

CONSOLIDATED LEGISLATION

Royal Decree 3/2023, of 10 January, which establishes the health and technical criteria of water intended for human consumption, and the control and supply of same.

Ministry of the Presidency, Parliamentary Affairs and the Democratic Memory Official State Gazette no. 9, of 11

January 2023

Reference: BOE-A-2023-628

CONTENTS

Preamble	6
CHAPTER I. General provisions	10
Article 1. Purpose	10
Article 2. Definitions	10
Article 3. Scope of application	13
Article 4. Responsibilities and competencies	14
CHAPTER II. Characteristics and control of water intended for human consumption	15
Section 1. Water quality	15
Article 5. Quality of water intended for human consumption	15
Article 6. Health rating of samples of water intended for human consumption	15
Article 7. Point of compliance	15
Article 8. Sampling points	16
Section 2. Human right to water: quantity and access	16
Article 9. Quantity of water supplied for human consumption	16
Article 10. Promotion of tap water	17
Article 11. Access to water and vulnerable populations	17
Section 3. Control and monitoring of quality of water for human consumption	18
Article 12. Purpose and control of monitoring	18

Article 13. Types of controls and monitoring	18
Article 14. Self-regulation Protocol	18
Article 15. Municipal monitoring	19
Article 16. Controls at priority premises	19
Article 17. Health monitoring	19
Article 18. Monitoring in the catchment areas	20
Article 19. Watch list	20
Article 20. Sampling, laboratories and methods of analysis	20
Article 21. Health inspections	21
Section 4. Response to incidents	21
Article 22. Types of incidents	21
Article 23. General measures in the event of incidents.	22
Article 24. Type AB incidents	22
Article 25. Type II incidents	23
Article 26. Type O incident	23
Article 27. Type C, E, F and S incidents	23
Article 28. Declaration of an exceptional situation	23
Article 29. Second declaration or extension of an exceptional situation	24
Article 30. Declaration of short-term exceptional situation	24
CHAPTER III. Supply of water intended for human consumption	25
Section 1. Components of the supply area	25
Article 31. Catchment areas	25
Article 32. Abstraction point	25
Article 33. Pipelines	26
Article 34. Supply of water via cistern tankers and mobile tanks	26
Article 35. Characteristics of cistern tankers and mobile tanks	27
Article 36. Purification treatment	27
Article 37. Reservoirs.	28
Article 38. Distribution network	29
Article 39. Measures when an infrastructure is commissioned	30
Article 40. Indoor facilities	30

Article 41. Priority premises	31
Article 42. Certifications	31
Section 2. Technical and hygiene requirements	31
Article 43. Filter systems and substances for treating water	31
Article 44. Materials that come into contact with water intended for human consumption	32
Article 45. Lead piping	33
Article 46. Purification apparatuses in indoor installations, buildings and premises	33
Section 3. Structural leaks	34
Article 47. Control of structural leaks	34
Section 4. Staff	34
Article 48. Training staff for supply areas	34
Article 49. Professional training for plumbing work on indoor systems	35
CHAPTER IV. Risk assessment and management	35
Article 50. General aspects of risk assessment and management	35
Section 1. Risk assessment and management of catchment areas	35
Article 51. Risk assessment and management of catchment areas	35
Article 52. Components of risk assessment in catchment areas	36
Article 53. Characterisation of catchment areas	36
Article 54. Detection of hazards and hazardous events in catchment areas	36
Article 55. Adequate control of water in catchment areas	36
Article 56. Obligations regarding information from operators about controls in catchment areas.	37
Article 57. Risk management measures in catchment areas	37
Article 58. Change of quality control for water intended for human consumption	38
Section 2. Risk assessment and management for supply areas and priority premises	39
Article 59. Water Safety Plan	39
Article 60. Water Safety Plan in supply areas	39
Article 61. Water Safety Plan in priority premises	39
CHAPTER V. Information transparency and management	40
Article 62. National Information System of Water for Human Consumption (SINAC)	40
Article 63. Information transparency and access	40
Article 64. Exchanges of information	41

CHAPTER VI. Water quality in food companies.	41
Article 65. Quality criteria for water intended for human consumption used in food companies	41
Article 66. Point of compliances in a food company	42
Article 67. Sampling point in a food company	42
Article 68. Types of controls used to ensure the quality of drinking water in food companies	42
Article 69. Types of analysis and frequency of control for water intended for human consumption in food companies	42
Article 70. Sampling, laboratories and methods of analysis for water intended for human consumption in food companies	43
Article 71. Exemptions applicable to food companies	43
CHAPTER VII. Penalties	43
Article 72. Infringements	43
Article 73. Infringements and penalties in public health	43
Additional provisions	45
First additional provision. Updating of water bodies due to presence of radon	45
Second additional provision. Competencies of the Ministry of Defence	45
Third additional provision. Information relating to monitoring the application of this law	45
Fourth additional provision. Mutual recognition	46
Fifth additional provision. Staff training	46
Sixth additional provision. Regional investment plan	46
Seventh additional provision. Application of the provisions of annexes I, II and IV.	47
Eighth additional provision. Application of the provisions in annex III	47
Ninth additional provision. Application of the provisions in chapter IV	47
Tenth additional provision. Interoperability of IT systems	48
Eleventh additional provision. Adaptations	48
Twelfth additional provision. Facilities with lead that comes into contact with water	48
Thirteenth additional provision. Schedule for evaluating structural leaks	48
Fourteenth additional provision. Minimum filtering and disinfectant treatment	49
Temporary provisions	49
Sole temporary provision. Application of the royal decree to materials in contact with water	49
Repealing provisions	49

Sole repealing provisions. Regulatory repeal	49
Final provisions	49
First final provision. Modification of Royal Decree 742/2013, of 27 September, which establishes the health and technical criteria for swimming pools	49
Second final provision. Modification of Royal Decree 817/2015, of 11 September, which establishes the criteria for monitoring and evaluating the status of surface waters and environmental quality standards	50
Third final provision. Modification of Royal Decree 487/2022, of 21 June, which establishes the health requirements for the control and prevention of legionellosis	51
Fourth final provision. Legislative authority	52
Fifth final provision final. Incorporation of European Union Law	52
Sixth final provision final. Regulatory authorisation	52
Seventh final provision. Entry into force.	52
ANNEX I. Parameters and parametric values	52
ANNEX II. Types of analysis and frequency of sampling	57
ANNEX III. Sample taking and methods of analysis	63
ANNEX IV. Watch list	70
ANNEX V. Request for declaration of exception situation	71
ANNEX VI. Measures when radioactive substances are present in water intended for human consumption	71
ANNEX VII. WSP in supply areas	75
ANNEX VIII. WSP in priority premises	79
ANNEX IX. Materials in contact with water	83
ANNEX X. Assessment of structural leaks	85
ANNEX XI. SINAC and information for citizens	88

CONSOLIDATED TEXT Most recent amendment: no amendments made

Τ

The General Healthcare Law 14/1986, of 25 April, established the obligation of public healthcare authorities to place greater priority on measures to promote health and prevent diseases. The aforementioned law stipulates the activities and products that can directly or indirectly have negative effects on health should be subject to controls by public administrations and healthcare measures should be taken to improve water supply systems.

The General Public Health Law 33/2011, of 4 October established that the Ministry of Health should make efforts to ensure that the State coordinates with public administrations and the competent bodies in the exercise of measures to prevent and protect against environmental risks to health.

The consolidated text of the Law on Waters, approved by Royal Legislative Decree 1/2001, of 20 July, established in the fourth final provision of same in response to the proposals of the Ministers for the Ecological Transition and the Demographic Challenge, Health and Consumer Affairs, that it shall regulate the basic requirements for water quality, including measures to protect catchments, with a view to ensuring that health is protected.

Pursuant to the provisions of Law 14/1986, of 25 April, Royal Decree 140/2003, of 7 February, which establishes the health criteria for the quality of water for human consumption, set down the health criteria to be complied with for water for human consumption and the installations that supply water from the catchment to the tap, guaranteeing that it is wholesome and clean, with a view to protecting the health of persons from the adverse effects of any kind of water contamination. This law transposed Council Directive 98/83/EC, of 3 November 1998, on the quality of water intended for human consumption to the applicable provisions stated in the Spanish legal system.

Royal Decree 140/2003, of 7 February, was substantially altered on two occasions by Royal Decree 314/2016, of 29 July, which modifies Royal Decree 140/2003, of 7 February, which establishes the health criteria for the quality of water intended for human consumption, Royal Decree 1798/2010, of 30 December, which regulates the exploitation and commercialisation of natural mineral and spring waters bottled for human consumption, and Royal Decree 1799/2010, of 30 December, which regulates the process of preparing and commercialising prepared bottled for human consumption; and via Royal Decree 902/2018, of 20 July, which modifies Royal Decree 140/2003, of 7 February, which establishes the health criteria for the quality of water for human consumption, and the specification of the analysis methods in Royal Decree 1798/2010, of 30 December, which regulates the exploitation and commercialisation of natural mineral and spring waters bottled for human consumption, and Royal Decree 1799/2010, of 30 December, which regulates the process of preparing and commercialising prepared bottled for human consumption.

Ш

After the European Citizens Initiative on the right to water (Right2Water), the Commission set in motion a public consultation process at EU level and carried out an evaluation of Council Directive 98/83/EC, of 3 November 1998, to establish the appropriateness and efficacy of the regulation. It was found that there was a need to update certain provisions of said directive. Four areas were identified that required improvement: the list of parametric values based on quality; the infrequent application of the method based on

risk factors, the imprecise nature of the provisions concerning information to citizens and the disparities between the homologation systems for materials that come into contact with water for consumption and the consequences of said disparities for human health. Furthermore, the "Right2Water" initiative identified one clear problem, which was that part of the population, in particular vulnerable groups and those at risk of social exclusion, lack access to water for consumption, and providing said access constitutes an undertaking by virtue of the sustainable development goal (SDG) no. 6 of the UN 2030 Agenda for Sustainable Development. One last issue that was identified is the general lack of awareness of water leaks, which are the outcome of insufficient investment in maintenance and renovation of water infrastructures.

