2, this repeal shall be without prejudice to Member States' obligations regarding deadlines for transposition into national law and for application as shown in Annex IV.

Any reference to the Directive repealed shall be construed as a reference to this Directive and shall be read in accordance with the correlation table set out in Annex V.

2. As soon as a Member State has brought into force the laws, regulations and administrative provisions necessary to comply with this Directive and has taken the measures provided for in Article 14, this Directive, not Directive 80/778/EEC, shall apply to the quality of water intended for human consumption in that Member State.

Article 17

Transposition into national law

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive within two years of its entry into force. They shall forthwith inform the Commission thereof.

When the Member States adopt those measures, these shall contain references to this Directive or shall be accompanied by such references on the occasion of their official publication. The methods of making such references shall be laid down by the Member States.

2. The Member States shall communicate to the Commission the texts of the provisions of national law which they adopt in the field covered by this Directive.

Article 18

Entry into force

This Directive shall enter into force on the 20th day following its publication in the *Official Journal of the European Communities*.

Article 19

Addressees

This Directive is addressed to the Member States.

Done at Brussels, 3 November 1998.

For the Council

The President

B. PRAMMER

ANNEX I

PARAMETERS AND PARAMETRIC VALUES

PART A

Microbiological parameters

Parameter	Parametric value (number/100 ml)
Escherichia coli (E. coli)	0
Enterococci	0

The following applies to water offered for sale in bottles or containers:

Parameter	Parametric value
Escherichia coli (E. coli)	0/250 ml
Enterococci	0/250 ml
Pseudomonas aeruginosa	0/250 ml
Colony count 22 °C	100/ml
Colony count 37 °C	20/ml

PART B

Chemical parameters

Parameter	Parametric value	Unit	Notes
Acrylamide	0,10	μg/l	Note 1
Antimony	5,0	μg/l	
Arsenic	10	μg/l	
Benzene	1,0	μg/l	
Benzo(a)pyrene	0,010	μg/l	
Boron	1,0	mg/l	
Bromate	10	μg/l	Note 2
Cadmium	5,0	μg/l	
Chromium	50	μg/l	
Copper	2,0	mg/l	Note 3
Cyanide	50	μg/l	
1,2-dichloroethane	3,0	μg/l	
Epichlorohydrin	0,10	μg/l	Note 1
Fluoride	1,5	mg/l	
Lead	10	μg/l	Notes 3 and 4
Mercury	1,0	μg/l	
Nickel	20	μg/l	Note 3
Nitrate	50	mg/l	Note 5
Nitrite	0,50	mg/l	Note 5
Pesticides	0,10	μg/l	Notes 6 and 7
Pesticides — Total	0,50	μg/l	Notes 6 and 8
Polycyclic aromatic hydrocarbons	0,10	μg/l	Sum of concentrations of specified compounds; Note 9
Selenium	10	μg/l	
Tetrachloroethene and Trichloroethene	10	μg/l	Sum of concentrations of specified parameters
Trihalomethanes — Total	100	μg/l	Sum of concentrations of specified compounds; Note 10
Vinyl chloride	0,50	μg/l	Note 1

Note 1: The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.

Note 2: Where possible, without compromising disinfection, Member States should strive for a lower value.

For the water referred to in Article 6(1)(a), (b) and (d), the value must be met, at the latest, 10 calendar years after the entry into force of the Directive. The parametric value for bromate from five years after the entry into force of this Directive until 10 years after its entry into force is 25 μg/l.

Note 3: The value applies to a sample of water intended for human consumption obtained by an adequate sampling method [1] at the tap and taken so as to be representative of a weekly average value ingested by consumers. Where appropriate the sampling and monitoring methods must be applied in a harmonised fashion to be drawn up in accordance with Article 7(4). Member States must take account of the occurrence of peak levels that may cause adverse effects on human health.

Note 4: For water referred to in Article 6(1)(a), (b) and (d), the value must be met, at the latest, 15 calendar years after the entry into force of this Directive. The parametric value for lead from five years after the entry into force of this Directive until 15 years after its entry into force is 25 μg/l.

Member States must ensure that all appropriate measures are taken to reduce the concentration of lead in water intended for human consumption as much as possible during the period needed to achieve compliance with the parametric value.

When implementing the measures to achieve compliance with that value Member States must progressively give priority where lead concentrations in water intended for human consumption are highest.

Note 5: Member States must ensure that the condition that [nitrate]/50 + [nitrite]/3 $\leq$ 1, the square brackets signifying the concentrations in mg/l for nitrate (NO_3) and nitrite (NO_2), is complied with and that the value of 0,10 mg/l for nitrites is complied with ex water treatment works.

Note 6: 'Pesticides' means:

— organic insecticides,

— organic herbicides,

— organic fungicides,

— organic nematocides,

— organic acaricides,

— organic algicides,

— organic rodenticides

— organic slimicides,

— related products (*inter alia*, growth regulators)

and their relevant metabolites, degradation and reaction products.

Only those pesticides which are likely to be present in a given supply need be monitored.

Note 7: The parametric value applies to each individual pesticide. In the case of aldrin, dieldrin, heptachlor and heptachlor epoxide the parametric value is 0,030 μg/l.

Note 8: 'Pesticides — Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure.

Note 9: The specified compounds are:

— benzo(b)fluoranthene,

— benzo(k)fluoranthene,

— benzo(ghi)perylene,

— indeno(1,2,3-cd)pyrene.

Note 10: Where possible, without compromising disinfection, Member States should strive for a lower value.

The specified compounds are: chloroform, bromoform, dibromochloromethane, bromodichloromethane.

For the water referred to in Article 6(1)(a), (b) and (d), the value must be met, at the latest, 10 calendar years after the entry into force of this Directive. The parametric value for total THMs from five years after the entry into force of this Directive until 10 years after its entry into force is 150 μg/l.

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[1] To be added following the outcome of the study currently being carried out.

Member States must ensure that all appropriate measures are taken to reduce the concentration of THMs in water intended for human consumption as much as possible during the period needed to achieve compliance with the parametric value.

When implementing the measures to achieve this value, Member States must progressively give priority to those areas where THM concentrations in water intended for human consumption are highest.

PART C

Indicator parameters

Parameter	Parametric value	Unit	Notes
Aluminium	200	μg/l	
Ammonium	0,50	mg/l	
Chloride	250	mg/l	Note 1
Clostridium perfringens (including spores)	0	number/100 ml	Note 2
Colour	Acceptable to consumers and no abnormal change		
Conductivity	2 500	μS cm^{-1} at 20 °C	Note 1
Hydrogen ion concentration	$\geq$ 6,5 and $\leq$ 9,5	pH units	Notes 1 and 3
Iron	200	μg/l	
Manganese	50	μg/l	
Odour	Acceptable to consumers and no abnormal change		
Oxidisability	5,0	mg/l O_2	Note 4
Sulphate	250	mg/l	Note 1
Sodium	200	mg/l	
Taste	Acceptable to consumers and no abnormal change		
Colony count 22°	No abnormal change		
Coliform bacteria	0	number/100 ml	Note 5
Total organic carbon (TOC)	No abnormal change		Note 6
Turbidity	Acceptable to consumers and no abnormal change		Note 7

RADIOACTIVITY

Parameter	Parametric value	Unit	Notes
Tritium	100	Bq/l	Notes 8 and 10
Total indicative dose	0,10	mSv/year	Notes 9 and 10

Note 1: The water should not be aggressive.

Note 2: This parameter need not be measured unless the water originates from or is influenced by surface water. In the event of non-compliance with this parametric value, the Member State concerned must investigate the supply to ensure that there is no potential danger to human health arising from the presence of pathogenic micro-organisms, e.g. cryptosporidium. Member States must include the results of all such investigations in the reports they must submit under Article 13(2).

Note 3: For still water put into bottles or containers, the minimum value may be reduced to 4,5 pH units.

For water put into bottles or containers which is naturally rich in or artificially enriched with carbon dioxide, the minimum value may be lower.

Note 4: This parameter need not be measured if the parameter TOC is analysed.

Note 5: For water put into bottles or containers the unit is number/250 ml.

Note 6: This parameter need not be measured for supplies of less than 10 000 m^3 a day.

Note 7: In the case of surface water treatment, Member States should strive for a parametric value not exceeding 1,0 NTU (nephelometric turbidity units) in the water ex treatment works.

Note 8: Monitoring frequencies to be set later in Annex II.

Note 9: Excluding tritium, potassium -40, radon and radon decay products; monitoring frequencies, monitoring methods and the most relevant locations for monitoring points to be set later in Annex II.

Note 10:

1. The proposals required by Note 8 on monitoring frequencies, and Note 9 on monitoring frequencies, monitoring methods and the most relevant locations for monitoring points in Annex II shall be adopted in accordance with the procedure laid down in Article 12. When elaborating these proposals the Commission shall take into account *inter alia* the relevant provisions under existing legislation or appropriate monitoring programmes including monitoring results as derived from them. The Commission shall submit these proposals at the latest within 18 months following the date referred to in Article 18 of the Directive.

2. A Member State is not required to monitor drinking water for tritium or radioactivity to establish total indicative dose where it is satisfied that, on the basis of other monitoring carried out, the levels of tritium of the calculated total indicative dose are well below the parametric value. In that case, it shall communicate the grounds for its decision to the Commission, including the results of this other monitoring carried out.

ANNEX II

MONITORING

TABLE A

Parameters to be analysed

1. *Check monitoring*

The purpose of check monitoring is regularly to provide information on the organoleptic and microbiological quality of the water supplied for human consumption as well as information on the effectiveness of drinking-water treatment (particularly of disinfection) where it is used, in order to determine whether or not water intended for human consumption complies with the relevant parametric values laid down in this Directive.

The following parameters must be subject to check monitoring. Member States may add other parameters to this list if they deem it appropriate.

Aluminium (Note 1)

Ammonium

Colour

Conductivity

Clostridium perfringens (including spores) (Note 2)

Escherichia coli (E. coli)

Hydrogen ion concentration

Iron (Note 1)

Nitrite (Note 3)

Odour

Pseudomonas aeruginosa (Note 4)

Taste

Colony count 22 °C and 37 °C (Note 4)

Coliform bacteria

Turbidity

Note 1: Necessary only when used as flocculant (*).

Note 2: Necessary only if the water originates from or is influenced by surface water (*).

Note 3: Necessary only when chloramination is used as a disinfectant (*).

Note 4: Necessary only in the case of water offered for sale in bottles or containers.

(*) In all other cases, the parameters are in the list for audit monitoring.

2. *Audit monitoring*

The purpose of audit monitoring is to provide the information necessary to determine whether or not all of the Directive's parametric values are being complied with. All parameters set in accordance with Article 5(2) and (3) must be subject to audit monitoring unless it can be established by the competent authorities, for a period of time to be determined by them, that a parameter is not likely to be present in a given supply in concentrations which could lead to the risk of a breach of the relevant parametric value. This paragraph does not apply to the parameters for radioactivity, which, subject to Notes 8, 9 and 10 in Annex I, Part C, will be monitored in accordance with monitoring requirements adopted under Article 12.

TABLE B1

Minimum frequency of sampling and analyses for water intended for human consumption supplied from a distribution network or from a tanker or used in a food-production undertaking

Member States must take samples at the points of compliance as defined in Article 6(1) to ensure that water intended for human consumption meets the requirements of the Directive. However, in the case of a distribution network, a Member State may take samples within the supply zone or at the treatment works for particular parameters if it can be demonstrated that there would be no adverse change to the measured value of the parameters concerned.

Volume of water distributed or produced each day within a supply zone (Notes 1 and 2) m^3	Check monitoring number of samples per year (Notes 3, 4 and 5)	Audit monitoring number of samples per year (Notes 3 and 5)
≤ 100	(Note 6)	(Note 6)
> 100 ≤ 1 000	4	1
> 1 000 ≤ 10 000	4 + 3 for each 1 000 m^3/d and part thereof of the total volume	1 + 1 for each 3 300 m^3/d and part thereof of the total volume
> 10 000 ≤ 100 000		3 + 1 for each 10 000 m^3/d and part thereof of the total volume
> 100 000		10 + 1 for each 25 000 m^3/d and part thereof of the total volume

Note 1: A supply zone is a geographically defined area within which water intended for human consumption comes from one or more sources and within which water quality may be considered as being approximately uniform.