In 2017, the Regional Office for Europe of the World Health Organisation (WHO) carried out a detailed review of the list of parameters and parametric values established in Council Directive 98/83/EC, of 3 November 1998, in order to determine if it was necessary to adapt it to recent technical and scientific advances. The results of the review included recommendations to control intestinal pathogens and *Legionella* bacteria and to add six chemical parameters. It also recommended that three compounds (Bisphenol A, Nonylphenol and β -Estradiol), which represent compounds with endocrine-disrupting properties, should be considered as references to evaluate the presence of this type of compounds and the efficacy of treatment when required.

The prevention and control of *Legionella* is stipulated in Royal Decree 487/2022, of 21 June, which establishes the medical criteria for the prevention and control of legionellosis. The measures contained in said law are applied to facilities that use water in their systems and produce aerosols and therefore may become a focus of human exposure to the bacteria. Facilities located in buildings that are used solely for residential purposes are excluded from the scope of application of said law, as long as they do not affect the area surrounding the buildings.

Spain is committed to the Sustainable Development Goals of the 2030 Agenda and to the Right to Water, in which the undertaking is respected by respecting the principle of subsidiarity and the Water and Health Protocol of the WHO Regional Office for Europe, protecting citizens' health through better management of water and reducing the diseases related to same.

Ш

The Council of the European Union approved a new law on 16 December 2020: the Directive (EU) 2020/2184 of the European Parliament and of the Council of 16 December 2020, on the quality of water intended for human consumption, which sets out to protect people's health from the adverse effects caused by any kind of contamination of waters intended for human consumption by guaranteeing that they are wholesome and clean, and improving access to water intended for human consumption.

Spanish law therefore needs to incorporate the requirements of the new Directive (EU) 2020/2184 of the European Parliament and of the Council of 16 December 2020. The entity responsible for the changes necessary to bring about said transposition have advised, for reasons of legislative economy and legal certainty, that a new royal decree should be approved that clearly and systematically integrates the regulations applicable to water for human consumption.

This royal decree has a twofold purpose. On the one hand, it establishes the legal framework to protect human health from the adverse effects from any contamination of water intended for human consumption by guaranteeing that it is wholesome and clean. On the other, it facilitates access to water by following UN recommendations on the human right to water and health in the Kingdom of Spain.

It establishes the quality requirements of the water used in the food industry to manufacture foodstuffs, or that comes into contact with them or with materials and objects that come into contact with food. It also includes possible exemptions for operators of food companies that have their own water source and use it for specific purposes as part of their processes, as long as the safety of the processes

and the foodstuffs manufactured are guaranteed, in accordance with the principles of the analysis of hazards and critical control points established in food safety legislation.

IV

The hydrological plans, which are an instrument provided for in water legislation with the general objective of ensuring that the public water supply and inland waters are in good condition and adequately protected, indicate the water bodies for each river basin used for the catchment of water used to produce water for human consumption. They contain a record of same that should be kept up to date, and adopt the measures necessary to prevent deterioration in quality to reduce the purification treatment levels required to produce water fit for human consumption.

Royal Decree 817/2015, of 11 September, which establishes the criteria for monitoring and evaluating the status of surface waters and environmental quality standards, establishes in annex I.C.1 of same, additional requirements to control water used for supply to monitor protected water catchment areas for the production of water for human consumption. With the aim of avoiding duplications in obligations, by detecting hazards and hazardous events, it is necessary to use the results of controls, which should be representative of the catchment areas obtained in the framework where water legislation applies. Risk assessment and management in the supply area should be applied by all operators.

٧

A mechanism called a "Watch List" is proposed to deal with the potential effects of emerging contaminants on human health. Amongst other things, this list will include some substance identified as endocrine disruptors. The Watch List will be implemented at European level through committee proceedings.

The values of the microbiological and chemical parameters are based on available scientific knowledge and on the precautionary principle, guaranteeing that water for human consumption can be safely used for the entire life cycle, which in turn guarantees a high level of health protection.

As far as the indicator parameters are concerned, some of do not have a direct impact on health, while others do so at levels over and above the parametric value established by this law. However, they are important when determining the functioning of the facilities that produce and distribute water for human consumption and when evaluating water quality.

Since the publication of Royal Decree 140/2003, of 7 February, it has become necessary to establish a series of harmonised minimum requirements for materials in contact with water for human consumption. This issue has been resolved at European level through Directive (EU) 2020/2184 of the European Parliament and of the Council, of 16 December 2020, which is integrated into national law via this decree and which will contribute towards creating a uniform level of health protection throughout the European Union, and bring about more effective functioning in the domestic market.

It should be guaranteed that the use of different processes to purify water, and the chemical substances and filtration methods used are effective, safe and adequately handled to prevent adverse effects on users' health. If there is any non-compliance with the parametric values, or other incidents, the operator should immediately investigate the cause and ensure that corrective measures are taken as soon as possible to reestablish adequate water quality. In cases where the water supply constitutes a potential health hazard, the supply should be prohibited or restricted.

V١

The risk-based focus established in this royal decree is an important new development since it includes three components: risk assessment and risk management of the catchment areas that produce water intended for human consumption; risk

assessment and risk management in the supply area, from the catchment area to delivery to the end user, which is referred to as the supply chain; and finally, risk assessment and risk management of the domestic supply systems in priority premises.

The risk assessment and risk management of catchment areas should take a holistic approach and be geared towards reducing the level of treatment required for the production of water intended for human consumption.

Risk assessment and risk management in supply areas is not a new concept. The first elements for a risk-based approach for supply areas were established in 2018 with Royal Decree 902/2018, of 20 July, based on the WHO risk assessment methodology called the "Water Safety Plan" or the "Water Safety Plan". Another applicable approach is the Spanish Standard UNE-EN 15975-2. Security in Drinking Water Supply. Guidelines for risk and crisis management. Part 2: Risk management, which are internationally recognised principles. Another standard is UNE EN ISO 22000 Food safety management systems. Requirements for any organisation in the food chain, which is used in the food industry.

Risk assessment and risk management for domestic distribution systems should focus on priority premises such as hospitals and healthcare institutions, in particular augmented care units; retirement homes; childcare facilities, educational institutions, buildings with a lodging facility; sports and leisure centres; institutions, etc. The parametric values used to assess the quality of water intended for human consumption should be complied with at the point at which the water for human consumption emerges from the taps that are used to water intended for human consumption. Said quality can be greatly affected by the characteristics of the domestic distribution system.

VII

Increasing awareness amongst consumers of the implications of consuming tap water, better knowledge of the relevant details and greater transparency will increase citizens' trust in the water that is supplied to them and in water-related services, and will lead to increased use of tap water.

Therefore, all administrations and water suppliers should ensure that there is greater transparency and access to information on water intended for human consumption, including details about the quality of the water intended for human consumption, water invoiced, price per litre, etc. Public and private water suppliers that manage large catchment areas should have additional information available online.

The Ministry of Health has been managing and operating the National Information System of Water for Human Consumption (SINAC) since 2003, and draws up the national yearly public information reports and periodic reports for the European Commission, in compliance with European obligations.

The Public Administration, autonomous communities, the cities of Ceuta and Melilla, and local bodies should ensure access to a minimum supply of water intended for human consumption to all citizens, and take measures to promote the use of tap water.

VIII

This royal decree is in compliance with the principles of sound regulation referred to in article 129 of Law 39/2015, of 1 October, on the Common Administrative Procedure of Public Administrations. In particular, the provisions of this royal decree comply with the principle of necessity and effectiveness, given that it is justified for reasons of general interest, as is the case of guaranteeing access to freely available water for human consumption that is wholesome and clean, from the water bodies to the tap, with the aim of protecting people's health from the adverse effects caused by any kind of contamination. This royal decree is also the most adequate instrument for ensuring that said objective are brought about.

As regards the proportionality principle, this initiative contains the essential regulations to meet the needs covered by the law, given that there are no other

less restrictive measures on rights, or others that impose fewer obligations on the recipients. The principle of legal certainty is also respected since it is adapted in a consistent manner with the other national and European bodies of law, facilitating knowledge and comprehension of same and therefore the actions and decisions to be made by persons and companies in the sector. In line with the principle of efficiency, this legislative initiative avoids unnecessary or additional administrative burdens and rationalises in the application of same the management of public resources. It is also a necessary regulation, given that it is a transposition of Directive (EU) 2020/2184 of the European Parliament and of the Council, of 16 December 2020.

This royal decree also complies with the principle of transparency, since it permits universal and up-to-date access to information about water intended for human consumption, while potential recipients were enabled to actively participate in the drafting of same.

A public consultation procedure was carried out prior to the drafting of this royal decree, in accordance with article 26.2 of Law 50/1997, of 27 November, of the Government. Likewise, the procedures of public consultation and hearings for potentially affected sectors were also carried out during the drafting process and the autonomous communities and cities of Ceuta and Melilla were also consulted, as were local entities through the Spanish Federation of Municipalities and Provinces. A mandatory report was issued by the National Water Council and the Advisory Council for the Environment. Reports were also issued by the Interministry Commission for Food Planning, the Consumers' and Users' Council and the Nuclear Safety Council.

This royal decree is issued pursuant to the provisions of article 149.1.16. and 22 of the Spanish Constitution, which reserves for the State exclusive competences with regard to the principles and general coordination of healthcare and legislation, planning and granting of water resources and exploitation.

By virtue of their legal capacity, on the recommendation of the Minister of Health, the Minister of Industry, Trade and Tourism, the Minister of Agriculture, Fisheries and Food the Third Vice-president of the Government and the Minister of Ecological Transition and the Demographic Challenge, and the Minister of Consumer Affairs, with the prior approval of the Minister of the Treasury and Public Administration, in accordance with the Council of State, and after due deliberation by the Cabinet of Ministers in their meeting held on 10 January 2023,

I HEREBY DECREE:

CHAPTER I

General provisions

Article 1. Purpose.

The purpose of this royal decree is to establish the technical and sanitary criteria for water intended for human consumption and the supply and distribution of same, from the water bodies to users' taps, and the control of quality, ensuring and improving, access, availability, wholesomeness and cleanliness, with the objective of protecting people's health from the adverse effects cause by any kind of contamination.

Article 2. Definitions.