Note 2: The volumes are calculated as averages taken over a calendar year. A Member State may use the number of inhabitants in a supply zone instead of the volume of water to determine the minimum frequency, assuming a water consumption of 200 l/day/capita.

Note 3: In the event of intermittent short-term supply the monitoring frequency of water distributed by tankers is to be decided by the Member State concerned.

Note 4: For the different parameters in Annex I, a Member State may reduce the number of samples specified in the table if:

(a) the values of the results obtained from samples taken during a period of at least two successive years are constant and significantly better than the limits laid down in Annex I, and

(b) no factor is likely to cause a deterioration of the quality of the water.

The lowest frequency applied must not be less than 50 % of the number of samples specified in the table except in the particular case of note 6.

Note 5: As far as possible, the number of samples should be distributed equally in time and location.

Note 6: The frequency is to be decided by the Member State concerned.

TABLE B2

Minimum frequency of sampling and analysis for water put into bottles or containers intended for sale

Volume of water produced for offering for sale in bottles or containers each day (1) m^3	Check monitoring number of samples per year	Audit monitoring number of samples per year
≤ 10	1	1
> 10 ≤ 60	12	1
> 60	1 for each 5 m^3 and part thereof of the total volume	1 for each 100 m^3 and part thereof of the total volume

(1) The volumes are calculated as averages taken over a calendar year.

ANNEX III

SPECIFICATIONS FOR THE ANALYSIS OF PARAMETERS

Each Member State must ensure that any laboratory at which samples are analysed has a system of analytical quality control that is subject from time to time to checking by a person who is not under the control of the laboratory and who is approved by the competent authority for that purpose.

1. PARAMETERS FOR WHICH METHODS OF ANALYSIS ARE SPECIFIED

The following principles for methods of microbiological parameters are given either for reference whenever a CEN/ISO method is given or for guidance, pending the possible future adoption, in accordance with the procedure laid down in Article 12, of further CEN/ISO international methods for these parameters. Member States may use alternative methods, providing the provisions of Article 7(5) are met.

Coliform bacteria and *Escherichia coli (E. coli)* (ISO 9308-1)

Enterococci (ISO 7899-2)

Pseudomonas aeruginosa (prEN ISO 12780)

Enumeration of culturable microorganisms — Colony count 22 °C (prEN ISO 6222)

Enumeration of culturable microorganisms — Colony count 37 °C (prEN ISO 6222)

Clostridium perfringens (including spores)

Membrane filtration followed by anaerobic incubation of the membrane on m-CP agar (Note 1) at 44 ± 1 °C for 21 ± 3 hours. Count opaque yellow colonies that turn pink or red after exposure to ammonium hydroxide vapours for 20 to 30 seconds.

Note 1: The composition of m-CP agar is:

Basal medium	
Tryptose	30 g
Yeast extract	20 g
Sucrose	5 g
L-cysteine hydrochloride	1 g
$MgSO_4 \cdot 7H_2O$	0,1 g
Bromocresol purple	40 mg
Agar	15 g
Water	1 000 ml

Dissolve the ingredients of the basal medium, adjust pH to 7,6 and autoclave at 121 °C for 15 minutes. Allow the medium to cool and add:

D-cycloserine	400 mg
Polymyxine-B sulphate	25 mg
Indoxyl-β-D-glucoside to be dissolved in 8 ml sterile water before addition	60 mg
Filter — sterilised 0,5% phenolphthalein diphosphate solution	20 ml
Filter — sterilised 4,5 % $FeCl_3 \cdot 6H_2O$	2 ml

2. PARAMETERS FOR WHICH PERFORMANCE CHARACTERISTICS ARE SPECIFIED

2.1. For the following parameters, the specified performance characteristics are that the method of analysis used must, as a minimum, be capable of measuring concentrations equal to the parametric value with a trueness, precision and limit of detection specified. Whatever the sensitivity of the method of analysis used, the result must be expressed using at least the same number of decimals as for the parametric value considered in Annex I, Parts B and C.

Parameters	Trueness % of parametric value (Note 1)	Precision % of parametric value (Note 2)	Limit of detection % of parametric value (Note 3)	Conditions	Notes
Acrylamide				To be controlled by product specification	
Aluminium	10	10	10		
Ammonium	10	10	10		
Antimony	25	25	25		
Arsenic	10	10	10		
Benzo(a)pyrene	25	25	25		
Benzene	25	25	25		
Boron	10	10	10		
Bromate	25	25	25		
Cadmium	10	10	10		
Chloride	10	10	10		
Chromium	10	10	10		
Conductivity	10	10	10		
Copper	10	10	10		
Cyanide	10	10	10		Note 4
1,2-dichloroethane	25	25	10		
Epichlorohydrin				To be controlled by product specification	
Fluoride	10	10	10		
Iron	10	10	10		
Lead	10	10	10		
Manganese	10	10	10		
Mercury	20	10	20		
Nickel	10	10	10		
Nitrate	10	10	10		
Nitrite	10	10	10		
Oxidisability	25	25	10		Note 5
Pesticides	25	25	25		Note 6
Polycyclic aromatic hydrocarbons	25	25	25		Note 7

Parameters	Trueness % of parametric value (Note 1)	Precision % of parametric value (Note 2)	Limit of detection % of parametric value (Note 3)	Conditions	Notes
Selenium	10	10	10		
Sodium	10	10	10		
Sulphate	10	10	10		
Tetrachloroethene	25	25	10		Note 8
Trichloroethene	25	25	10		Note 8
Trihalomethanes — Total	25	25	10		Note 7
Vinyl chloride				To be controlled by product specification	

2.2. For hydrogen ion concentration the specified performance characterisatics are that the method of analysis used must be capable of measuring concentrations equal to the parametric value with a trueness of 0,2 pH unit and a precision of 0,2 pH unit.

Note 1 (*): Trueness is the systematic error and is the difference between the mean value of the large number of repeated measurements and the true value.

Note 2 (*): Precision is the random error and is usually expressed as the standard deviation (within and between batch) of the spread of results about the mean. Acceptable precision is twice the relative standard deviation.

(*) These terms are further defined in ISO 5725.

Note 3: Limit of detection is either:

— three times the relative within batch standard deviation of a natural sample containing a low concentration of the parameter,

or

— five times the relative within batch standard deviation of a blank sample.

Note 4: The method should determine total cyanide in all forms.

Note 5: Oxidation should be carried out for 10 minutes at 100 °C under acid conditions using permanganate.

Note 6: The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned. The limit of detection may not be achievable for all pesticides at present, but Member States should strive to achieve this standard.

Note 7: The performance characteristics apply to the individual substances specified at 25 % of the parametric value in Annex I.

Note 8: The performance characteristics apply to the individual substances specified at 50 % of the parametric value in Annex I.

3. PARAMETERS FOR WHICH NO METHOD OF ANALYSIS IS SPECIFIED

Colour
Odour
Taste
Total organic carbon
Turbidity (Note 1)

Note 1: For turbidity monitoring in treated surface water the specified performance characteristics are that the method of analysis used must, as a minimum, be capable of measuring concentrations equal to the parametric value with a trueness of 25 %, precision of 25 % and a 25 % limit of detection.

ANNEX IV

DEADLINES FOR TRANSPOSITION INTO NATIONAL LAW AND FOR APPLICATION

Directive 80/778/EEC Transposition 17.7.1982 Application 17.7.1985 All Member States except Spain, Portugal and new *Länder* of Germany	Directive 81/858/EEC (Adaptation due to accession of Greece)	Act of Accession of Spain and Portugal Spain: transposition 1.1.1986 application 1.1.1986 Portugal: transposition 1.1.1986 application 1.1.1989	Directive 90/656/EEC for new *Länder* of Germany	Act of Accession of Austria, Finland and Sweden Austria: transposition 1.1.1995 application 1.1.1995 Finland: transposition 1.1.1995 application 1.1.1995 Sweden: transposition 1.1.1995 application 1.1.1995	Directive 91/692/EEC
Articles 1 to 14			Application 31.12.1995		
Article 15	Amended with effect from 1.1.1981	Amended with effect from 1.1.1986		Amended with effect from 1.1.1995	
Article 16					
Article 17					Article 17(a) inserted
Article 18					
Article 19		Amended	Amended		
Article 20					
Article 21					

ANNEX V

CORRELATION TABLE

This Directive	Directive 80/778/EEC
Article 1(1)	Article 1(1)
Article 1(2)	—
Article 2(1) (a) and (b)	Article 2
Article 2(2)	—
Article 3(1) (a) and (b)	Article 4(1)
Article 3(2) (a) and (b)	—
Article 3(3)	—
Article 4(1)	Article 7(6)
Article 4(2)	Article 11
Article 5(1)	Article 7(1)
Article 5(2) first sentence	Article 7(3)
Article 5(2) second sentence	—
Article 5(3)	—
Article 6(1)	Article 12(2)
Article 6(2) to (3)	—
Article 7(1)	Article 12(1)
Article 7(2)	—
Article 7(3)	Article 12(3)
Article 7(4)	—
Article 7(5)	Article 12(5)
Article 7(6)	—
Article 8	—
Article 9(1)	Article 9(1) and Article 10(1)
Article 9(2) to (6)	—
Article 9(7)	Article 9(2) and Article 10(3)
Article 9(8)	—
Article 10	Article 8

This Directive	Directive 80/778/EEC
Article 11(1)	—
Article 11(2)	Article 13
Article 12(1)	Article 14
Article 12(2) and (3)	Article 15
Article 13(1)	—
Article 13(2) to (5)	Article 17(a) (inserted by Directive 91/692/EEC)
Article 14	Article 19
Article 15	Article 20
Article 16	—
Article 17	Article 18
Article 18	—
Article 19	Article 21

Annex B: The [Draft] Private Water Supplies Regulations (Northern Ireland)

STATUTORY RULES OF NORTHERN IRELAND

2009 No.

WATER AND SEWERAGE

The Private Water Supplies Regulations (Northern Ireland) 2009

Made - - - -	***
Coming into operation --	***

CONTENTS

SCHEDULES

The Department of the Environment, in exercise of the powers conferred by Articles 107(2) and (3) and 118(3) and (4) of the Water and Sewerage Services (Northern Ireland) Order 2006 (**a**) and being a Department designated (**b**) for the purposes of section 2(2) of the European Communities Act 1972 (**c**) in relation to the environment in exercise of the powers conferred upon it by that section, hereby makes the following Regulations:

PART 1

Water standards

Citation and commencement

1. These Regulations may be cited as the Private Water Supplies Regulations (Northern Ireland) 2009 and shall come into operation on [ ] 2009.

(**a**) S.I. 2006/3336 (N.I. 21)
(**b**) S.I. 2008/301
(**c**) 1972 c.68

Interpretation

2.—(1) The Interpretation Act (Northern Ireland) 1954 (**a**) shall apply to these Regulations as it applies to an Act of the Assembly.

(2) In these Regulations—

"the Appeals Commission" means the Water Appeals Commission for Northern Ireland;

"the Department" means the Department of the Environment;

"private dwelling" means a dwelling used only for domestic purposes and in which water is not used for any commercial activity;

"responsible persons" are—

(a) the owner or occupier of the premises supplied; and

(b) any other person who exercises powers of management or control in relation to the supply.

(3) Any other expressions used in these Regulations and in Council Directive 98/83/EC on the quality of water intended for human consumption (**b**) have the same meaning as in that Directive.

Water Supplies to which these Regulations apply

3.—(1) These Regulations apply to all water supplies not provided by a water undertaker appointed under Article 13 of the Water and Sewerage Services (Northern Ireland) Order 2006 **(c)**.

(2) The supplies in paragraph (1) are referred to in these Regulations as private supplies.

Exemptions

4. These Regulations do not apply in relation to—

(a) water controlled by the Natural Mineral Water, Spring Water and Bottled Drinking Water (Northern Ireland) Regulations 2007(**d**);

(b) water that is a medicinal product within the meaning of the Medicines Act 1968(**e**); or

(c) water used solely for washing a crop after it has been harvested and that does not affect the fitness for human consumption of the crop or of any food or drink derived from the crop.