- 1. This royal decree contains the following terms, which are defined below:
- a) Water intended for human consumption: water for human use, in its original state or after being treated, intended for drinking, cooking, food preparation, personal hygiene or other domestic purposes in both public and private premises, regardless of its origin and whether it is supplied from distribution networks, from a tanker or put into bottles or containers, and that is wholesome and clean.
- b) Water bodies: water from catchment areas in the water bodies that are used for the production of water intender for human consumption, regardless of their origin and treatment required in each case.

- c) Supply system: the pipework, fittings and appliances that link the general installation of the building or indoor network with the exterior supply distribution network. The tap or fitting in the meter cabinet or casket behind the stopcock outside of the building is the delivery point for the owner of the indoor installation or building.
- d) Health authority: competent regional health administration or other bodies belonging to the autonomous communities and the cities of Ceuta and Melilla with similar competences.
- e) Water administration: basin organisations responsible for inland waters in river basins that exceed the territorial scope of an autonomous community, or despite not meeting the foregoing criterion have not been transferred to the autonomous communities and the water competent water administration of the autonomous communities in the basins that lie within the territory of the autonomous community. In case of marine catchment areas, the water administration shall refer to and be understood as forming part of the administration with competences in coastal waters.
- f) Piping: any conduction of raw water from the catchment area to the drinking water treatment plant (DWTP), or in the absence of same, to the header reservoir; or of treated water between reservoirs or lines between the DWTP and the header reservoir that do not have any delivery points to the distribution network.
- g) Header reservoir: located at the outlet of the DWTP or desalination plant, or in the absence of same, the place where water treatment takes place after abstraction, excluding rechlorination.
- h) Distribution basin or regulating reservoir: used to store, regulate and/or distribute water intended for human consumption, placed at the start or intermediate stages of the distribution network.
- i) Priority premises: large non-domestic premises with many users potentially exposed to water-related risks, in particular large premises for public use, as identified in annex VIII.
- j) Drinking water treatment plant (DWTP): group of unit processes to treat water, located behind the distribution network and/or header reservoir, which may contain more treatment unit processes than filtration and disinfection. This term includes ocean water desalination plants and private supply treatment plants that are not connected to the public distribution network.
- k) Domestic distribution system: the pipework, fittings and appliances located after the supply network, the responsibility for which lies with the owner of the domestic distribution system and not the supplier of the distribution network. The domestic distribution system consists of the general system of the building and the private indoor systems.
- I) Plumbing company: natural person or legal entity that carries out the work of installation, assembly, commissioning, repair and maintenance of the plumbing systems under the scope of the Technical Building Code and in accordance with the provisions of this royal decree.
- m) Kit: set of resources and products sufficient for a given purpose, in which the product presentation offers a method of analysis for direct application.
- n) Water body: units of management effectively identified and demarcated in the basin hydrological plans currently in force. They may be:
- 1. Surface water body: defined and significant quantity of surface water, such as a lake, reservoir, current, river or canal, transitional waters or a section of coastal waters.
- 2. Body of groundwater: clearly defined volume of underground water in one or more aquifers.
- o) Material in contact with water: building product or material used for coating or in the assembly of infrastructures that are located in an area from the catchment area to the tap, including sources, cisterns and mobile reservoirs, and in contact with water intended for human consumption. This term includes:
- 1. Starting substance: intentionally added substance for the production of organic materials, or of admixtures for cementitious materials;

- 2. Component: chemical composition of a metal, enamel, ceramic or other inorganic material.
- p) Water supplier: local administration or other public or private entity that is responsible for managing water intended for human consumption or part of same, or for any other activity related to supply.
- q) Delivery point: place where a water supplier of part of a catchment area delivers the water to the supplier of the next part of same, or to the user.
- r) Sampling point: place designated for taking samples of water intended for human consumption for self-regulation, operational checks, sanitary monitoring of the quality of same in accordance with the provisions of this law.
- s) Distribution network: set of piping designed to distribute water intended for human consumption from the DWTP, header reservoirs, distribution basin or regulating reservoir to the user's domestic supply.
- t) Result: quantified value of a parameter with a specific analytical method expressed un units established in annex XI, part A.7.g).
- u) Radioactive substance: substance that contains one or more radionuclides whose activity is not considered to be negligible for radiological protection.
 - v) Parametric value: maximum or minimum level set for each parameter in a control.
- w) Parametric value for radioactive substances: value of the radioactive substance in water intended for human consumption above a certain level, in which case it shall be assessed if the presence of radioactive substances implies a risk to human health and so requires measurements, and if necessary, corrective measures to improve water quality until it reaches a level that meets the requirements for radiological protection.
- x) Reference value: maximum or minimum level of parameters that do not have a defined parametric value.
- y) Catchment area: area in which water is abstracted for production as water intended for human consumption, and where the activities that take place there, along with the uses of the soil or nature of same may have an influence on the quality of the abstracted water.
- 1. In the case of catchments of inland surface waters, said areas shall be made up of the hydrological area, basin or drainage sub-basin, where the waters are drained towards the abstraction point. When establishing such areas, zones whose distance or where there is a presence of obstacles to the flow of water or contaminants that have no influence on water quality at the abstraction point shall be excluded.
- 2. In the case of catchment areas of coastal surface waters, the area defined shall be near the abstraction point so that the water contained there is the one to be abstracted in normal service conditions.
- 3. In the case of groundwater catchment areas, the zone shall be the surface area so that the water that filters through there may be the one abstracted under normal service conditions. When establishing the area, zones whose distance means that they have no influence on the water quality at the abstraction point may be excluded. This demarcation shall also be applied to natural springs.
- z) Supply area: an area that is geographical defined and registered on the census by the health authority, and not larger than the province itself. The water intended for human consumption comes from one or more catchment areas and the quality of the distributed water may be regarded as uniform throughout most of the year and includes the entire set of installations: the abstraction intake, conduction, treatment, storage, transport and distribution of the water intended for human consumption to the user's supply or delivery point.

The types of supply area (SA) are classified according to the volume of water supplied per day:

- 1. "Type 0 area": supplies less than or equal to 10 m³ of water intended for human consumption a day on average with no public or commercial activity.
- 2. "Type 1 area": supplies less than or equal to 10 m³ of water intended for human consumption a day on average with public or commercial activity.

- 3. "Type 2 area": supplies more than 10 m³ and up to 100 m³ of water a day on average.
- 4. "Type 3 area": supplies more than 100 m³ and up to 1,000 m³ of water a day on average.
- 5. "Type 4 area": supplies more than 1,000 m³ and up to 10,000 m³ of water a day on average.
- 6. "Type 5 area": supplies more than 10,000 m³ and up to 100,000 m³. of water a day on average.
 - 7. "Type 6 area": supplies more than 100,000 m³ of water on average.
 - 2. The following terms are used in the food industry:
- a) Food, food legislation, food company, food company operator: as defined respectively in articles 2 and 3, sections 1, 2 and 3 of Regulation (EC) No. 178/2002 of the European Parliament and of the Council of 28 January 2002, laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in in matters of food safety.
- b) Water intended for human consumption used in a food company: any water used a food company for manufacturing, treating, conserving and marketing products or substances for consumption, along with water used to clean surfaces, objects or materials that might come into contact with food.
- c) Process water in a food company: any water used during a food manufacturing process, for refrigeration or to produce hot steam in a closed circuit, and that does not come into contact with food.
- d) Cleaning water used in a food company: any water used for this purpose, different from the water used to clean surfaces, objects and materials, that might come into contact with food and that is not a source of contamination for same.

Article 3. Scope of application.

- 1. This provision applies to the waters intended for human consumption defined in articles 2.1.a) and 2.2.b) and to the catchment waters defined in article 2.1.b).
 - 2. The following are excluded from the scope of application of this royal decree:
- a) All waters governed by Royal Decree 1798/2010, of 30 December, which regulates the exploitation and commercialisation of natural mineral waters and spring waters bottled for human consumption, and by Royal Decree 1799/2010, of 30 December, which regulates the process of preparing and marketing waters prepared and bottled for human consumption.
- b) All waters governed by Royal Legislative Decree 1/2015, of 24 July, which approves the consolidated text of the Law on guarantees and the reasonable use of medicines and sanitary products.
- c) All medicinal mineral waters of spas governed by Royal Decree Law of 25 April 1928, which approves the Statute on the exploitation of medicinal mineral water springs, and by Law 22/1973, of 21 July, on Mines.
- d) Any waters included in installations affected by Royal Decree 487/2022, of 21 June, which lays down the sanitary requirements for the prevention and control of legionellosis, except for the provisions in this royal decree on priority premises.
- e) Any waters used solely for purposes whose quality, according to the health authority, does not directly or indirectly affect the health of the persons who use it.
- f) For the purposes of assessing and managing the risks of the catchment areas of the waters used to produce water intended for human consumption from an individual source of supply that produces an average of at least 10 m³ a day, unless said waters are supplied as part of a commercial or public activity.

For these type 0 supply areas, the health authority may establish that they at least comply with the provisions in section 3.b) or it may do the following when a potential risk to people's health due to water quality is perceived:

- 1. Inform the public affected by the risk of the exclusion and of any measures taken to protect their health from the negative effects of a possible water contamination;
- 2.Immediately inform the public affected by the risk about the appropriate health recommendations;
- 3. Request that the local administration take the necessary measures for these supply areas to protect the public's health and comply with the provisions in said articles, if there is no exclusion.
 - 3. The provisions in this royal decree shall partially apply to the following cases:
- a) Passenger vessels (cruise liners and ferries) that fly the Spanish flag and sail on domestic routes, whose owners are operators for the purpose of this royal decree and should comply with the provisions of chapter I, sections 1, 3 and 4 of chapter II, with the exception of articles 28, 29 and 30, and articles 61 and 63.1 and the corresponding annexes of same.
- b) Type 1 supply areas should comply with the articles of chapter I and sections 1, 3 and 4 of chapter II.

Article 4. Responsibilities and competencies.

- 1. When the supply of water intended for human consumption is directly managed, the local administration should manage same without prejudice to the responsibilities and competences of the health authority:
- a) Appropriate water treatment to ensure that the water supplied through any distribution network, tanker or mobile storage tank inside its territory is suitable for consumption at the user's delivery point;
- b) The Protocol of Self-Regulation and municipal monitoring at the infrastructures owned and managed by the municipality;
- c) The Water Safety Plan (hereinafter the WSP), in the supply areas owned and managed by the municipality;
- d) Assessment of structural leaks in the distribution and supply networks owned and managed by the municipality;
- e) Guarantees that comply with annex I for the quality of water intended for human consumption in the distribution network up to the delivery point at domestic systems;
- f) The notification of information in the National Information System of Water for Human Consumption (hereinafter SINAC) and in its website;
- g) The improvement of access to water for vulnerable groups, the identification of same and the social action mechanisms for this sector of the population;
- h) Appropriate measures to ensure compliance with the obligations laid down in this law by owners of buildings or premises with public or commercial activity, and ensure that owners of priority premises comply with the obligations established in this royal decree;
 - i) Any other activity described in this royal decree that corresponds to same.
- 2. When management of the water supply is indirect, delegated or mixed, the local administration should ensure that the operators owning the concession are not included in section 1. They should:
- a) Comply with the provisions of this law with regard to infrastructures, and the repair and maintenance of same;
- b) Guarantee the quality of the water intended for human consumption in the distribution network up to the delivery point of the domestic system and comply with the provisions of annex I.
 - c) Comply with the sampling frequency laid down in the Self-Regulation Protocol;
 - d) Supply water fit for consumption;

- e) Carry out and implement the WSPs in the supply areas and propose corrective measures;
 - f) Evaluate structural leaks in the distribution networks and supplies;
 - g) Enter information in the SINAC and their corporate websites;
 - h) Any other activity described in this royal decree that corresponds to same.
 - 3. Owners of buildings or premises with public or commercial activities should:
- a) Apply the measures and controls necessary to maintain the quality of the water intended for human consumption and ensure that it does not deteriorate between the system to the tap as a result of lack of hygiene or maintenance of the domestic supply system;
 - b) Draw up and implement the WSP if the premises is priority;
 - c) Any other activity described in this royal decree that corresponds to same.

CHAPTER II

Characteristics and control of water intended for human consumption

Section 1. Water quality

Article 5. Quality of water intended for human consumption.

- 1. Water intended for human consumption should be wholesome and clean at the point of compliance.
- 2. For the purposes of this royal decree, water intended for human consumption shall be considered to be wholesome and clean when:
- a) It is free of microorganisms, parasites and substances in quantities and concentrations that might make it a risk to human health;
 - b) It meets the requirements specified in annex I.
- 3. The measures adopted for compliance with this royal decree shall be based on the precautionary principle and under no circumstances may directly or indirectly lead to a deterioration in the quality of the water intended for human consumption or increase the contamination of the water used to produce water intended for human consumption.

Article 6. Health rating of samples of water intended for human consumption.

- 1. The samples of water intended for human consumption may be rated as follows:
- a) Fit for consumption when it does not contain any kind of microorganism, parasite or substance in quantities and concentrations that might make it a risk to human health. It should also comply with the parametric values specified in parts A and B of annex I and not exceed the suitability values indicated in the notes of Table 3, part C of annex I or the parametric values exempted by the health authority determined therein;
- b) Not fit for consumption: when it does not comply with the requirements of paragraph a) or when the reference values of the parameters in the watch list are detected or exceeded. In such cases the health authority shall assess the health risks, giving the appropriate health recommendations to the public, municipality and the operator.
- 2. In the case of the parameters in annex I, part C, if the parametric values are exceeded, this does not necessarily imply a priori that quality levels are unacceptable, and adequate corrective measures should be taken, while the provisions in the notes of table 3, annex I should be complied with.
- 3. In The provisions of annex VI should be followed for the radioactive substances mentioned in annex I, part $\sf E$.

Article 7. Point of compliance.

1. The water intended for human consumption made available to users should comply with the quality requirement mentioned in annex I in at least the following points:

- a) The point where it leaves the taps that are habitually used for consumption, for waters supplied through a distribution network, inside public or private buildings, premises and establishments and homes;
- b) The point in which it leaves the cistern tanker and is made available to the user, for waters supplied from a public or private cistern tanker or mobile tank;
- c) Without prejudice to the provisions in the foregoing paragraphs, the compliance point of the distribution network operators shall be the service connection.
 - 2. The compliance point for food companies is defined in article 66.

Article 8. Sampling points.

- 1. Without prejudice to the provisions in II, the official sampling points allocated for taking samples shall be at least the following:
- a) The catchment area of the water intended for human consumption, at a point assigned by the water administration;
- b) The sampling points in the supply area shall be representative of the supply area or parts of same, and shall be assigned by the health authority after consultations with the operator:
 - 1. One at the abstraction point or at the inlet to the DWTP
 - 2. One at the outlet of the DWTP or header reservoir;
 - 3. One at the outlet of the distribution reservoir and/or regulating reservoir;
 - 4. One at each delivery point between operators;
 - 5. At least one in all the distribution networks;
- If the network supplies more than 20,000 m³/day, the number of sampling points shall be at least 1 per 20,000 m³ or the fraction of water distributed a day as a yearly average;
 - 6. One at the user's delivery point in the case of tankers and mobile tanks.
 - c) After the delivery point at the domestic supply system:
 - 1. One at the tap or fitting in the meter cabinet or casket behind the stopcock;
 - 2. One at the tap in homes and several taps that are representative in the premises or buildings.
- 2. Samples may be taken to determine specific parameters at compliance points other than the ones established in article 7, as long as it can be demonstrated that the validity of the results does not affect the representative nature of the quality of the water intended for human consumption from the outlet of the DWTP to the user delivery point.
 - 3. The sampling points for food companies are contained in article 67.
- 4. The health authority may demand changes in the location of the sampling points or increase their number if they are not sufficiently representative.

Section 2. Human right to water: quantity and access

Article 9. Quantity of water supplied for human consumption.

- 1. The volume of water intended for human consumption should be enough for the population's hygienic-sanitary needs and for the development of activities within the supply area. To this end, the minimum target for the net provision or average consumption should be at least 100 litres per inhabitant a day, unless the hydrological plan currently in force has established a higher provision, in which case said provision cannot be reduced.
- 2. The operators of the infrastructures in all the supply areas should record all the water that is abstracted, treated and distributed.
- 3. The Ministry for the Ecological Transition and the Demographic Challenge, along with the competent regional authorities, local administrations and operators of the supply areas, shall carry out regular information campaigns on saving water.

Article 10. Promotion of tap water.

- 1. Public administrations shall take the measures necessary to ensure the provision of tap water intended for human consumption on their premises and in other public spaces, within the scope of their respective competences.
- 2. The local administrations and authorities with competences in consumption shall take the necessary measures to promote the use of tap water intended for human consumption, selecting the most adequate measures in collaboration with operators and taking into consideration local, geographical and cultural circumstances.
 - 3. Such measures may include:
- a) Information issued by local administrations to citizens and signs indicating fountains or devices that supply water intended for human consumption outdoors, along with signs by building owners indicating fountains or devices that supply water intended for human consumption inside public or commercial buildings
 - b) Yearly campaigns to inform citizens about the quality of said water.
- 4. Likewise, establishments in the hospitality sector will be obliged to always offer consumers, customers and users of their services the option of consuming unbottled water at no charge and as a complementary service at their establishment, in accordance with the provisions of article 18.3 of Law 7/2022, of 8 April, on waste and contaminated soils for a circular economy, and the legislation that implements said law.
- 5. The promoters of cultural and sporting events and festivals shall guarantee access to unbottled tap water intended for human consumption.

Article 11. Access to water and vulnerable populations.

- 1. Local administrations shall take the necessary measures to improve access to water intended for human consumption for the entire population, in particular for those groups that are vulnerable or at risk of social exclusion, including persons who do not have connections to the municipal distribution network.
- 2. To determine the vulnerable populations or groups at risk of social exclusion, autonomous communities and local entities shall use at least the criteria defining a vulnerable consumer or person at risk of social exclusion established in articles 3 and 4 of Royal Decree 897/2017, of 6 October, which regulates the concept of the vulnerable consumer, incomebased discounts and other measures to protect domestic consumers of electrical energy, and shall be able to include additional criteria for vulnerability that enable the inclusion of a larger number of consumers under said category.
- 3. Local administrations, along with the authorities with competences in social programmes for groups that are vulnerable or at risk of social exclusion, should:
- a) Identify the persons who have no or limited access to water intended for human consumption when said lack of access is due to economic difficulties of a personal nature or financial problems of the competent administration;
- b) Assess the possibilities for improving access to water for said persons and inform them about said possibilities or about alternative resources;
- c) Provide information about social action mechanisms for families in economic situations that fall below the poverty line;
- d) Draw up a report about the situation regarding access to water intended for human consumption, identifying the measures taken to improve access and promote use for said population. This report shall be submitted to the Ministry of Social Rights and the 2030 Agenda, in the manner and timescale determined by same in coordination with the Spanish Federation of Municipalities and Provinces.
- 4. Local administrations should implement effective social action mechanisms to guarantee the right to water of the entire population, paying attention to the problems suffered by populations that are vulnerable or at risk of social exclusion, applying

administrative processes or tools for social action that are most appropriate to the special features of their territory and population.

5. One of the aims of the social action mechanisms should be to offer affordable rates and give form to this objective in the rates policies and structures, which may consist of discounts included in the tariffs, in the pricing of same and/or solidarity funds.

Section 3. Control and monitoring of quality of water for human consumption

Article 12. Purpose of control and monitoring.

- 1. In general terms, the parameters set in annexes I and IV for each supply area shall be controlled according to the provisions in annexes II, III and VI.
- 2. When the health authority so requires, other parameters or contaminants that are suspected to be present in the water intended for human consumption and that constitute a risk to users' health shall also be controlled.
- 3. The results taken from the analyses carried out in accordance with the controls established in article 13 should be collected in electronic format and reported to the SINAC in the due time and form established in annex XI.
- 4. In the case of operational controls, the SINAC shall be notified in accordance with the provisions of annex II.

Article 13. Types of controls and monitoring.

- 1. Water control includes the following kinds of checks:
- a) Self-regulation: carried out by the operator responsible for the public or private supply area or part of same;
 - b) Municipal monitoring: carried out by the local administration at the user's tap;
 - c) Control at priority premises: carried out by the owner of the priority premises;
 - d) Health monitoring: carried out by the health authority;
- e) Monitoring at the catchment areas: carried out by the water administration or the competent administration in the case of coastal and marine waters;
 - f) Monitoring on vessels: carried out by the owner of the vessel.
 - 2. The analyses corresponding to these controls are defined in annex II.