Wholesomeness

5. Water is wholesome if all the following conditions are met—

(a) it does not constitute a risk to human health;

(b) it meets the concentrations and values specified in Part 1 of Schedule 1; and

(c) in the water: $\frac{\text{nitrate (mg/l)}}{50} + \frac{\text{nitrite (mg/l)}}{3} \leq 1$.

New installations

6. Only substances or products specified under regulation 30 of the Water Supply (Water Quality) Regulations (Northern Ireland) 2007 **(**f**)** may be used for new installations for the preparation or distribution of water intended for human consumption.

(**a**) 1954 c.33 (NI)
(**b**) OJ L 330/32 5.12.98
(**c**) SI 2006/3336 (N.I.21)
(**d**) SR 2007 No. 420
(**e**) 1968 c 67, see section 130
(**f**) SR 2007 No. 147

Requirement to carry out a risk assessment

7.—(1) The Department shall carry out an assessment ("risk assessment") of the potential risks associated with each private supply specified under Regulation 9 within eighteen months of the coming into operation of these Regulations, and subsequently every five years (or earlier if it considers that the existing risk assessment is inadequate).

(2) It shall carry out a risk assessment where the private supply is a new supply and is to be used for the first time, within six months of that supply being identified as a private supply specified under Regulation 9.

(3) It may carry out a risk assessment on a private supply specified under Regulation 10 if appropriate to do so.

(4) Schedule 2 (Requirements for Risk Assessment) has effect.

PART 2

Monitoring

Monitoring

8. The Department shall monitor all private supplies in accordance with this Part.

Large supplies and supplies to commercial or public premises

9. The Department shall monitor the private supply in accordance with Schedule 3 and carry out any additional monitoring that the risk assessment shows to be necessary if the private supply—

(a) provides an average daily volume of water of $10m^3$ or more or serves 50 or more persons, or

(b) supplies water to premises where the water is used for a commercial activity (including commercial food production) or to public premises.

Other private supplies

10.—(1) In the case of a private supply to more than one private dwelling that is not monitored in accordance with regulation 9, the Department may monitor in accordance with the risk assessment and, in addition, it may monitor for—

(a) conductivity;

(b) enterococci;

(c) *Escherichia coli (E. coli)*;

(d) hydrogen ion concentration;

(e) turbidity;

(f) any parameter in Schedule 1 identified in the risk assessment as being at risk of exceeding the values in that Schedule; and

(g) anything else identified in the risk assessment as a risk to human health.

(2) The Department may carry out any additional monitoring that the risk assessment shows to be necessary.

Supplies to single private dwellings

11. In the case of a private supply to a single private dwelling where the water is not used as part of a commercial activity the Department shall offer appropriate advice to the owner or occupier.

Sampling and analysis

12.—(1) When the Department monitors a private supply it shall take a sample—

(a) if the water is supplied for domestic purposes, from a tap normally used to provide water for human consumption, and which, if there is more than one tap, is representative of the water supplied to the premises;

(b) if the water is supplied for food production purposes, at the point at which it is used for food production; or

(c) if the water is supplied from a tanker, at the point at which it emerges from the tanker.

(2) Schedule 4 (sampling and analysis) has effect.

Maintenance of records

13. The Department shall keep records in respect of every monitored private supply in its area in accordance with Schedule 5.

Publication of information

14.—(1) The Department shall annually publish a report about private supplies.

(2) The report shall contain —

(a) the number of private supplies in the preceding year; and

(b) any other information about private supplies in such form as the Department may determine.

PART 3

Action in the event of failure

Provision of information

15.—(1) If the Department considers that a private supply is a risk to human health it shall take appropriate steps to ensure that people likely to consume water from it—

(a) are informed that the supply constitutes a risk to human health;

(b) where possible, are informed of the degree of the risk; and

(c) are given advice to allow them to minimise any such risk.

(2) The Department shall notify the Health and Social Care Board for Northern Ireland and the district council for the district in which the premises are, and the supply is, situated.

Investigation

16. The Department shall carry out an investigation to establish the cause if any sample that it takes is unwholesome, or if an indicator parameter in that sample exceeds the limits in Part 2 of Schedule 1.

Procedure following investigation

17.—(1) Once the Department has established the cause of the water being unwholesome, it shall act in accordance with this regulation.

(2) If the cause of the unwholesome water is attributable to the domestic distribution system within a private dwelling, the Department shall offer advice to the occupier on measures necessary for the protection of health, and may serve an improvement notice on the responsible person.

(3) If paragraph (2) does not apply and if it cannot solve the problem informally the Department—

(a) may, on application by a responsible person, grant an authorisation to that person if the conditions in regulation 18(2) are fulfilled, and

(b) if it does not grant an authorisation, shall serve an improvement notice on one or more responsible persons.

(4) Before serving an improvement notice the Department shall have regard to any agreement, contract licence or other document produced to the Department relating to the terms on which water is supplied.

Authorisations of different standards

18.—(1) Any responsible person may apply to the Department for the grant of an authorisation under this regulation.

(2) The Department may grant an authorisation of different standards under this regulation if—

(a) the only cause of the unwholesome water is that a parameter in Table B of Part 1 of Schedule 1 is not complied with;

(b) the Department has consulted all water users who will be affected by the authorisation and the relevant District Council, and the Health and Social Care Board for Northern Ireland and has taken their views into account.

(c) granting the authorisation does not cause a risk to human health, and

(d) the supply of water cannot be maintained by any other reasonable means.

(3) An authorisation shall require the responsible person to take action over a period of time to ensure that the parameters in Table B are complied with, and shall specify—

(a) the person to whom the authorisation is granted;

(b) the supply concerned;

(c) the grounds for granting the authorisation;

(d) the parameters concerned, previous relevant monitoring results, and the maximum permissible values under the authorisation;

(e) the geographical area, the estimated quantity of water supplied each day, the number of persons supplied and whether or not any food-production undertaking is affected;

(f) an appropriate monitoring scheme to be undertaken by either the Department or the relevant responsible person, with an increased monitoring frequency where necessary;

(g) a summary of the plan for the necessary remedial action, including a timetable for the work and an estimate of the cost and provisions for reviewing progress; and

(h) the duration of the authorisation.

(4) If the Department grants an authorisation, and the responsible person takes action in accordance with the timetable of works specified in the authorisation, the Department may not serve an improvement notice concerning the matters specified in the authorisation without first amending or revoking the authorisation.

(5) The duration of the authorisation shall be as short as possible and in any event may not exceed three years.

(6) The Department shall ensure that people affected are promptly informed of the authorisation and its conditions and, where necessary, ensure that advice is given to particular groups for which the authorisation could present a special risk.

(7) Towards the end of the duration of the authorisation the Department shall review it to determine whether sufficient progress has been made. If the Department intends to grant a second authorisation, this shall be communicated to the European Commission along with the results of the review.

(8) It may then grant a second authorisation for up to three years.

(9) If towards the end of the duration of the second period of authorisation the Department considers that sufficient progress has not been made the Department may grant a third period of authorisation but only if—

(a) it considers that there are exceptional circumstances to justify doing so; and

(b) the European Commission confirms its approval.

(10) It may revoke or amend the authorisation at any time, and in particular may revoke or amend it if the timetable for remedial action has not been adhered to.

Improvement notices

19.—(1) An improvement notice shall specify—

(a) the responsible person;

(b) the supply concerned;

(c) the grounds for the notice;

(d) the parameters concerned;

(e) previous relevant monitoring results;

(f) the geographical area, the estimated quantity of water supplied each day and whether or not any food-production undertaking is affected;

(g) what, in the Department's opinion, the person specified in the notice has to do; and

(h) a requirement that that person carries out the necessary works, or measures at least equivalent to them, within the period specified in the notice.

(2) If the person on whom the notice is served does not comply with it the Department may carry out the necessary works at that person's expense.

(3) It is an offence to fail to comply with an improvement notice.

Restriction notices

20.—(1) The Department shall serve a notice ("a restriction notice") in relation to a private supply on one or more responsible persons if—

(a) the private supply is a risk to human health; and

(b) serving the notice will not create a greater risk to human health than not serving it.

(2) The notice shall—

(a) identify the private supply to which it relates;

(b) state the grounds for serving the notice; and

(c) prohibit the supply of water, or restrict what the water may be used for.

(3) The Department shall revoke the notice as soon as there is no longer a risk to human health.

(4) It is an offence to breach a restriction notice or to fail to comply with it.

Change in persons

21. Any requirement which—

(a) is imposed on a person or premises by virtue of an authorisation, an improvement notice or a restriction notice; and

(b) is expressed to bind those premises in relation to a particular person,

binds that person's successors and is a statutory charge.

Appeals

22.—(1) Any person who is aggrieved by an improvement notice or a restriction notice may appeal to the Appeals Commission within 28 days of service of the notice.

(2) An improvement notice is automatically suspended pending an appeal unless it states on the face of the notice that the failure is a potential risk to human health.

Powers of the Appeals Commission

23. On an appeal against an improvement notice or a restriction notice, the Appeals Commission may either cancel the notice or confirm it, with or without modification.

PART 4

Enforcement

Power to enter premises

24.—(1) A person authorised by the Department for the purposes of these Regulations—

(a) may enter any premises for the purposes of ensuring that the provisions of these Regulations are being complied with; and

(b) shall produce, if so required, a document showing his authority.

(2) The power may be exercised—

(a) at all reasonable hours; or

(b) in an emergency, at any time and if need be by reasonable force.

(3) An authorised person may take with him—

(a) such other persons as he considers necessary, including a constable;

(b) any equipment or materials required for any purpose for which the power of entry is being exercised.

(4) An authorised person entering unoccupied premises shall leave them as effectively secured against unauthorised entry as they were before entry.

(5) Admission to any premises used only as a private dwelling shall not be demanded as of right unless 24 hours notice of the intended entry has been given to the occupier.

Powers of authorised persons

25.—(1) When an authorised person enters premises under these Regulations he may—

(a) take samples;

(b) inspect any—

(i) source of supply and its catchment;

(ii) treatment facility;

(iii) distribution system; or

(iv) domestic distribution system;

(v) plant, machinery or equipment

(c) carry out any other survey, test or inspection required;

(d) search the premises;

(e) carry out experimental borings or other works;

(f) take photographs and make recordings;

(g) take away and analyse such samples of water or any land or articles, documents or records as the Department—

(i) considers necessary for the purposes of making a decision; and

(ii) has authorised the person to take away and analyse.

(2) The authorised person may seize any computers and associated equipment for the purpose of copying documents provided they are returned as soon as practicable.

(3) He may have access to, and inspect and copy any documents or records (in whatever form they are held) relating to these Regulations, and remove them to enable them to be copied.

Provision of information

26. The Department may serve a notice requiring any person to furnish such information as it may reasonably require for the purposes of these Regulations.

Obstruction

27. Any person who—

(a) intentionally obstructs any person acting in the execution of these Regulations;

(b) without reasonable cause, fails to give to any person acting in the execution of these Regulations any assistance or information that that person may reasonably require of him for the performance of his functions under these Regulations;

(c) furnishes to any person acting in the execution of these Regulations any information that he knows to be false or misleading; or

(d) fails to produce a record when required to do so to any person acting in the execution of these Regulations,

is guilty of an offence.

Penalties

28.—(1) A person guilty of an offence under these Regulations is liable—

(a) on summary conviction, to a fine not exceeding the statutory maximum or to a term of imprisonment not exceeding three months or both, or

(b) on conviction on indictment, to a fine or to imprisonment for a term not exceeding two years or both.

(2) For the purposes of these Regulations section 20(2) of the Interpretation Act (Northern Ireland) 1954 applies with the omission of the words "the liability of whose members is limited" and where the affairs of a body corporate are managed by its members, applies in relation to the acts or defaults of a member in connection with his functions of management as if he were a director of the body corporate.

Revocations

29. The Private Water Supply Regulations (Northern Ireland) 1994 (a) are revoked.

Sealed with the Official Seal of the Department of the Environment on ***

Maggie Smith
A senior officer of the
Department of the Environment

(**a**) S.R. 1994 No.237

L.S.