Article 14. Self-regulation Protocol.

- 1. The operator responsible for the supply area or part of same should update the Self-regulation Protocol for supply in accordance with the Health Monitoring Programme for Drinking Water, prepared by the health authority for its territory, as indicated in article 17.
- 2. The aims of the Self-regulation Protocol (hereinafter the Protocol) should be at least the following:
- a) Check that the measures applied to control risks to human health throughout the supply, from the abstraction point onwards and including treatment, storage and distribution, are effective and the water at the compliance point is wholesome and clean;
- b) Possess information about the quality of the water intended for human consumption in order to demonstrate compliance with the obligations established in this law and with the parametric values provided for in annex I;
 - c) Determine the most adequate methods to reduce the risks to human health.
 - 3. The updated Protocol should include at least the following points:
- a) Outline and description of the supply area and of the infrastructures managed by the operator;
 - b) Sampling programme;
 - c) Programme of cleaning and maintenance of the installations;

- d) In the case of distribution networks, detection programme and measures to deal with structural leaks of water intended for human consumption;
 - e) Suppliers of the products used to treat the water and clean the installations;
 - f) Procedures for reporting non-compliances and informing users;
 - g) Incident management procedures;
 - h) Training plan;
 - i) Alternative or exceptional supply to be used in the event of an emergency;
 - j) Certificates from own or contracted laboratories;
 - k) Data of update of Protocol.
- 4. The Protocol should be made available to the health authority in electronic format and be updated every year or when there are substantial changes to supplies.
- 5. Once the WSP referred to in article 59 is drawn up and implemented, it shall replace the Protocol, which shall then be made an annex of the WSP.

Article 15. Municipal Monitoring.

- 1. The objective of municipal monitoring is to provide the information necessary to determine the quality of water intended for human consumption at the compliance point of domestic supply systems. The local administrations shall inspect both priority and non-priority premises with checks at taps, which shall be carried out in accordance with the provisions of annexes II, III and VI.
- 2. If there is a non-compliance of the parametric values, and notwithstanding the provisions of annex III, part A, a sample shall be taken at the tap or fitting in the meter cabinet or casket behind the stopcock to determine if the non-compliance is due to the domestic system or the distribution network, in which case the owner of the public or commercial building or premises shall be obliged to repair or replace it.

Article 16. Controls at priority premises.

- 1. The object of controls at priority premises is to provide the local administration with the information necessary to determine the quality of the water intended for human consumption at the point of compliance and use. The control shall be carried out by the owner of the priority premises, in accordance with the provisions of annexes II and III.
- 2. In municipalities with less than 20,000 inhabitants and where the local or regional administration lacks adequate resources, the health authority may monitor priority premises that have previously request this service.
- 3. If there is a non-compliance of the parametric values, a sample shall be taken at the tap or fitting in the meter cabinet or casket behind the stopcock to determine if the non-compliance is due to the domestic system or the distribution network, in which case the owner of the public or commercial building or premises shall be obliged to repair or replace it.

Article 17. Health monitoring.

- 1. The regional health authority is responsible for monitoring the water intended for human consumption, and it shall update the Health Monitoring Programme for Drinking Water (hereinafter the Programme). Said health monitoring includes the supply areas managed or owned by the State.
 - 2. The Programme should include at least the following activities to be carried by the operators:
 - a) Analysis and frequencies established in annexes I and II;
- b) Description and review of the supply area, the catchment, treatment and storage infrastructures and the distribution network for the water intended for human consumption;
 - c) Review of the Protocol;
 - d) Collecting and analysis water samples; or
 - e) Measurements registered via a continuous or on-site measurement process.

- 3. Activities carried out by the health authority can also be included:
- a) Inspections of records on the operational status and maintenance of equipment and/or
- b) Inspections of the supply area, including the water catchment, treatment, storage and distribution infrastructures and the control laboratories;
- c) Verification and approval of the WSPs for the supply areas to check the compliance with same by operators, check the level of implementation and effectiveness of same.
- 4. The Programme shall be constantly reviewed and updated. The health authority shall inform the Ministry of Health by electronic means of updates to the Programme and any changes to same.
- 5. The health authority shall include radioactive substances in the Programme in accordance with the criteria and requirements established in annex VI.

Article 18. Monitoring in the catchment areas.

The catchment areas shall be monitored by the water administration according to the provisions in Royal Decree 817/2015, of 11 September, which establishes the criteria for monitoring and evaluating the status of surface waters and environmental quality regulations, in particular according to the provisions in article 8.1.a) and annex I.C.1 of same.

Article 19. Watch list.

- 1. The watch list in annex IV contains the contaminants of emerging concern that are considered to be a risk to health.
- 2. The Ministry of Health shall update this list, including other emerging contaminants such as substances, compounds and microorganisms of concern for human health as new scientific and technical knowledge appears.
- 3. For each new emerging contaminant included in the watch list, the Public Health Commission of the Ministry of Health shall, when necessary, propose a possible method of analysis that does not involve excessive costs and a reference value where applicable.
- 4. If a contaminant in the list appears in the water of the catchment area at levels above the reference value, the water administration shall immediately inform the health authority and the operator.
 - 5. The health authority and the operators:
- a) May use the information taken from the risk assessment in the catchment areas and the monitoring programmes of surface and groundwaters carried out by the water administration as a basis for finding contaminants of emerging concern that may be present in the water;
- b) When said contaminants are discovered in surface or ground waters, the health authority may make use in its Programme of the provisions of article 26.

Article 20. Sampling, laboratories and methods of analysis.

- 1. Samples should be taken at the supply area and at the point of use or the tap in accordance with the provisions of annex III, part A.
- 2. Public and private laboratories, including subcontracted ones, that carry out the methods of analysis of annex I and IV, should comply with the specifications of annex III and the eighth additional provision.
- 3. Any laboratory that carried out tests on the controls provided for in article 13 should be registered at the SINAC.
- 4. The parameters of annex I, parts A, B and E should be tested in the laboratory and the parameters of parts C, D and F may be test in a laboratory, on line or on site.

- 5. The methods of analysis used by laboratories should be adapted to the specifications of annex III. In particular:
- a) The methods of microbiological analysis should comply with the provisions of annex III, part C;
- b) The methods of physical and chemical analysis should comply with the minimum requirements established in annex III, part D;

In the absence of a method of physical or chemical analysis that complies with the minimum requirements, laboratories shall use the best techniques available without generating excessive costs, and shall validate and document said methods of physical and chemical analysis in accordance with annex III, part E:

c) When online kits or apparatuses are used in on-site tests, they should comply with the specifications of annex III, parts B and F.

Article 21. Health inspections.

Health authority inspections may include the supply area, the infrastructures mentioned in the articles of section 1, chapter III, the control laboratories, the related documentation and the content submitted to SINAC by operators.

Section 4. Response to incidents

Article 22. Types of incidents.

- 1. The following events shall be considered incidents of water intended for human consumption in this royal decree:
- a) The parametric values of annex I or the reference values of the parameters in the watch list are exceeded;
- b) Exceptional situations in which it may be suspected that the water is not wholesome and clean without the need for analytical results, such as, such as natural disasters or major accidents that lead to deficiencies in the infrastructures of the supply area;
 - c) Lack of water supply for more than twenty-four hours.
- 2. Incidents related to the supply of water intended for human consumption are classified as follows:
- a) Type AB incident: incident due to non-compliance in analytical results of microbiological or chemical parameters or the possibility of risks to health;
- b) Type C incident: incident caused by excessive parametric values of the quality parameters;
- c) Type E incident: incident caused by excessive parametric values of radioactive substances;
- d) Type II incident: incidents in indoor installations of public or commercial priority premises, non-priority premises and housing;
- e) Type O incident: incident due to the presence of substances, compounds and microorganisms of the watch list that exceed reference values or imply potential risks to health in the catchment area or distribution network;
- f) Type F network: incident caused by continuous lack of water for the population over more than 24 hours:
- g) Type S incident: incidents without analytical results or due to deficiencies in infrastructures of the supply area in exceptional situations such as natural disasters or major accidents, where it may be suspected that the water is not wholesome and clean;
- h) Type X incident: any other kind of incident where there is a presence of other microbiological or chemical contaminants not indicated in annex I, parts A and B, or annex IV that may be a risk to health.
- 3. Any kind of incident should be reported to the SINAC, notwithstanding the possibility of the health authority asking the operator, building owner or water administration for information in a format different from that sent to the SINAC, according to the Programme of same.

Article 23. General measures in the event of incidents.

- 1. The operator, water administration, municipality, owner of the activity or health authority that detects an analytical incident in the quality of the water intended for human consumption, should confirm said incident within the twenty-four hours following detection, and should take another water sample if necessary.
- 2. After confirming the incident, the operator, the water administration in the catchment areas, the municipality in the supply area or the owner of the building where the domestic systems are located, shall immediately confirm the cause of the health incident, and leave a record of same in the SINAC.
- 3. If the incident involves a possible criminal offence, the health authority or water administration should report the incident to the Headquarters of the Nature Protection Service (SEPRONA) of the Guardia Civil.
- 4. When the incident is confirmed, the health authority, at the operator's request and after carrying out a risk assessment, shall order the most adequate measures to be taken, which may consist of restricting water use, prohibiting supply or applying appropriate treatment techniques to change the nature or properties of the water before it is supplied, with a view to reducing or eliminating the risk or non-compliance and the present of potential risks to public health.
- 5. The operator, municipality or owner of the public or commercial premises shall immediately take corrective and preventive measures and shall report them to users and other operators that are affected.
- 6. Once the corrective measures have been taken, the operator, municipality or the owner of the premises shall take another sample at the point where the incident took place or at another representative point, with a view to verifying that the situation has returned to normal, and it shall report the results to the health authority, which shall in turn evaluate if the incident can be closed. If it decides to do so, it shall subsequently inform users and the other affected operators within twenty-four hours.

Article 24. Type AB incidents.

In the case of type AB incidents, the steps described in article 23 shall be followed, along with the following additional measures:

- a) Any type AB incident should be reported to the health authority after the detection of same. The report shall be issued after confirmation in the case of chemical parameters;
- b) The health authority shall assess the importance of the parametric values that are exceeded, the health repercussions for the affected population and the option of carrying out a risk assessment study of the incident, if it is considered to be necessary;
- c) If it is suspected that there is or there may be a health risk for the population, the health authority shall consider opening a "potential risk situation". The provisions of article 23 shall be applied to each potential risk situation;
- d) In the event of a potential risk situation, the operator, municipality or owner of the public or commercial premises shall inform the affected parties about the potential risk situation and the risks to human health and their cause, the parametric values that have been exceeded and the corrective and preventive measures taken, including prohibition, restriction or other actions, within twenty-four hours after the health authority's assessment;
- e) The operator shall also work in coordination with the health authority to transmit the health recommendations for the population or groups of same where the parametric value has been exceeded and implies risks to health, regularly updating the advice necessary for users about the conditions for consumption and use of the water and taking into special consideration groups that have higher health risks related to water;
- f) Once the corrective measures have been taken, the operator or owner of the public or commercial premises shall take another sample at the point where the problem arose to check that the situation has returned to normal, and shall report the results to the health authority, which shall evaluate if the potential risk situation can be closed;
- g) Users shall be informed once the potential risk situation to human health has come to an end and/or that normal service has resumed

within twenty-four hours after the potential risk situation was closed.

Article 25. Type II incidents.

- 1. When water quality incidents take place in the domestic supply systems of public or commercial priority or non-priority premises, detected by the owner or other entity, the town hall or health authority, the owner should:
- a) Take adequate measures to reduce or eliminate the risk of non-compliance with the parametric values;
- b) Take other measures, such as appropriate treatment methods, to change the nature or properties of the water before it is supplied, in order to reduce or eliminate the risk of the water breaching the parametric values after it is supplied; and
- c) Report the situation to the users of said premises, as required by the health authority, and shall duly advise the users affected about any possible additional measures that they should take.
- 2. When water quality incidents take place in the domestic supply systems of housing, the local administration shall issue the necessary recommendations to owners about the measures required to reduce or eliminate any breaches of the parametric values.

Article 26. Type O incident.

- 1. When the water administration or competent authority detects a type O incident in the catchment areas, it shall immediately report the incident to the health authority and operators.
 - 2. The health authority, in collaboration with the operator, shall:
- a) Check if the treatment carried out or proposed by the operator is sufficient for the purpose of achieving the reference value, or if it is necessary to optimise the treatment;
- b) The operator shall take a sample at the outlet of the DWTP or header reservoir. If the value is above the reference value, the substances, compounds or microorganisms shall be monitored in the distribution network until the value detected in 3 consecutive samples taken at the frequency required by the health authority is below the reference value.
- 3. The water administration or competent authority, with assistance and advice from the health authority, shall ensure that the owner of the activity that produces the contamination in the catchment areas takes corrective measures to protect human health when it is considered necessary and shall carry out the monitoring processes indicated by the water administration.

Article 27. Type C, E. F and S incidents.

- a) The steps described in article 23 shall be followed for type C incidents, bearing in mind the requirements of section 2, article 6 and the notes of annex I, part C;
- b) The steps described in article 23 shall be followed for type E incidents, along with the provisions of annex VI;
- c) The necessary steps shall be followed for type ${\sf F}$ and ${\sf S}$ incidents, without prejudice to the provisions of article 23.

Article 28. Declaration of an exceptional situation.

1. When levels of the chemical parameters mentioned in annex I, part B are above the parametric values, or the parameters in the watch list of annex IV exceed the reference values in a supply area and when the supply of water intended for human consumption cannot be maintained by using other reasonable means, the operator of the distribution network(s) or the supply area may ask the health authority to declare an exceptional situation with regard to the values of said parameters.

- 2. Situations in which the declaration of an exceptional situation can be requested:
- a) New intake in the catchment area protected from the water body;
- b) New pressure level detected in a catchment area;
- c) Unexpected situation in a supply area or catchment area that causes the parametric values to be temporarily exceeded.
- 3. When requesting the declaration of an exceptional situation, the operator of the distribution network should submit the documentation that appears in annex V in electronic format. The health authority should reply within one month dating from when it has all the documentation necessary to study said authorisation.
- 4. The health authority shall establish a new parametric value or reference value, as long as the new value does not constitute a risk to public health, and with the proviso that the supply of water intended for human consumption cannot be maintained by any other reasonable means in the affected area.
- 5. The health authority shall issue recommendations and advice for the population affected by the declaration of an exceptional situation, especially for groups in the population that may run specific risks as a result of said declaration.
- 6. The health authority shall notify the Ministry of Health by electronic means of the declarations of exceptional situations that are authorised. Notifications shall be issued in the two weeks before sending authorisation to the operator.
- 7. The maximum period for a declaration of an exceptional situation shall be three years. In said period, the water administration, local administrations, the operator and the health authority should each use the resources at their disposal to resolve and close the declaration of an exceptional situation.

Article 29. Second declaration or extension of an exceptional situation.

In exceptional cases, when there is a need to continue applying corrective measures to the incident that led to the declaration of an exceptional situation for a period longer than the one that was initially authorised, the operator may apply to the Ministry of Health by electronic means three months before the three-year period that was initially authorised for another declaration of an exceptional situation for a three-year period. The Ministry of Health shall inform the European Commission of this second declaration so that it may determine if sufficient progress has been made in applying corrective measures.

The operator shall submit the following documentation for said application:

- a) Application for a second declaration of an exceptional situation;
- b) Copies of the documentation submitted for the application for the first declaration.
- c) Project outline plans of the corrective measures that are currently being applied and the investment costs.
- d) Work schedule and date when project is estimated to end.

Article 30. Declaration of short-term exceptional situation.

- 1. If the local administration or operator detect a situation provided for in article 28 and anticipate that it can be resolved in less than thirty days, and that the non-compliance of the parametric value is of little significance to the health authority, a request may be submitted to the health authority for a declaration of a short-term exceptional situation.
- 2. The operator of the distribution network should submit the documentation described in annex V to the health authority by electronic means. The health authority should reply within one month dating from when it received all the documentation necessary to study said authorisation.
- 3. If the health authority considers that this new value does not present a significant risk for the affected population, it may authorise the declaration and notify the Ministry of Health by electronic means, as indicated in article 28.6.
- 4. If a parametric value in a particular supply of water is not complied with for more than thirty days in the previous twelve months, the provisions of this article cannot be applied.

CHAPTER III

Supply of water intended for human consumption

Section 1. Components of the supply area

Article 31. Catchment areas.

- 1. Notwithstanding any possible prohibitions established by law and provided by the health authority in each case, the water used to produce water intended for human consumption may have its origins in any location, as long as there is no health risk the population receiving said supply.
- 2. The water administration or administration with competencies in marine catchment areas, shall make the geometry of the catchment areas available to the health authority and operator of the abstraction and/or treatment point, via interoperable information services in accordance with Law 14/2010, of 5 July, on the geographical information infrastructures and services in Spain, and the analytical results of the water used to produce water intended for human consumption in areas protected for drinking water catchments, in accordance with the provisions of Royal Decree 817/2015, of 11 September, Royal Decree 1514/2009, of 2 October, which regulates the protection of groundwaters against contamination and deterioration, and any other applicable legislation.

Article 32. Abstraction point.

- 1. The abstraction points used to produce water intended for human consumption require the legal protection of an exclusive right to use the water that, in accordance with article 52 of the consolidated text of the Law on Waters, approved by Royal Legislative Decree 1/2001, of 20 July, may be acquired by legal provision or an administrative concession. The establishment of a new abstraction point or any changes to existing ones are subject to the conditions established by the water administration when the concession is granted or the modifications of the characteristics of same are authorised.
- 2. The owner shall submit the information required by the water administration for the application or regularisation of the concession by electronic means, in accordance with the provisions of articles 123.3.d) and 125.1 of the Regulations on Public Water Supply, which implements preambles I, IV, V, VI, VII and VIII of the consolidated text of the Law on Waters, approved by Royal Legislative Decree 1/2001, of 20 July.
- 3. The owner of the abstraction point shall request by electronic means a favourable report from the health authority, in accordance with the provisions of articles 123.3.d) and 125.1 of the Regulations on Public Water Supply. Said report should be issued within three months after the documentation is presented and shall accompany the request submitted to the water administration on the new abstraction point or the modification of same.
- 4. The documentation to be submitted by the owner of the owner of the abstraction point to the health authority shall be as follows:
 - a) The name, location and coordinates of the abstraction point;
 - b) Circuit diagram or plan and explanatory report;
- c) Name and code of the water body and protected area where the new abstraction shall be located, along with the depth and characteristics of the type of soil and enclosing rock;
- d) Possible focuses of contamination upstream in the case of surface waters and in the soil in the case of groundwaters;
 - e) Planned measures and protective perimeters requested:
- f) Prior analysis with the parameters of annex I, parts A, B and C; except for the following parameters: chlorite and chlorate, trihalomethanes, haloacetic acids, free residual chlorine and combined residual chlorine, in a laboratory that meets the provisions of article 20. If the health authority considers it to be necessary, a radioactivity check shall also be carried out in accordance with annex II, part B;
 - g) Supply areas to be supplied and any scheduled subsequent water treatment;

- h) Predicted average annual water flow in cubic metres.
- 5. The owner should install adequate protective measures, in accordance with the instructions of the health authority, with a view to preventing contamination and degradation of water quality.
- 6. The operator of the abstraction point shall maintain the protective measures that fall within its competence, notwithstanding the competences of the basin organisation.
- 7. The operator of the abstraction point should assign at least one sampling point for taking samples.

Article 33. Pipelines.

- 1. The construction of a new pipeline or the renovation of an existing one for a planned length of more than one kilometre shall require a favourable report from the health authority. To this end, the public or private entity responsible for the project should present the health authority with at least the following documentation by electronic means before the works commence:
 - a) Circuit diagram or plan and explanatory report;
 - b) Origin of the water and if the pipeline is to carry raw water or water intended for human consumption;
 - c) If the line is open, any potential focuses of contamination;
 - d) Protective measures:
 - e) Coating materials that will come into contact with the water;
 - f) Destination of the water.

The health authority shall issue a binding report on the sanitary feasibility of the project within three months after the above documentation is submitted.