SCHEDULES

SCHEDULE 1

Regulation 5

Concentrations and Values

PART 1

Wholesomeness

TABLE A

MICROBIOLOGICAL PARAMETERS

Directive requirements – Prescribed concentrations and values

Parameters	*Maximum concentration or value*	*Units of Measurement*
Escherichia coli (E. coli)	0	Number/100ml
Enterococci	0	Number/100ml

TABLE B

CHEMICAL PARAMETERS

Directive requirements – Prescribed concentrations and values

Parameters	*Maximum concentration or value*	*Units of Measurement*
Acrylamide [(1)]	0.10	µg/l
Antimony	5.0	µgSb/l
Arsenic	10	µgAs/l
Benzene	1.0	µg/l
Benzo(a)pyrene	0.010	µg/l
Boron	1.0	mgB/l
Bromate	10	µgBrO_3/l
Cadmium	5.0	µgCd/l
Chromium	50	µgCr/l
Copper	2.0	mgCu/l
Cyanide	50	µgCN/l
1, 2 dichloroethane	3.0	µg/l
Epichlorohydrin [(1)]	0.10	µg/l
Fluoride	1.5	mgF/l

Parameters	*Maximum concentration or value*	*Units of Measurement*
Lead	(a) 25 until immediately before 25th December 2013	µgPb/l
	(b) 10, on and after 25th December 2013	µgPb/l
Mercury	1.0	µgHg/l
Nickel	20	µgNi/l
Nitrate [2]	50	$mgNO_3/l$
Nitrite	0.5	$mgNO_2/l$
Pesticides [3]		
Aldrin	0.030	µg/l
Dieldrin	0.030	µg/l
Heptachlor	0.030	µg/l
Heptachlor epoxide	0.030	µg/l
other pesticides	0.10	µg/l
Pesticides total [4]	0.50	µg/l
Polycyclic aromatic hydrocarbons [5]	0.10	µg/l
Selenium	10	µgSe/l
Tetrachloroethene and Trichloroethene [6]	10	µg/l
Trihalomethanes: Total [7]	100	µg/l
Vinyl chloride [1]	0.50	µg/l

[1] The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water. This is controlled by product specification.

[2] See also the nitrate-nitrite formula in regulation 5(c)

[3] For these purposes "Pesticides" means—

(a) organic insecticides,

(b) organic herbicides,

(c) organic fungicides,

(d) organic nematocides,

(e) organic acaricides,

(f) organic algicides,

(g) organic rodenticides,

(h) organic slimicides,

(i) related products (inter alia, growth regulators)

And their relevant metabolites, degradation and reaction products.

Only those pesticides which are likely to be present in a given supply need to be monitored.

[4] "Pesticides total" means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring process.

[5] The specified compounds are:

(a) benzo(b)fluoranthene

(b) benzo(k)fluoranthene

(c) benzo(ghi)perylene

(d) indeno(1,2,3-cd)pyrene.

The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

[6] The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

[7] The specified compounds are:

(a) chloroform

(b) bromoform

(c) dibromochloromethane

(d) bromodichloromethane

The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

National requirements – Prescribed concentrations and values

Parameters	*Maximum concentration or value or state*	*Units of Measurement*
Aluminium	200	µgAl/l
Colour	20	mg/l Pt/Co
Iron	200	µgFe/l
Manganese	50	µgMn/l
Nitrite [(1)]	0.10	mgNO_2/l
Odour	Acceptable and no abnormal change	
Sodium	200	mgNa/l
Taste	Acceptable and no abnormal change	
Tetrachloromethane	3	µg/l
Turbidity	4	NTU

[(1)] Ex water treatment works only. (See also the nitrate-nitrite formula in regulation 5(c))

PART 2

Indicator Parameters

Parameters	*Maximum concentration or value or state (unless otherwise stated)*	*Units of measurement*
Ammonium	0.50	mgNH_4/l
Chloride [(1)]	250	mgCl/l
Clostridium perfringens (including spores)	0	Number/100ml
Coliform bacteria	0	Number/100ml
Colony counts	No abnormal change	Number/1ml at 22°C
	No abnormal change	Number/1ml at 37°C
Conductivity [(1)]	2500	µS/cm at 20°C
Hydrogen ion	9.5	pH value
	6.5 (minimum)	pH value
Sulphate [(1)]	250	mgSO_4/l
Total indicative dose (for radioactivity) [(2)]	0.10	mSv/year
Total organic carbon (TOC)	No abnormal change	mgC/l
Tritium (for radioactivity)	100	Bq/l
Turbidity [(3)]	1	NTU

[(1)] The water should not be aggressive.

[(2)] Excluding tritium, potassium-40, radon and radon decay products.

[3] Only in the case of surface water treatment where the parametric value should be strived for in the water ex-treatment works.

SCHEDULE 2

Regulation 7

Requirements for Risk Assessment

1. When undertaking or reviewing and updating a risk assessment for the purposes of regulation 7 the Department shall do so in accordance with the provisions of this Schedule.

2. A risk assessment shall comprise the following—

(a) documentation on and a description of the supply, including the catchment from which the supply draws water;

(b) a hazard assessment and risk characterisation;

(c) an identification of the measures by which risks may be controlled;

(d) establishment of verification procedures,

and for the purposes of this paragraph, "hazard" means a biological, chemical, physical or radiological agent that has the potential to cause harm or danger to human health; and "risk" means the likelihood of identified hazards causing harm in exposed populations in a specified time, including the magnitude of that harm and/or the consequences of such harm.

3. In respect of a supply which comprises, either alone or in any combination thereof, catchments, surface water or ground water, the risk assessment shall include provision in relation to the relevant matters specified in Table A of this Schedule.

4. In respect of a supply which receives treatment, including treatment at source and any point thereafter, the risk assessment shall make provision in relation to the relevant matters specified in Table B of this Schedule.

5. In respect of a supply which comprises intermediate tanks and distribution, the risk assessment shall include provision in relation to the relevant matters specified in Table C of this Schedule.

TABLE A

SOURCE AND CATCHMENT

(1) *Source of supply*	*(2)* *Information to be considered in the risk assessment*
(1) Catchments	(i) geology and hydrology (ii) meteorology and weather patterns (iii) general catchment and river health (iv) wildlife (v) competing water uses (vi) nature and intensity of development and land use (vii) other activities in the catchment that potentially release contaminants into source water (viii) planned future activities
(2) Surface water	(i) description of water body type (e.g. river, reservoir, dam) (ii) flow and reliability of source water (iii) retention times (iv) water constituents (physical, chemical, microbial)

	(v) protection (e.g. enclosures, access) (vi) recreational and other human activity (vii) bulk water transport
(3) Groundwater	(i) confined or unconfined aquifer (ii) aquifer hydrogeology (iii) flow rate and direction (iv) dilution characteristics (v) recharge area (vi) wellhead protection (vii) depth of casing (viii) bulk water transport

TABLE B

TREATMENT

(i) treatment process (ii) equipment design (iii) monitoring equipment and automation (iv) water treatment chemicals used (v) treatment efficiencies (vi) disinfection removals of pathogens (vii) disinfection residuals/contact time (viii) maintenance schedules

TABLE C

INTERMEDIATE TANKS AND DISTRIBUTION

(i) reservoir/tank design (ii) retention times (iii) seasonal variations (iv) protection (e.g. covers, enclosures, access) (v) distribution system design (vi) hydraulic conditions (e.g. water age, pressures, flows) (vii) backflow protection (viii) disinfection residuals (ix) maintenance and cleaning schedules

Risk Assessment by persons other than the Department

6.—(1) The Department may enter into an arrangement for any person to carry out a risk assessment on its behalf for the purposes of Regulation 7.

(2) The Department may provide for any such person to be reimbursed.

(3) The Department shall not enter into an arrangement under paragraph (1) unless it is satisfied that the task will be carried out promptly by a person competent to perform it.

SCHEDULE 3

Regulation 9

Monitoring

PART 1

Check monitoring

Sampling

7. Check monitoring means sampling for each parameter listed in Table A in the circumstances listed in that table.

TABLE A

Check monitoring

Parameter	Circumstances
Aluminium	When used as flocculant or where the water originates from, or is influenced by, surface waters
Ammonium	In all supplies
Clostridium perfringens (including spores)	Where the water originates from, or is influenced by, surface waters
Coliform bacteria	In all supplies
Colour	In all supplies
Conductivity	In all supplies
Escherichia coli (E. coli)	In all supplies
Hydrogen ion	In all supplies
Iron	When used as flocculant or where the water originates from, or is influenced by, surface waters
Manganese	Where the water originates from, or is influenced by, surface waters
Nitrate	When chloramination is practised
Nitrite	When chloramination is practised
Odour	In all supplies
Taste	In all supplies
Turbidity	In all supplies
Disinfectant residual	When disinfection treatment is practised.

Frequency of sampling

8.—(1) Sampling shall be carried out at frequencies specified in Table B of this Schedule.

TABLE B

Sampling frequency for check monitoring

Volume m^3/day	*Sampling frequency per year*
≤10	1
> 10 ≤ 100	2
> 100 ≤ 1,000	4
> 1,000 ≤ 2,000	10
> 2,000 ≤ 3,000	13
> 3,000 ≤ 4,000	16
> 4,000 ≤ 5,000	19
> 5,000 ≤ 6,000	22
> 6,000 ≤ 7,000	25
> 7,000 ≤ 8,000	28
> 8,000 ≤ 9,000	31
> 9,000 ≤ 10,000	34
> 10,000	4 + 3 for each 1,000 m^3/day of the total volume (rounding up to the nearest multiple of 1,000 m^3/day)

(2) The Department may reduce the frequency of sampling for a parameter to a frequency not less than half if—

(a) it is of the opinion that the quality of water in the supply is unlikely to deteriorate;

(b) in the case of hydrogen ion the parameter has had a pH value that is not less than 6.5 and not more than 9.5; and

(c) in all other cases, in each of two successive years the results of samples taken for the purposes of monitoring the parameter in question are constant and significantly lower than the concentrations or values laid down in Schedule 1.

(3) The Department may set a higher frequency for any parameter if it considers it appropriate taking into account the findings of any risk assessment, and in addition may monitor anything else identified in the risk assessment.

PART 2

Audit monitoring

Sampling

9.—(1) Audit monitoring means sampling for each parameter listed in Schedule 1 (other than parameters already being sampled under check monitoring).

(2) The Department may, for such time as it may decide, exclude a parameter from the audit monitoring of a private supply—

(a) if it considers that the parameter in question is unlikely to be present in the supply or system at a concentration or value which poses a risk of the private supply failing to meet the concentration, value or state specified in Schedule 1 in respect of that parameter; and

(b) taking into account the findings of any risk assessment.

(3) It may monitor anything else identified in the risk assessment.

Frequency of sampling

10.—(1) Sampling shall be carried out at the frequencies specified in Table C of this Schedule.

TABLE C

Sampling frequency for audit monitoring

Volume m3 /day	*Sampling frequency per year*
≤ 1000	1
> 1000 ≤ 10,000	1 + 1 for each 3,300 m^3/day of the total volume (rounding up to the nearest multiple of 3,300 m^3/day)
> 10,000 ≤ 100,000	3 + 1 for each 10,000 m^3/day of the total volume (rounding up to the nearest multiple of 10,000 m^3/day)
> 100,000	10 + 1 for each 25,000 m^3/day of the total volume (rounding up to the nearest multiple of 25,000 m^3/day)

(2) The Department may set a higher frequency for any parameter if it considers it appropriate taking into account the findings of any risk assessment.

SCHEDULE 4

Regulation 12

Sampling and analysis

PART 1

General

Samples: general

11.—(1) The Department shall ensure that each sample taken in accordance with a monitoring programme is—

(a) representative of the water at the sampling point at the time of sampling;

(b) not contaminated in the course of being taken;

(c) kept at such temperature and in such conditions as will secure that there is no material alteration of a concentration, value or state of any parameter for which the sample is to be analysed; and

(d) analysed as soon as may be after it has been taken—

(i) by a person who is competent to perform that task; and

(ii) with the use of such equipment as is suitable for the purpose.

Analysing samples

12.—(1) The Department shall ensure that each sample is analysed in accordance with this paragraph.

(2) For each parameter specified in the first column of Table A in Part 2 of this Schedule—

(a) the method of analysis specified in the second column of that table; or

(b) an alternative method of analysis authorised under paragraph 3;

(3) For each parameter specified in the first column of Table B in Part 2 of this Schedule the method of analysis is one that is capable of—

(a) measuring concentrations and values with the trueness and precision specified in the second and third columns of that table; and

(b) detecting the parameter at the limit of detection specified in the fourth column of that table;

(4) For hydrogen ion, a method of analysis which is capable at the time of use of measuring a value with a trueness of 0.2 pH unit and a precision of 0.2 pH unit.