- 2. The pipelines shall be washed and disinfected before they are commissioned.
- 3. When a raw water pipe is not enclosed, the operator of same should enclose it if the health authority considers that there is a risk to public health.
- 4. When a pipe carries water intended for human consumption, it should always be enclosed and carry the water at high pressure if circumstances so permit.
 - 5. The operator of the pipeline should assign at least one sampling point for taking samples.

Article 34. Supply of water via cistern tankers and mobile tanks.

- 1. The operator of a supply area may make use of cistern tankers and mobile tanks for a maximum of four months a year, without prejudice to the provisions in the section below. In exceptional cases, if the operator of a supply area or private individuals are obliged to supply water intended for human consumption via cistern tankers for more than four months a year, they should previously inform the health authority in order to receive a favourable health report.
- 2. An operator who supplies water via a cistern tanker or mobile tank shall request administrative authorisation from the competent regional or local administration for registration in this activity.
- 3. For supplies of this type, the operators involved should submit at least the following documentation to the health authorities where loading and unloading of water take place:
 - a) Basic information:
 - 1. Licence plate and number of chassis;
 - 2. Cistern capacity;
 - 3. Interior coating material;
- 4. Information as to whether the cistern operator carries out any kind of treatment of the water intended for human consumption;
 - 5. Final cleaning and disinfection.

If this information has not been previously provided by the owner of the cistern tanker of it has already been authorised.

- b) Information about each alternative supply:
- 1. Origin and destination of the water, and the operators who participate in same;
- 2. Dates of use or transport of the water intended for human consumption;
- 3. Reason why this type of supply is used;
- 4. Analysis of water controls of the source of the load, at least in the previous month with other parameters ordered by the health authority, from the operator who delivered the water to the operator of the cistern tanker, at a laboratory that complies with the provisions of article 20 and annex III.

Article 35. Characteristics of the cistern tankers or mobile tanks.

- 1. The cistern tankers or mobile tanks used to transport water intended for human consumption should be clearly marked and visible with indications that it is used to transport water intended for human consumption, such as the drinking water pictogram (white tap on a blue background).
- 2. If the cistern tanker has been used to transport food different from water intended for human consumption, it should be thoroughly cleaned before transporting the water, eliminating any traces of the previously foodstuffs, and then be disinfected.
- 3. The cistern tankers, tanks or other mobile components used to transport water intended for human consumption can only be utilised for this purpose for the duration of the alternative supply.
- 4. An operator who has cisterns or mobile tanks that can be coupled to different tractor heads should possess the identification documents of the cistern. The manager of each supply of this type should have a favourable health report.
- 5. The operator of the cistern tanker or mobile tank should carry out the loading process at a supply area where the water is suitable for human consumption. Therefore, direct loading from an abstraction point, or any other infrastructure that is not representative of the quality of the water in the supply area is excluded.
- 6. The operator of the cistern tanker shall always take all the necessary protective measures to ensure that water quality is not degraded, along with any other measures established by the health authority. A check valve shall be installed in new installations at the delivery point or network of the water intended for human consumption to be used exclusively by the cistern tanker.
- 7. The owner of the cistern tanker shall regularly monitor the conditions of the structure, fastening elements, valves and installations at least once a year. Before commencing the activity, the owner should clean and disinfect the cistern; the cleaning process should be used to descale and disinfect the cistern, and be followed by thorough rinsing with drinking water.
- 8. The owner of the cistern tanker should assign at least one sampling point for taking samples.

Article 36. Purification treatment.

- 1. La The construction or remodelling of a DWTP or a water purification treatment process requires a favourable report from the health authority. To do so, the public or private entity responsible for the project should submit at least the following information by electronic means to the health authority before building work commences:
 - a) Origin and destination of the water, and the operators involved;
 - b) Supply area(s) to be supplied, population supplied and volume of water treated per day;
- c) Circuit diagram or plan and detailed report of the DWTP and the planned treatment unit processes;

- d) Active substances, mixture and polymers to be used in the purification process, the planned doses and trade names;
 - e) Material that will come into contact with the water intended for human consumption;
- f) Analysis of the water at source with the parameters indicated by the health authority at a laboratory that complies with the provisions of article 20.

The health authority shall issue a binding report on the sanitary feasibility of the project within three months after the documentation is submitted.

- 2. The purification processes shall not transmit any substances or properties that might contaminate or degrade the water or imply a breach of the requirements of annex I and a risk for the population being supplied. Neither should they directly or indirectly produce any contamination or deterioration of the surface water or groundwater used to produce water intended for human consumption.
- 3. The abstracted water should undergo a mandatory minimum purification process. The disinfection process should guarantee the absence of any pathogenic microorganisms and comply with microbiological pathogens. The disinfection system should function automatically and continuously, to ensure that contact time is sufficient according to the type of disinfectant and the concentrations of same in accordance with scientific and technical references. Therefore, all water intended for human consumption should be disinfected and should contain traces of disinfectant.
- 4. Before disinfection, new or existing abstraction points should include at least one sand filtration process or other filtering medium before distribution. The following cases apply in this regard:
 - a) Surface catchment areas and spring waters;
- b) Groundwater catchment areas when abstracted water quality has a turbidity level of over 1 Nephelometric Turbidity Unit (NTU) in more than 5% of the yearly samples:
- c) When the health authority considers it to be necessary, in accordance with the risk assessment.
- 5. The filter system should be designed whenever possible to reduce turbidity to the lowest possible levels, the aim being for water turbidity to be less than 0.8 NTU.
- 6. The minimum concentration of free residual chlorine measured at the user's main stopcock should stand at the level indicated by the health authority. If another disinfectant is used, the regulations that authorise the use of same in water intended for human consumption shall be followed.
- 7. When the operator can demonstrate that there is no risk of contamination or microbial growth in any part of the distribution network up to the user's tap, it may apply to the health authority for exemption from containing residual disinfectant or an exemption from filtering the water, as long as the turbidity of the water when entering the purification process is less than 1 NTU in 100% of the tests in the last ten years.
- 8. The operator should assign at least one sampling point for taking samples at the outlet of the DWTP or header reservoir.

Article 37. Reservoirs.

- 1. The construction of reservoirs or remodelling of an existing one requires a favourable report from the health authority. To do so, the public or private entity responsible for the project should submit at least the following information by electronic means to the health authority before building work commences:
 - a) Origin and destination of the water, and the operators involved;
 - b) Supply area(s) and population to be supplied;
- c) Circuit diagram or plan and detailed report of the reservoir; hydraulic diagram; ventilation system and protective measures;
- d) If purification or rechlorination processes of the water intended for human consumption in the reservoir are planned, the type of disinfection system and the substances to be used should be described;
 - e) Reservoir capacity in cubic metres and the number of basins or compartments;
 - f) Material that will come into contact with the water intended for human consumption.

The health authority shall issue a binding report on the sanitary feasibility of the project within three months after the above documentation is submitted.

- 2. In the case of new regulating reservoirs and distribution basins, these should have at least two pools or compartments in parallel if the downstream distribution networks only have one reservoir or have no bypass between upstream waters and the distribution network. In the case of remodelling work, there should be at least two pools whenever possible.
- 3. The public or private entity responsible for building the reservoir should install roofing, vents, overflows and drainage to enable it to be completely emptied, cleaned and disinfected, along with protective measures and clearly visible signs that identify it as a water supply storage point, to ensure that it is not contaminated or the water quality is not worsened. The reservoir shall be washed and disinfected before commissioning.
- 4. The operator shall maintain the protective measures and regularly monitor the conditions of the structure, fastening elements, valves, conduits and installations in general.
- 5. The operator shall assess the frequency of cleaning and disinfection of the reservoir when it has a capacity of over 10,000 m³ in accordance with the health authority's criteria, which shall be adapted to the water quality, reservoir dimensions, etc.
- 6. Reservoirs with a capacity of less than 10,000 m^{3 shall} be cleaned and disinfected at least every 3 years or when the health authority so requires.
- 7. When necessary, the cleaning process should include descaling, and disinfection and substance rinsing with drinking water, in compliance with the provisions of Royal Decree 830/2010, of 25 June, which establishes the regulatory legislation for training to carry out treatment with biocides.
 - 8. The reservoir operator should assign at least one sampling point for taking samples.

Article 38. Distribution network.

- 1. The construction of a distribution network or remodelling of an existing one with a length of more than one kilometre requires a favourable report from the health authority. To do so, the public or private entity responsible for the project should submit at least the following information by electronic means to the health authority before building work commences:
 - a) Area to be supplied, volume of water supplied a day and population to be supplied;
- b) Circuit diagram or plan of the network; detailed report; indicating the crossing points with other pipelines that might affect water quality, such as sewers;
 - c) Origin and destination of the water, and the operators involved;
- d) If rechlorination is to be carried out, geo-referencing of the rechlorination points and disinfection method and substances to be used;
 - e) Material that will come into contact with the water intended for human consumption.

The health authority shall issue a binding report on the sanitary feasibility of the project within three months after the above documentation is submitted.

- 2. The distribution networks of water intended for human consumption shall always be at a higher elevation that the sanitation piping, with minimum separation of 1 metre between tangential, horizontal and vertical planes to the pipes that are closest to each other. If such separations cannot be maintained, or it is necessary for the crossings with other pipelines, shorter distances shall be accepted as long as special precautions are taken.
- 3. The distribution networks shall have a mesh design whenever possible, eliminating points and situations that facilitate contamination or deterioration of the water. They should have appropriate mechanisms to close off sectors, in order

To be able to close off areas due to malfunctions, along with systems that enable sectors to be purged to protect the population from any potential health risks.

- 4. The affected section of piping in new networks shall be washed and disinfected before commissioning and after any maintenance or repair activities that might lead to a risk of contamination of the water intended for human consumption. Treatment of already existing networks shall be carried when the network sections can be isolated, when there are drainage and access points. Otherwise, the appropriate disinfection shall be carried out, ensuring that adequate doses of disinfectant are used.
- 5. If rechlorination processes are used in the distribution network, the operator should ensure whenever possible that there is sufficient contact between the disinfectant and the water to properly disinfect the water, in accordance with point 7 of the previous article.
- 6. The operator should regularly monitor the conditions of the structure, fastening elements, valves, conduits and installations in general.
- 7. The network operator should assign the minimum number of sampling points required to be representative of the network layout, in collaboration with the health authority, without prejudice to the provisions of article 8.
- 8. All service connections should have a check valve and a stopcock outside the property, thus demarcating the competences between the distribution network operator and the owner of the building or premises that receives said service, unless the local or supra-municipal regulations applicable to each supply system provide for another system.