(5) For these purposes—

"limit of detection" is to be calculated as—

(a) three times the relative within-batch standard deviation of a natural sample containing a low concentration of the parameter; or

(b) five times the relative within-batch standard deviation of a blank sample;

"precision" (the random error) is to be calculated as twice the standard deviation (within a batch and between batches) of the spread of results about the mean; and

"trueness" (the systematic error) is to be calculated as the difference between the mean value of the large number of repeated measurements and the true value.

Authorisation of alternative methods of analysis

13.—(1) If the Department is satisfied that an alternative method of analysis is at least as reliable as a method of analysis prescribed by paragraph 2(2)(a), it may authorise its use instead of the prescribed method.

(2) The Department shall provide the European Commission with relevant information concerning such methods and their equivalence.

Sampling and analysis by persons other than the Department

14.—(1) The Department may enter into an arrangement for any person—

(a) to take and/or analyse samples on its behalf; and

(b) to report the findings to the Department as soon as they are available and to report any breach of these Regulations to it immediately.

(2) The Department may provide for any such person to be reimbursed.

(3) The Department shall not enter into an arrangement under paragraph (1) unless it is satisfied that the task will be carried out promptly by a person competent to perform it.

Laboratories

15. The Department shall ensure that any laboratory at which samples are analysed has a system of analytical quality control that is subjected from time to time to checking by a person who is—

(a) not under the control of either the laboratory or the Department; and

(b) approved by the Department for that purpose.

Interpretation

16. In this schedule—

"laboratory" includes any premises at which samples are analysed for the purposes of these Regulations (including on-site analysis); and

"taking and analysing samples" includes taking, handling, transporting, storing and analysing samples.

PART 2

Analytical methods

TABLE A

Prescribed methods of analysis

(1) *Parameter*	*(2)* *Method*
Clostridium perfringens (including spores)	Membrane filtration followed by anaerobic incubation of the membrane on m-CP agar* at 44 ± 1°C for 21 ± 3 hours. Count opaque yellow colonies that turn pink or red after exposure to ammonium hydroxide vapours for 20 to 30 seconds.
Coliform bacteria	ISO 9308-1
Colony count 22°C-enumeration of culturable microorganisms	PrEN ISO 6222
Colony count 37°C-enumeration of culturable microorganisms	prEN ISO 6222
Enterococci	ISO 7899-2
Escherichia coli (E. coli)	ISO 9308-1

*The composition of m-CP agar is:

Basal medium

—	Tryptose	30.0g
—	Yeast extract	20.0g
—	Sucrose	5.0g
—	L-cysteine hydrochloride	1.0g
—	MgSO4.7H2O	0.1g
—	Bromocresol purple	40.0mg
—	Agar	15.0g
—	Water	1,000.0ml

Dissolve the ingredients of the basal medium, adjust pH to 7.6 and autoclave at 121°C for 15 minutes. Allow the medium to cool and add:

—	D-cycloserine	400.0mg
—	Polymyxine-B sulphate	25.0mg
—	Indoxyl-β-D-glucoside	60.0mg

to be dissolved in 8ml sterile water before addition

—	Filter-sterilised 0.5% phenolphthalein diphosphate solution	20.0ml
—	Filter-sterilised 4.5% $FeCl_3.6H_2O$	2.0ml

TABLE B

Prescribed performance characteristics for methods of analysis

(1) *Parameters*	*(2)* *Trueness % of prescribed concentration or value or specification*	*(3)* *Precision % of prescribed concentration or value or specification*	(4) *Limit of detection % of prescribed concentration or value or specification*
Aluminium	10	10	10
Ammonium	10	10	10
Antimony	25	25	25
Arsenic	10	10	10
Benzene	25	25	25
Benzo(a)pyrene	25	25	25
Boron	10	10	10
Bromate	25	25	25
Cadmium	10	10	10
Chloride	10	10	10
Chromium	10	10	10
Colour	10	10	10
Conductivity	10	10	10
Copper	10	10	10
Cyanide [1]	10	10	10
1,2-dichloroethane	25	25	10
Fluoride	10	10	10
Iron	10	10	10
Lead	10	10	10
Manganese	10	10	10
Mercury	20	10	20
Nickel	10	10	10
Nitrate	10	10	10
Nitrite	10	10	10
Pesticides and related products [2]	25	25	25
Polycyclic aromatic hydrocarbons [3]	25	25	25
Selenium	10	10	10
Sodium	10	10	10
Sulphate	10	10	10
Tetrachloroethene [4]	25	25	10
Tetrachloromethane	20	20	20
Trichloroethene [4]	25	25	10
Trihalomethanes: Total [3]	25	25	10
Turbidity [5]	10	10	10
Turbidity [6]	25	25	25

[1] The method of analysis should determine total cyanide in all forms.

[2] The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned.

[3] The performance characteristics apply to the individual substances specified at 25% of the parametric value in Part 1 of Table B in Schedule 1.

[4] The performance characteristics apply to the individual substances specified at 50% of the parametric value in Part 1 of Table B in Schedule 1.

[5] The performance characteristics apply to the prescribed value of 4 NTU.

[6] The performance characteristics apply to the specification of 1 NTU for water leaving surface water treatment works.

SCHEDULE 5

Regulation 13

Records

17.—(1) Within twelve months of these Regulations coming into force the Department shall compile records to include—

(a) the name and address of every owner of the land or private supply;

(b) the location and description of the private supply;

(c) an eight figure ordnance survey grid reference of the location of the source of supply;

(d) a description of the source;

(e) the addresses of the premises supplied by the private supply;

(f) a plan of the private supply showing the sources and premises supplied;

(g) the purposes for which the water is supplied;

(h) the estimated average daily volume of water supplied;

(i) an estimate of the numbers of people served by the supply;

(j) any drinking-water treatment to which the supply is subject;

(k) the monitoring programme for the supply;

(2) The Department shall review and update the record at least once a year

(3) It shall keep the record for at least thirty years.

18.—(1) For each supply it shall record each of the following within 28 days of the event—

(a) date and results of any sampling and analysis relating to that supply;

(b) sufficient records to show that the requirements of regulations 7 and 8 and Schedules 3 and 4 have been satisfied;

(c) the results of any investigation undertaken in accordance with these Regulations;

(d) any authorisation;

(e) any action taken or required to be taken by any person under these Regulations;

(f) any action taken or required to be taken following a notice given under Article 119 of the 2006 Order;

(g) in respect of any risk assessment, the date and results of any inspection of the supply, and the results of analysis of samples taken for the purposes of the assessment;

(h) any notices served under these Regulations;

(i) any request for the Department to carry out sampling and analysis, undertake a risk assessment or give advice;

(j) a summary of any advice given in relation to the supply; and

(k) such other particulars as the Department may determine.

(2) The Department shall keep the records of sampling and analysis for at least 30 years, and all other records under this paragraph for at least 10 years.

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations implement Council Directive 98/83/EC (on the quality of water intended for human consumption, OJ No. 330, 5.12.1998, p.32) in relation to private water supplies specified in regulation 3.

Part 1 of the Regulations deals with water standards. Regulation 5 and Schedule 1 define wholesomeness. Regulation 7 places a duty on the Department of the Environment ("the Department") to carry out a risk assessment of a private water supply, and Schedule 2 details the requirements of a risk assessment.

Part 2 and Schedule 3 deal with monitoring private water supplies. Regulation 8 requires the Department to monitor private water supplies in accordance with that Part, and regulation 12 and Schedule 4 specify how samples must be taken. Regulation 13 and Schedule 5 require the Department to keep records. Under regulation 14 the Department shall publish information annually.

Part 3 deals with what happens if the water supply is unwholesome or exceeds specified parameters. If the problem cannot be solved informally, the Department shall serve an improvement notice requiring the supply to be made wholesome. Failure to comply with an improvement notice is an offence, punishable on summary conviction to a fine not exceeding the statutory maximum or to imprisonment for a term not exceeding three months or both, or on conviction on indictment, to a fine or to imprisonment for a term not exceeding two years or both.

A partial regulatory impact assessment of the costs and benefits and the effect that this instrument will have on the business and the voluntary sector is available from the Department of the Environment, Calvert House, 23 Castle Place, Belfast BT1 1FY.

Annex C: Partial Regulatory Impact Assessment

The Draft Private Water Supplies Regulations (Northern Ireland)

Contents

1. Title of proposal

The Draft Private Water Supplies Regulations (Northern Ireland)

2. Purpose and Intended Effect

Objectives

2.1. To transpose into legislation, implement and enforce Northern Ireland's obligations under European Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption[1] ("The Drinking Water Directive") in respect of private supplies. As a consequence, the current regulations (The Private Water Supplies Regulations (Northern Ireland) 1994[2]) will be revoked and replaced.

2.2. To protect the health of consumers of private water supplies and consumers of food and drink prepared from private water supplies.

Purpose

2.3. This partial RIA forms part of the Department's consultation paper on the proposed new regulatory arrangements for private supplies. The purpose of the partial RIA is to assess the likely impact of the proposed new regulatory arrangements on owners and consumers of private supplies and on public and commercial activities that are affected by private supplies.

3. Consultation

3.1. The Drinking Water Inspectorate (DWI), a part of the NI Environment Agency within DOE, and the policy team in the Department, have liaised and collaborated with their counterparts in Scotland, Wales and England to seek to achieve a consistent approach to policy and to the content of the Regulations. DWI has also liaised with these administrations regarding technical guidance on the proposed Regulations. This guidance entitled "Private Water Supplies Technical Manual" is available online.[3]

3.2. The Department is responsible for implementing the current arrangements and will continue to be responsible for implementing the proposed new arrangements. Comments on this partial RIA received within the 12 weeks public consultation process will inform the preparation of the final RIA.

4. Options

4.1. This partial RIA identifies 3 options:

[1] OJ L 330/32 5.12.98
[2] SR 1994 No. 237
[3] http://www.privatewatersupplies.gov.uk/private_water/22.html

1. **Do nothing**

2. **Full transposition without risk assessment**
   (a) excluding small private supplies
   (b) including small private supplies[1]

3. **Full transposition with risk assessment[2]**
   (a) excluding small private supplies
   (b) including small private supplies

Other potential options

4.2. Implementation by administrative or non-regulatory means, such as guidance or a Code of Practice, would not transpose the Directive into national law and would not achieve the controls and the measures needed to monitor and enforce the Directive's standards and other wholesomeness requirements. The European Commission would not be satisfied by such an approach, and would most likely invoke infraction proceedings to achieve proper transposition. This option is therefore ruled out.

Exemption from the Directive

4.3. The Directive offers a discretionary exemption in relation to an individual supply that provides an average daily volume of less than 10 cubic metres (<10m³/day), or serves fewer than 50 persons, provided the water is not supplied as part of a commercial or public activity.

4.4. Hence, the exemption could apply to an individual supply of <10m³/day, that serves one or more dwellings and is used solely to meet the daily domestic needs of the occupants. However, a supply of <10m³/day could not be exempt if there was any element of commercial (or public) use such as bed and breakfast. Therefore it is not possible to exempt from the proposed Regulations small or medium enterprises (SMEs) who use the private supplies as part of such activities.

Consideration of the three options

Option 1 - do nothing

4.5. The current Private Water Supplies Regulations 1994 were intended to transpose the 1980 Directive. They do not adequately transpose and implement the 1998 Directive, primarily because:

[1] "Small" supplies includes those which provide <10m³/day, or serving fewer than 50 persons, **except supplies to single private dwellings**

[2] "Risk Assessment" entails examining elements of a water supply and source to identify the risk of parameters being present, enabling a possible reduction in amount of monitoring

- the Directive includes some new and some tighter standards for drinking water quality – there are some new parameters and a number of parameters have been dropped;

- sampling and analysis ("monitoring") requirements have changed significantly, including new "check" and "audit" monitoring to assess compliance with the standards; and

- The Department has no power or duty to enforce the standards in the current Regulations, and has only a discretionary power in article 3(E) of the Water and Sewerage Services (Northern Ireland) Order 1973 to serve private supply notices that may require owners and occupiers to take remedial action to improve failing private supplies.

Assessment of Risks involved with Option 1

4.6. If nothing is done to improve the quality of private water supplies, including where necessary enforcing drinking water quality standards, many people who rely wholly or partly on private supplies to provide their drinking water will continue to consume drinking water of a quality that could be inferior to the quality of public water supplies. According to the 2007 Report "Drinking Water Quality in Northern Ireland[1]" (produced by the Drinking Water Inspectorate), there was approximately a 1% failure rate in 2007 in terms of all chemical parameters tested in private supplies and an approximately 12% failure rate in terms of all microbiological parameters tested (excluding dairy farms). Failure of the microbiological standards represents a risk of illness to persons consuming such water.

4.7. The European Commission is already aware that transposition of the 1998 Directive has not been completed throughout the UK. Unless each administration across the UK makes new regulations that incorporate all the requirements of the Directive, as it applies to private supplies, the Commission may use its Treaty powers to seek judgement at the European Court of Justice to secure compliance by the UK Government with the Directive. This could result in significant fines to the Northern Ireland Executive which would ultimately be paid from the public purse.

4.8. For the reasons given above, it is not feasible for the Department to do nothing and **Option 1** is therefore ruled out.

Option 2 - full transposition **without** risk assessment

2(a) excluding small supplies

4.9. Option **2(a)** would comply fully with the requirements of the Directive. It would involve meeting the Directive's monitoring (sampling and analysis) requirements relating to all supplies that are not allowed to be exempt. The

[1] Report available online at http://www.ni-environment.gov.uk/water/drinkwater.htm

Directive must always apply to all supplies of 10m³/day or more and supplies of less than 10m³/day that are used for commercial purposes, for example food production or catering, or as part of a public activity.

4.10. Option **2(a)** would require the Department to investigate a failure to comply with a standard and to require the owner to take necessary remedial action. At first the Department would try to solve the problem informally. If the owner did not take the required action, the Department would either have to issue an "authorisation", with a programme of remedial action, if the failure was not of a microbiological parameter and/or did not cause a risk to human health; or, in any other case, an "improvement notice", with a programme of remedial action which must be complied with. The Department would also have the power to prohibit a supply of water, or restrict what the water can be used for, in cases where a serious risk to human health is posed.

2(b) <u>including</u> small supplies

4.11. Option **2(b)** is similar to option **2(a)**, the only difference being that it would include the "small" domestic supplies (<10m³/day, or serving fewer than 50 persons) that supply more than one dwelling. Action in respect of supplies to single private dwellings would be solely to offer advice if requested to do so. This option goes further than is required by the Directive in the sense that it does not seek to apply fully the discretionary threshold below which smaller supplies may be exempt.

4.12. Option **2(b)** will ensure that users of small private supplies enjoy a similar degree of health protection as consumers of larger private supplies or those which provide water for use in a commercial or public activity.

Assessment of Risks involved with Option 2

4.13. Options **2(a)** and **2(b)** do not involve risk assessments. Consequently, failures of supplies to comply with the standards will normally only be detectable by routine monitoring under the proposed Regulations. The routine monitoring of the majority of private supplies will be infrequent and as such the water quality outside of these sampling occasions will be unknown and this may present a risk, especially during periods of heavy rain when it is known that the water quality of such supplies can be compromised and could pose a risk to health. Options 3(a) and 3(b) propose that this risk is offset by the inclusion of risk assessments which will lead to earlier detection of at-risk supplies and will demonstrate quickly the cause of a problem, resulting in earlier implementation of remedial action.

<u>Option 3 - full transposition **with** risk assessment</u>

3(a) <u>excluding</u> small supplies

4.14. Option **3(a)** would comply fully with the requirements of the Directive. This option goes further than is required by the Directive because it includes risk assessments. The Directive allows parameters to be excluded from

"audit" monitoring when it can be demonstrated that they are unlikely to be present at concentrations that would contravene the standards. Carrying out risk assessments and taking the findings into account will help the Department assess whether to reduce the overall amount of monitoring and the information obtained from risk assessments will help the Department to identify where failures are likely to occur. Furthermore, risk assessments will also assist the Department when investigating failures and when reaching decisions on appropriate and proportionate remedial action.

3(b) <u>including</u> small supplies

4.15. Option **3(b)** is the same as option **3(a)**, except that it would include the smaller supplies. Therefore this option both goes further than option **3(a)** and further than is required by the Directive.

Assessment of Risks involved with Option 3

4.16. Options 3(a) and 3(b) include risk assessments, which will lead to earlier detection of at risk supplies, resulting in earlier implementation of remedial action.

4.17. Both Options 2 and 3 will place a general duty on the Department to enforce the requirements of the proposed Regulations. As per the Directive, in respect of supplies to single private dwellings, it is proposed the Department will offer appropriate advice to the owner/user of the supply.

5. Cost and benefits

<u>Sectors and groups affected</u>

5.1. The Department will implement the monitoring and other requirements of the proposed Regulations.

5.2. The proposed Regulations will primarily affect those with responsibility for ensuring that their private supplies meet the required standards. These are usually the owners of the land or of the private supply, or any other persons who exercise powers of management or control.

5.3. The sectors liable to be affected will include groups of dwellings that are served by the same private supply, food production undertakings, and any catering businesses, including establishments or dwellings where bed and breakfast facilities are provided, other recreational and holiday premises such as hotels or guest houses.

<u>Numbers of private water supplies</u>

5.4. Of the 111 private water supplies currently registered with the Drinking Water Inspectorate, 18 are small domestic supplies serving more than one dwelling. The proposed Regulations may include a power to monitor these small shared supplies if considered appropriate to do so. If any such supplies

were monitored, the costs incurred are likely to be lower than for monitoring larger or commercial supplies, because the draft Regulations propose that in such cases, small supplies would be monitored by a decreased suite of parameters and in accordance with a risk assessment. 78 of the 93 commercial supplies are small or medium sized businesses. The remaining 15 are larger commercial businesses.

Cost

5.5. The Department is responsible for discharging the functions and duties under the proposed Regulations. The costs for monitoring private water supplies in Northern Ireland are met from the public purse.

5.6. In the following sections the total costs for options 2(a), 2(b), 3(a) and 3(b) are calculated and compared with the costs for option 1 and the extra cost over option 1.

Option 1 (Do nothing)

5.7. The current costs for the monitoring (sampling and analysis) of private water supplies are based on the number of monitoring visits for each supply. A breakdown of the current costs is available in Appendix 1. The total annual current cost is £110,450.

Options 2(a) and 2(b) (without risk assessments)

5.8. The main costs associated with the proposed Regulations will be:

- the maximum cost of a sampling visit
- the maximum cost of carrying out, or arranging to carry out, the analysis (note the full monitoring requirements have to be carried out under these two options)
- the new cost of carrying out investigations into a failure to determine the cause and the appropriate remedial action
- the new cost of preparing and serving an “improvement notice”
- the new cost of preparing and serving a “restriction notice”
- the new cost of preparing, consulting upon, issuing and reviewing an authorisation
- the cost of any steps the Department itself takes under an improvement notice.
- Administrative Costs

5.9. Annual maintenance costs for source protection, collection chambers, treatment and distribution have not been included. Such costs may arise from, for example, cleaning collection chambers, replacing filters or UV lamps, or repairing burst pipes. Annual maintenance costs are difficult to estimate but are likely to be small compared to the annual costs of monitoring.

Options 3(a) and 3(b) (with risk assessments)

5.10. The main costs will be:

- the new cost of carrying out, or arranging to carry out, risk assessments
- the maximum cost of a sampling visit [***note*** that it will be possible to achieve savings by carrying out the sampling and some or all the work associated with a risk assessment during the same visit]
- the maximum cost of carrying out, or arranging to carry out, the analysis [***note*** that the findings of a risk assessment in conjunction with a previous history of compliance for individual parameters at predetermined levels may allow a reduction in the number of parameters for audit monitoring and therefore reduce the costs]
- the new cost of carrying out an investigation to determine the cause of a failure and the appropriate remedial action
- the new cost of preparing and serving an “improvement notice”
- the new cost of preparing and serving a “restriction notice”
- the new cost of preparing, consulting upon, issuing and reviewing an authorisation
- the cost of any steps the Department itself takes under an authorisation.
- Administrative Costs

5.11. A breakdown of the estimated costs for options 2 and 3 is available in Appendix 1. A summary of costs and benefits is given at the end of this section.

Benefits

General approach

5.12. Estimates of the benefits of the options have been informed by the partial Regulatory Impact Assessment (RIA) (March 2005) [1] and by the final RIA[2] published with the draft and final Scottish Regulations respectively. The RIAs were informed by, and developed from, a report of a study carried out on behalf of the Scottish Executive by EnviroCentre, Glasgow [3]. This also formed the basis for the recently published Impact Assessment of Draft Private Water Supplies (England) Regulations 2008. A breakdown of the estimated benefits is available in Appendix 1.

Option 1 - do nothing

5.13. No benefits.

Option 2 - full transposition **without** risk assessment

Option 2(a) (excluding small supplies)

5.14. The main benefit of option 2(a) will be to ensure that the 93 private water supplies used for commercial purposes in Northern Ireland will be wholesome and safe for human consumption.

Option 2(b) (including small supplies)

5.15. The additional benefit for option 2(b) will be to ensure similar protection for 18 small private water supplies serving more than one dwelling. This will result in reduced numbers of adverse health impacts, including transmission of waterborne pathogens, among the populations who depend on, or who make occasional use of, private supplies.

Option 3 - full transposition **with** risk assessment

5.16. Options 2(a) and 2(b) do not include risk assessments. Without risk assessment, failures of supplies to comply with the standards for wholesomeness and other requirements will normally only be detectable by monitoring. Risk assessments will lead to earlier detection of potentially failing supplies and to earlier implementation of remedial action, therefore the benefits will be achieved over a shorter timeframe.

Options 2 and 3

5.17. The quantifiable health benefits from options 2(a), 2(b), 3(a) and 3(b) are avoiding loss of income, loss of economic activity, medical treatment costs and morbidity through avoidance of illness associated with consumption of

[1] The Draft Private Water Supplies (Scotland Regulations 2005 and Proposals for a Private Water Supplies Grant Scheme – A Consultation issued in March 2005.
[2] Final Regulatory Impact Assessment, The Private Water Supplies (Scotland) Regulations 2006, issued in April 2006.
[3] Economic Assessment in Support of the Partial Regulatory Impact Assessment for Possible Regulations for Private Water Supplies and Public Buildings in Scotland, the Scottish Executive Central Research Unit 2004.

contaminated water from private supplies. A breakdown of the estimated quantifiable benefits is available in Appendix 1. There are also a number of other benefits that are not quantifiable but are recorded in Appendix 1 qualitatively – these include economic competitiveness for commercial supplies, public confidence; value for money by avoiding costly prosecutions; property enhancement; and increased awareness of water and environmental quality.

Comparison of Summary Costs and Benefits

5.18. A comparison of the estimated additional costs (over option 1) and estimated value of benefits for options 2(a), 2(b), 3(a) and 3(b) are presented in the table below. The present value of costs and benefits are discounted over 15 years at 3.5%. Note that these are the quantifiable costs and benefits and there are also some costs and benefits that it was not possible to quantify.

Estimated additional costs and benefits

Option	Costs £	Benefits £
2(a) – excluding small supplies without risk assessment	62,538	1.04m
2(b) – including small supplies without risk assessment	108,682	1.06m
3(a) – excluding small supplies with risk assessment	- 321,407	1.87m
3(b) – including small supplies with risk assessment	- 270,970	1.91m

5.19. The present value of the annual and one-off costs of option 3(a) and 3(b) are negative because the annual costs are less than for option 1. For all options the estimated value of the benefits greatly exceeds the estimated additional costs. When risk assessment is included for commercial supplies (option 3(a) compared to option 2(a)) and for all supplies (option 3(b) compared to option 2(b)) the differences between the estimated benefits and the additional costs increases by over £1m (commercial supplies [£1.87m - {-£321,407}] - [£1.04m - £62,538] = £1.22m and all supplies [£1.91m - {-£270,970}] - [£1.06m - £108,682] = £1.23m). The cost savings for option 3(b) (i.e. risk assessment including small supplies) are not as high as the savings for 3(a), therefore it is proposed to pursue option 3(a).

6. Enforcement, sanctions and monitoring

6.1. The Department will be responsible for implementing and enforcing the monitoring and other requirements of the new Regulations. The owners of the land or the private supply where the problem arises will need to implement any remedial action required to meet the revised drinking water quality standards. The Regulations will make it an offence for an owner of the land or

a private supply to fail to comply with an “improvement notice” or a “restriction notice” issued by the Department. On summary conviction for an offence under the proposed Regulations, a person would be liable to a fine or imprisonment not exceeding three months or both, and on conviction on indictment, to a fine, or imprisonment not exceeding two years, or both.

6.2. The Department would monitor and review the operation of the proposed Regulations on a regular basis and would amend them as required to reflect changes in European legislation (the Directive is likely to be reviewed within the next 5 years) and practical experience of their operation.

7. Summary and Recommendation

7.1. This report presents the findings of the partial Regulatory Impact Assessment which has been undertaken in relation to the proposed Private Water Supplies Regulations (Northern Ireland) 2009. It identifies the costs and benefits of three options, namely:

- **do nothing;**
- **full transposition of the 1998 Drinking Water Directive (this option also assesses both scenarios of either excluding or including “small” shared domestic private supplies); and**
- **full transposition of the 1998 Drinking Water Directive with Risk Assessment (again assessing the 2 scenarios of either excluding or including “small” private supplies)**

7.2. On the basis of the analysis it is concluded that option 1 is not viable and that the Directive should be transposed.

7.3. Having assessed the costs and benefits, the option which the Department would recommend is option 3(a) – full transposition of the Directive with Risk Assessment and excluding “small” private supplies. (The Regulations may include a discretionary power for the Department to monitor small shared supplies if considered appropriate to do so.) This option would result in an estimated saving of £321,407 per year, with an estimated benefit of £1.87m. The use of risk assessments, as recommended by the World Health Organisation, is a proactive measure to identify potential hazards and to prevent or control risks involved. As has been shown in the analysis of costs and benefits, the use of risk assessments should decrease costs involved by demonstrating which parameters do not require to be monitored, and maximise potential benefits.

Appendix 1 to Partial RIA: Detail of Costs / Benefits

Costs

Option 1: Current Costs

The current costs for the monitoring (sampling and analysis) of private water supplies are based on the number of monitoring visits for each supply. The cost per visit is currently £75 for sampling. The cost for analysis of tests is dependent on the parameters being tested at each visit – the total costs per category of supply is shown in the table below. An average of £71 per monitoring visit is estimated for transport and administration (this includes the costs of delivery and collection of sample bottles, transportation to the laboratories and project management of the contract). The annual costs for monitoring per current category of supply and the total annual costs are shown in table 1 below.

Table 1

Category	Number of Supplies in NI	Total Annual Cost for Sampling	Total Annual Cost for Analysis	Total Cost for Administration
2.1	1	1800	1875.63	1704
2.2	14	12600	22624.98	11928
2.3	31	9300	14240.78	8804
2.4	42	6300	9690.24	5964
2.5	5	375	56.65	355
1E	18	1350	203.94	1278
Sub Total	111	31725	48692.22	30033
Total				**110,450.22**

Options 2 and 3: Estimated Costs

Annual maintenance costs for any additional (over option 1) source protection/collection, treatment and distribution again have not been included, for example cleaning collection chambers, replacing filters or UV lamps or repairing burst pipes. These annual maintenance costs are difficult to estimate but are likely to be small compared to the annual costs of monitoring.

Tables 2(a) and 2(b) summarise the estimated costs of options 2(a) and 2(b), and Tables 3(a) and 3(b) summarise the estimated costs of options 3(a) and 3(b).

The Tables also show the additional costs for each of the 4 options (2(a), 2(b), 3(a) and 3(b)) compared to option 1 (do nothing).

Table 2a (Option 2(a))

Additional costs for commercial supplies – without risk assessments

Item	Unit cost	Calculation	Cost
Sampling visit	£80	15 x 4 for largest supplies + 49 x 2 for medium supplies 29 x 1 for small commercial supplies = 187 visits	**£14,960/a**
Check analysis	£75	15 x 4 for largest supplies + 49 x 2 for other large supplies + 29 x 1 for small commercial supplies = 187 analyses	**£14,025/a**
Audit analysis	£435	64 x 2 for large/medium supplies + 29 x 1 for small supplies = 157 analyses	**£68,295/a**
Investigation –	£100 for visit plus limited analysis	Assume 10% fail in year 1, 5% fail in year 2 etc – approximates to 20% failing in total = 19 failing supplies	**£1,900 one-off**
Improvement and restriction notices	£50 each	Assume 75% fail for microbial parameters = 14 restriction notices. Assume 50% of these are solved by informal negotiation and other 50% require improvement notices = 7 improvement notices Total notices = 21	**£1050 one-off**
Authorisations	£50	Assume other 25% require authorisation = 5 authorisations	**£250 one-off**
Remedial action	£2,000 average	For 19 failing supplies	**£38,000 one-off**
Administration	£80	187 sampling visits	**£14,960/a**
Total			**£112,240/a £41,200 one-off**
Option 1			£110,450
Extra cost Option 2(a) Over option 1		**Annual costs**	**£1,790/a**
		One-off costs	**£41,200**
		Present value of these costs discounted over 15 years at 3.5%	**£62,538**

Table 2b (Option 2(b))

Additional costs for small supplies – without risk assessments

Item	Unit cost	Calculation	Cost
Sampling visit	£80	18 x 1 for small supplies = 18 visits	**£1,440/a**
Small supplies analysis	£25	18 analyses (assumes no additional analyses required)	**£450/a**
Investigation	£100 for visit plus limited analysis	Assume 20% fail in year 1, 10% fail in year 2 etc – approximates to 40% failing in total = 7 failing supplies	**£700 one-off**
Improvement and restriction notices	£50 each	Assume 75% fail for microbial parameters = 5 restriction notices Assume 50% of these are solved by informal negotiation and other 50% require improvement notices = 3 improvement notices Total notices = 8	**£400 One-off**
Authorisations	£50	Assume other 25% require authorisation = 2 authorisations	**£100 One-off**
Remedial action	£750 average	For 7 failing supplies	**£5250 One-off**
Administration	£80	For 18 small supplies	**£1440/a**
Total for small supplies			**£3330/a £6,450 One-off**
Total for commercial supplies		*[See Table 2a]*	**£112,240/a £41,200 One-off**
Total for all supplies			**£115,570/a £47650 One-off**
Option 1		*[For sampling and analysis only]*	£110,450
Extra cost Option 2(b)		**Annual costs**	**£5120/a**
		One-off costs	**£47,650**
		Present value of these costs discounted over 15 years at 3.5%	**£108,682**

Table 3a (Option 3(a))

Additional costs for large supplies – with risk assessments

Item	Unit cost	Calculation	Cost
Risk assessment	£100	93 risk assessments every 5 years	**£9,300 total £1860/a**
Sampling visit	£80	15 x 4 for largest supplies + 49 x 2 for medium supplies 29 x 1 for small commercial supplies = 187 visits	**£14,960/a**
Check analysis	£75	15 x 4 for largest supplies + 49 x 2 for other large supplies + 29 x 1 for small commercial supplies = 187 analyses	**£14,025/a**
Audit analysis	£218	64 x 2 for large/medium supplies + 29 x 1 for small supplies = 157 analyses Assumes that risk assessment reduces substantially number of parameters to be monitored to halve cost	**£34,226/a**
Investigation	£100 for visit plus limited analysis	Assume 10% fail in year 1, 5% fail in year 2 etc – approximates to 20% failing in total = 19 failing supplies	**£1,900 one-off**
Improvement and restriction notices	£50 each	Assume 75% fail for microbial parameters = 14 restriction notices. Assume 50% of these are solved by informal negotiation and other 50% require improvement notices = 7 improvement notices Total notices = 21	**£1,050 one-off**
Authorisations	£50	Assume other 25% require authorisation = 5 authorisations	**£250 One-off**
Remedial action	£2,000 average	For 19 failing supplies	**£38,000 One-off**
Administration	£80	For 187 sampling visits	**£14,960/a**
Total			**£80,031/a £41,200 One-off**
Option 1			£110,450
Extra cost Option 3(a)		**Annual costs**	**- £30,419**
		One-off costs	**£41,200**
		Present value of these costs discounted over 15 years at 3.5%	**- £321,407**

Please note that the extra annual cost is negative because option 3(a) costs less than option 1.

Table 3b (Option 3(b))

Additional costs for small supplies - with risk assessments

Item	Unit cost	Calculation	Cost
Risk assessment	£100	18 risk assessments for small supplies every 5 years	**£1,800m total £360/a**
Sampling visit	£80	18 x 1 for small supplies = 18 visits	**£1,440/a**
Small supplies analysis	£25	18 analyses (assumes risk assessment does not reduce requirements and no additional analyses required)	**£450/a**
Investigation	£100 for visit plus limited analysis	Assume 20% fail in year 1, 10% fail in year 2 etc – approximates to 40% failing in total = 7 failing supplies	**£700 one-off**
Improvement and restriction notices	£50 each	Assume 75% fail for microbial parameters = 5 restriction notices Assume 50% of these are solved by informal negotiation and other 50% require improvement notices = 3 improvement notices Total notices = 8	**£400 one-off**
Authorisations	£50	Assume other 25% require authorisation = 2 authorisations	**£100 one-off**
Remedial action	£750 average	For 7 failing supplies	**£5,250 one-off**
Administration	£80	For 18 sampling visits	**£1440**
Total for small supplies			**£3690/a £6,450 one-off**
Total for large supplies		*[See Table 3a]*	**£80,031/a £41,200 one-off**
Total for all supplies			**£83,721/a £47,650 one-off**
Option 1			£110,450
Extra cost Option 3(b)		**Annual costs**	**- £26,729/a**
		One-off costs	**£47,650**
		Present value of these costs discounted over 15 years at 3.5%	**- £270,970**

Please note that the extra annual cost is negative because option 3(b) costs less than option 1.

Benefits

The benefit assessment model employed in the EnviroCentre report has been used, which gives an estimate of the financial benefits of introducing the new regulations. Applicable figures for numbers of supplies etc. in Northern Ireland were applied.

The model calculates the number of people likely to get ill assuming each exposure has a risk of contracting illness, and the numbers are based on the number of people utilising supplies (domestic and commercial); the sample failure rate for the supply class; and an estimated illness contraction rate of 1%.

The EnviroCentre model calculates the total cost of supply failures from the following estimates (the estimated costs have been increased by 8.3% to allow for inflation since 2003 when the costs for the Scottish study were obtained): a loss of income based on an average daily wage of £94.61; a loss of productivity based on an estimated 30% of daily wage reflecting the overall economic loss per work day lost; an estimated illness reporting rate of 10%; an estimated duration of illness of 2 days; the average cost of treatment of £162.45 per illness taking account of travel, doctor's time and treatment; and decrease in quality of life when affected by illness (£54.15 per illness).

The Benefit model calculates the cumulative benefit over 15 years based on assumptions of the resulting improvements due to the regulations, and discounts the benefits over 15 years at 3.5%.

When assessing health benefits in Northern Ireland it was decided to exclude supplies to single private dwellings because the Department will only offer advice to owners/users of such supplies, if requested to do so.

Option 2: without risk assessments
Using the EnviroCentre model, there is an estimated health benefit of £1.04m for option 2(a) over option 1, and an estimated health benefit of £1.06m for option 2(b), which includes small supplies, over option 1.

Option 3: with risk assessments
Using the EnviroCentre model, there is an estimated health benefit of £1.87m for option 3(a) over option 1, and an estimated health benefit of £1.91m for option 3(b), which includes small supplies, over option 1.

Table 4 below summarises the relevant factors considered for the options and the corresponding quantifiable and qualitative benefits associated with them.

Table 4 - Benefits summary for the proposed Regulations

Factor	Benefit
Health - reduction in failing supplies (options 2(a), 2(b), 3(a) and 3(b))	Fewer people being exposed to failing supplies, leading to reduced risk of contracting illness from unwholesome water (for example an *E. coli* infection from a private supply may be easily spread amongst children or the elderly who may have little or no resistance to *E. coli*). Reduced visits to GPs and requirement for medical treatment. Reduced cost burden on local industry, commerce and health service. Based on the contraction and reporting rates for illness in the EnviroCentre report from existing failing samples from private water supplies, these health benefits have been estimated as up to **£1.04m and £1.06m** (options 2(a) and 2(b) respectively) and **£1.87m and £1.91m** (options 3(a) and 3(b) respectively) over 15 years discounted at 3.5%.
Economic competitiveness (options 2(a), 2(b), 3(a) and 3(b))	Commercial activities that depend upon a consistent, good quality water supply (e.g. tourist related, food production) can encourage repeat business, and avoid the costly risk of failure. Increased commercial opportunities to suppliers of water treatment systems and local tradespersons to undertake upgrading of supplies.
Public confidence (options 2(a), 2(b), 3(a) and 3(b))	Options 2(a) (commercial supplies) and 2(b) (including small supplies) will through the remedial action and enforcement scheme improve protection to users of these supplies respectively. The use of risk assessments (options 3(a) (commercial supplies) and 3(b) (including small supplies)), the changes in parameters being monitored and the remedial action and enforcement scheme will improve further the protection to users of these supplies respectively. With a satisfactory source protection, water treatment and distribution system, there will be a reduced likelihood of failure and therefore people becoming ill and adversely affecting confidence in the water supply.
Value for money (avoid costly prosecutions) (options 2(a), 2(b), 3(a) and 3(b))	It will be more cost effective to require improvement to the source, treatment or distribution of a failing supply than to prosecute owners who refuse to take remedial action.
Impact on development (property) (options 2(a), 2(b), 3(a) and 3(b))	The quality of water supplied to existing properties will continue to be monitored and improved where necessary. This may enhance property prices when the owners can demonstrate that their private supplies are wholesome (increasingly prospective purchasers are asking about quality of private supplies). Note that remedial action in relation to an unwholesome supply to single private dwelling is discretionary. No new restrictions on development if proposed in the area served by a private supply.
Availability of information	Information on failing supplies, and the reasons why they are failing, will lead to a greater awareness and a more efficient management system,

(options 2(a), 2(b), 3(a) and 3(b))	reducing future risk of failure (options 3(a)) and 3(b) mainly, but also to a lesser extent for options 2(a) and 2(b)).
Social justice (options 2(a), 2(b), 3(a) and 3(b))	Monitoring, remedial action and, if necessary, enforcement to require compliance with wholesomeness standards will apply to only commercial failing private supplies (options 2(a) and 3(a) and to all supplies (options 2(b) and 3(b) with local discretion in relation to a supply to a single private dwelling. Social justice is greater with options 2(b) and 3(b) as all consumers will get advice and the same degree of health protection.
Environmental Quality Mainly options 3(a) and 3(b)	The use of risk assessments leading to improved management at the source of a private supply will also create conditions for improvements in the quality of the surrounding environment (mainly options 3(a) and 3(b), such as avoiding pollution of water bodies.
Rural impacts Mainly options 2(b) and 3(b)	Most private supplies are in rural areas, where the benefits will apply, particularly improved health (the value of the health benefits is estimated above) and quality of life. Less potentially long journeys to seek medical treatment. Increased awareness will lead to local knowledge building because risk assessments are likely to place increased emphasis on the education of owners, managers and users of private supplies, enhancing self-regulation and management, with greater potential for transferring and acquiring knowledge. These are greater for options 2(b) and 3(b) with local discretion in relation to a supply to a single private dwelling.
UK benefits (options 2(a), 2(b), 3(a) and 3(b)	Measures that meet effectively the general obligations, and that may go beyond the basic requirements of the Directive, should not only confer substantive health benefits, but should also minimise or reduce the risk of the European Commission bringing a case against the UK Government in the European Court of Justice.

Appendix 2 to Partial RIA: Impact Assessment Screening

All policies need to be proofed or have their impact assessed against a wide range of criteria. The table below shows the results of a screening exercise for each impact assessment. The results of the necessary impact assessments are included after this table.

Impact Assessment	Required?
Crime	X
Community Safety & Victims	X
Equality	X
Health	X
Human Rights	X
Rural Proofing	✓
Social Inclusion	X
Economic Appraisal	X
Economic Impact Assessment	X
Small Firms Impact Test	✓
Competition Assessment	✓
State Aid Compliance Assessment	X
Environment Assessment	X
Strategic Environmental Assessment	X

Appendix 3 to Partial RIA: Rural Proofing

Rural Proofing is a process to ensure that all relevant Government policies are examined carefully and objectively to determine whether or not they have a different impact in rural areas from that elsewhere, because of the particular characteristics of rural areas. Where necessary, it may involve deciding if policy adjustments should be made to reflect rural needs and in particular to ensure that, as far as possible, public services are accessible on a fair basis to the rural community.

Northern Ireland has a legal obligation to comply with the requirements of the European 1998 Drinking Water Directive (98/83/EC), the purpose of which is to protect human health from adverse effects resulting from contamination of water intended for human consumption. Included in this consultation paper are the Regulations which have been drafted for the purpose of implementing the 1998 Directive. These regulations will replace the existing Private Water Supplies Regulations (Northern Ireland) 1994.

The majority of private water supplies are in rural areas serving rural communities or rural businesses.

For a private supply to a single private dwelling (there are approximately 3000 such supplies in Northern Ireland), the proposed regulations will have no effect other than the owner or occupants receiving advice regarding their private supply.

A small supply to a rural community of two or more houses, but serving less than 50 people, that is used solely for domestic purposes and not part of a commercial or public activity, may be monitored as a minimum once per year and may undergo a risk assessment every 5 years, at the discretion of the Department. There are 18 such supplies in Northern Ireland, and these are monitored under the current Private Water Supplies Regulations (Northern Ireland) 1994. However, the recommendation resulting from this partial RIA is that these supplies are excluded from mandatory testing, although the Department may use a discretionary power to monitor if it considers appropriate to do so.

The owner of any private water supply that is used for commercial purposes (such as a bed and breakfast or food producer) has to meet the standards in the Directive as there is no exemption permitted. There are currently 93 such supplies in Northern Ireland of varying sizes. A minimum of one check[1] and audit[2] monitoring (sampling and analysis) is proposed each year, depending on the size of the supply. The use of risk assessment should enable the number of parameters in audit monitoring to be reduced. These businesses

[1] Check Monitoring must be carried out at least once a year to confirm that the water in a supply is wholesome. Some parameters will only be monitored in certain circumstances but the suite of parameters under check monitoring cannot be reduced even if compliance is met.
[2] Audit Monitoring provides further detail about the quality of a water supply. Parameters from audit monitoring may be excluded if it is shown that the concentrations in a supply are unlikely to exceed the prescribed values.

may have to pay the one-off cost of any treatment that is necessary to comply with the standards and safeguard the health of the occupants/visitors and the quality of the products. There will also be the cost of maintaining any treatment equipment.

In assessing the impact on rural areas, it has been noted that the majority of private water supplies are in such areas of Northern Ireland. There will be no different impact through these regulations on private supplies which are in rural areas and those which are not. Therefore, it is concluded that it is not necessary to make any adjustments to policy to reflect rural needs.

Appendix 4 to Partial RIA: Small Firms Impact Test

A small business is defined as having fewer than 50 employees; and no more than 25% of the business owned by another enterprise (which is not a small business); and either less than £4.4 million annual turnover; or less than £3.18 million annual balance sheet total. The proposed Regulations will affect all businesses that rely wholly or partly on private supplies for drinking water or for water used in food production. Many of these are likely to be small businesses. However, the proposed Regulations are likely to have a similar effect on small and large businesses, relative to size. Small businesses are likely to use less water than large businesses and the cost of any necessary remedial action is likely to be approximately proportionate to water used. It is concluded that overall the proposals are not likely to have a disproportionate impact on small businesses.

Appendix 5 to Partial RIA: Competition Assessment

It may be expected that the impact associated with the proposed Regulations may put businesses that rely on private supplies at a disadvantage to businesses that use public supplies because of the possible costs to businesses associated with, where necessary, improvements to private water supplies. However, businesses that rely on public water supplies have to pay for the costs of meeting the public supply regulations through their water bills and this includes the costs of improvements. The impact of the proposed Regulations for private supplies should eventually be offset by increased public confidence in the quality of products, particularly food and drinks prepared from private supplies. It is concluded that there will be no significant effect on competition.

Appendix 6 to Partial RIA: Public and Community/Voluntary Sectors

Given that the proposal is quite specific in nature the analysis reveals that it is unlikely to have any substantial impact on the public, community or voluntary sectors. The main impacts will be beneficial in terms of protecting the health of consumers of private water supplies.

ANNEX D: SCREENING FOR EQUALITY IMPACT ASSESSMENT

THE PRIVATE WATER SUPPLIES REGULATIONS (NORTHERN IRELAND) 2009

NORTHERN IRELAND ACT 1998 (SECTION 75) STATUTORY EQUALITY OBLIGATIONS

1. GENERAL DETAILS

1.1 Title of Proposed Regulations

The Private Water Supplies Regulations (Northern Ireland) 2009

1.2 Brief summary of the scope and aims of the proposed Regulations

European Directive 1998/83/EC on the quality of water intended for human consumption is commonly known as the Drinking Water Directive. It covers all drinking water supplies whether public or private. The draft Private Water Supplies Regulations (Northern Ireland) 2009 propose to transpose the requirements of the Drinking Water Directive in respect of private supplies used by commercial organisations or private individuals.

The Directive was made following a review of the previous Drinking Water Directive (80/778/EEC). It sets new or revised standards and identifies other quality measures for drinking water. It sets out detailed requirements for sampling and analysis, and a framework for investigation and remedial action when there is a failure to meet the drinking water standards.

2.0 SCREENING ANALYSIS

All public authorities in carrying out their functions relating to Northern Ireland are required under Section 75 of the Northern Ireland Act 1998 to identify those policies which are likely to have the greatest impact on equality of opportunity and community relations. This is assessed against the nine categories listed below.

i. Persons of different religious beliefs
ii Persons of different political opinions
iii. Persons of different racial groups
iv. Persons of different ages
v. Persons of different marital status.
vi. Persons of different sexual orientation.
vii. Men and woman generally.
viii. Persons with a disability and persons without.
ix. Persons with dependants and persons without.

2.1 Is there any evidence of higher or lower participation or uptake by different groups within the nine categories?

NO

2.2 Is there any evidence that particular groups have different needs, experiences and priorities in relation to the proposals?

NO

2.3 Is there an opportunity to promote equality of opportunity or good relations by altering the proposals or by other wise working with others in Government or the community at large?

NO

2.4 Have consultations in the past with relevant groups, organisations or individuals indicated that these proposals could create problems specific to them?

NO

3.0 IMPACT ASSESSMENT DECISION

3.1 Full impact assessment procedure is confined to the policies considered likely to have significant implications for equality of opportunity and community relations.

3.2 Taking account of the screening analysis in Section 2.0 do these proposals need to be submitted to a full equality impact assessment?

NO

4.0 REASON FOR DECISION

As a result of the Screening analysis in Section 2.0, it is considered that there will be no significant implications for equality of opportunity or community relations as a result of the introduction of these Regulations.

Annex E: List of Consultees

Antrim Borough Council
Ards Borough Council
Armagh City and District Council
Ballymena Borough Council
Ballymoney Borough Council
Banbridge District Council
Belfast City Council
British Holiday and Home Parks Association
Carrickfergus Borough Council
Castlereagh Borough Council
Chartered Institute of Environmental Health
Coleraine Borough Council
Communicable Disease Surveillance Centre
Cookstown District Council
Craigavon Borough Council
Derry City Council
Down District Council
Dungannon and South Tyrone Borough Council
Eastern Group Public Health Committee
Environmental Health Services Department
Fermanagh District Council
Geological Survey of NI
Food Standards Agency NI
Health and Social Care Board
Larne Borough Council
Limavady Borough Council
Lisburn City Council
Magherafelt District Council
Moyle District Council
Newry and Mourne District Council
Newtownabbey Borough Council
NI Public Health Agency

NI Local Government Association

NI Water

North Down Borough Council

Northern Group Systems (Environmental Health)

Omagh District Council

Southern Group Public Health Committee

Strabane District Council

Ulster Farmers' Union

Western Group Environmental Health Committee