Article 39. Measures when an infrastructure is commissioned.

- 1. The owner of the new installations and infrastructure or party responsible for the rehabilitation of existing ones shall apply for a favourable sanitary report from the corresponding health authority, according the location of the supply area, before they are commissioned.
- 2. The health authority shall prepare the report from evidence taken during inspections and monitoring for the period necessary to ensure adequate assessment of the functioning of the installations, the results of the analyses carried out by the operator and the parameters reported by same.

Article 40. Indoor facilities.

- 1. The characteristic and functioning of indoor facilities should not lead to contamination or worsen the quality of the water intended for human consumption with germs or substances that might imply a risk to public health.
- 2. Any tank in an indoor installation should whenever possible be placed above the level of the sewage system; it should always be covered and have a drainage system that enables it to be completely emptied, cleaned and disinfected. Piping of the indoor sanitation network should not be placed above the indoor tanks or within a radius of 2 metres from same. If the tanks are kept in the open air, they should be thermally protected and insulated.
- 3. The owner of the building or residents' association, owner of the residence or public or private commercial premises, notwithstanding the provisions of article 49, should do the following:
 - a) Supply water suitable for human consumption via their indoor installation;
- b) Keep the indoor installation in good condition, regularly checking the situation of the structure of the indoor tank, fastening elements, valves, piping and the installation in general;
- c) Use corrective or preventive measures if there are any changes to water quality or health risks due to characteristics in the indoor installation that are a hazard to water quality.
- 4. Besides the above, the owner of the building, the residents' association or owner of the residence or public or private commercial premises should regularly clean

The indoor tank, including descaling, disinfection and rinsing. The frequency of cleaning and disinfection shall be assessed in accordance with the criteria of the local administration, and shall be adapted to the water quality, tank dimensions, etc. To this end, professional cleaning services shall be contracted in accordance with the Technical Building Engineering Code, and comply with the provisions of Royal Decree 830/2010, of 25 June.

5. A connector or tap should be fitted behind the service connection or the general stopcock in each building for taking samples whenever this is technically possible. The tap or connector in the meter cabinet or casket behind the stopcock may also be used for this purpose.

Article 41. Priority premises.

- 1. The priority premises defined in article 2 should comply with the provisions in this royal decree and at national level shall be those indicated in annex VIII.
 - 2. Owners of priority premises should draw up their own Sanitary Water Plan.
- 3. The health authority may include other public premises or buildings that it considers necessary for inclusion in its monitoring programme.

Article 42. Certifications.

- 1. If the operators of the elements in the supply area included in this Section are certified under Standard UNE-EN ISO 9001, "Quality management systems. Requirements"., this should be entered in the SINAC.
- 2. The entities accredited by ENAC to carry out the audits on operators for the certifications of the UNE-EN ISO 9001 or other quality standards should have at least the following:
 - a) Compliance with this legislation;
- b) Notification of the data required in the National Information System of Water for Human Consumption (SINAC) in the time and form indicated in annex XI.

Section 2. Technical and hygiene requirements

Article 43. Filter systems and substance for treating water.

- 1. The chemical substances used to purify water intended for human consumption and the filtration systems shall:
- a) Be of suitable quality for use, without directly or indirectly posing a hazard for human health. The use of substances, mixtures and polymers is prohibited when the active substance or monomer has a harmonised classification at EU level as a carcinogen, mutagen or toxic for reproduction or has been identified as an endocrine disruptor or toxic when ingested, according to the provisions of Regulation (EC) No. 1272/2008 of the European Parliament and of the Council, of 16 December 2008, on classification, labelling and packaging of substances and mixtures:
 - b) Not adversely affect the colour, smell or taste of the water intended for human consumption;
- c) Not encourage microbial proliferation. This requirement shall not apply to filters, reactors or other biological treatments;
- d) Not worsen the quality of the water intended for human consumption, in particular the by-products of the disinfection process shall be as few as possible without compromising the disinfection.
- 2. Notwithstanding the provisions of point 1, the products used for the disinfection of water intended for human consumption should comply with the provisions of Regulation (EU) No. 528/2012 of the European Parliament and of the Council, of 22 May 2012, concerning the making available on the market and use of biocidal products, for Product Type 5 (PT5), and with any other applicable national or European legislation.
- 3. This royal decree shall apply, without prejudice to the European legislation concerning chemical substances, which consists of Regulation (EC) No. 1907/2006 of the European

Parliament and of the Council, of 18 December 2006, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94, as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC and Regulation (EC) No. 1272/2008 of the European Parliament and of the Council, of 16 December 2008, on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and modifying Regulation (EC) No. 1907/2006, respectively.

- 4. Notwithstanding the provision of section 1, the manufacture of filtration substances and systems shall comply with the provisions of the UNE EN standards on "chemical products used in the treatment of water intended for human consumption" or other similar regulation or standard that guarantees at least an equivalent level of protection for human health. The manufacturer should submit an affidavit of liability to the operator that complies with the corresponding UNE EN standard and with this royal decree.
- 5. To disinfect surfaces in contact with water intended for human consumption throughout the supply area and in interior installations, chemical substances shall be used that comply with the provisions of Regulation (EU) No. 528/2012 of the European Parliament and of the Council, of 22 May 2012, concerning the making available on the market and use of biocidal products, for Product Type 4 (PT4).

Article 44. Materials that come into contact with water intended for human consumption.

- 1. Materials used in new facilities or in existing ones when they are repaired or rebuilt to abstract, treat, store and distribute water intended for human consumption and that come into contact with said water, should not worsen water quality or transmit substances, germs or properties that are hazardous to health, or that might impede the water from complying with the parameters of annex I. To this end, the materials should comply with the following basic hygienic requirements:
 - a) They shall not pose a direct or indirect hazard to human health;
 - b) They shall not negatively affect the colour, smell or taste of the water;
 - c) They shall not encourage the proliferation of microbes;
- d) They shall not migrate contaminants to the water intended for human consumption at levels beyond what is necessary for the purpose of said material or that worsen water quality, and under no circumstances shall they exceed the parametric values of annex I.
- 2. The facilities referred to in section 1 include infrastructures that are situated from the abstraction point to the user's tap, as well as any other infrastructure equivalent to same.
- 3. The materials referred to in section 1 include the ones present in the products used in the structure itself and in other products installed in said infrastructures, and that come into contact with the water intended for human consumption.
- 4. To comply with the requirements of section 1, the provisions established by the European Commission for the acts of implementation applicable to said materials and products, where the following is established:
- a) The specific minimum hygiene requirements via the European positive lists for starting substances, compositions and components, the use of which is authorised in the manufacture of materials or products in contact with water, including where appropriate the conditions of use and migration limits;
- b) The methods to test and accept starting substances, compositions and components that are to be included in the European positive lists, as well as the procedures and methods to assay and accept the end materials used. The principles to establish these methods and positive lists can be found in annex IX;
 - c) The procedures to evaluate compliance of the products and their markings.

- 5. For the purpose of including or withdrawing starting substances, compositions and components from the European positive lists, the manufacturers of materials and products that enter into contact with water intended for human consumption can submit applications to the European Chemicals Agency, as stated in article 11.5 of Directive (EU) 2020/2184 of the European Parliament and of the Council, of 16 December 2020, on the quality of water intended for human consumption.
- 6. Operators and building companies may only use the material and products for said installations that comply with the provisions of this article, for which they should verify that the materials or products comply with the applicable requirements prior to use or installation.
- 7. To control the commercialisation of the materials and products contained in this article, in accordance with article 14 of Law 21/1992, of 16 July, on Industry, the competent authority with powers to monitor the interior market of each autonomous community and the cities of Ceuta and Melilla may carry out technical checks on its own behalf or via entities appointed by same, taking whatever samples and tests it considers necessary with a view to verifying compliance of the materials and products with the established requirements.

When it is found that the use of a product is clearly hazardous, the competent authority shall immediately order the economic agent to take all the adequate corrective measures to adapt the material or product to the established requirements, withdraw it from the market or recover it within a reasonable timescale proportional to the nature of the hazard provided by same.

If market controls find that the established requirements for a product have not been complied with, the manufacturer, importer or distributor whose infringements have been brought to light shall be penalised in accordance with liabilities deriving from same, in accordance with the provisions of Title V of Law 21/1992, of 16 July.

8. Notwithstanding the foregoing, when the local water quality so requires, the health authority may take stricter protective measures regarding the use of materials in specific hydrogeological situations or for duly justified reasons. Said measures shall be reported to the Ministry of Health.

Article 45. Lead piping.

The installation of lead piping that comes into contact with water intended for human consumption is prohibited in accordance with the provisions of article 44 This includes piping that contains lead, and other products with lead components or lead alloys that come into contact with water.

Article 46. Purification apparatuses in indoor installations, buildings and premises.

- 1. Domestic purification systems for water intended for human consumption in buildings should comply with the following:
 - a) They shall not pose a direct or indirect hazard to human health;
 - b) They shall not negatively affect the colour, smell or taste of the water;
 - c) They shall not encourage the proliferation of microbes;
- d) They shall not migrate contaminants to the water intended for human consumption at levels beyond what is necessary for the purpose of said material or that worsen water quality, and under no circumstances shall they exceed the parametric values of annex I;
 - e) The provisions of articles 43 and 44;
 - 2. Water purification systems can be installed:
- a) After the main stopcock: in this case they should comply with the Technical Building Engineering Code, approved by Royal Decree 314/2006, of 17 March, in particular with "Section HS4. Water supply";
- b) At points of use or taps: in this case they should comply with standard UNE 149101. Water conditioning equipment inside buildings. Validation of equipment used in the treatment of drinking water

inside buildings, or another similar regulation or standard that guarantees at least an equivalent level of health protection.

- 3. The owners of public or commercial buildings or premises where water treatment systems are installed at the inlet of the installation or the parties responsible for priority premises or public or commercial facilities that install such systems on the taps, should have the following available for the health authority:
- a) An affidavit of liability from the manufacturer of the apparatus indicating that it complies with the provisions of sections 2.a) or 2.b):
- b) The results of the "tap control" analysis carried out by the owner as per the frequency indicated by the health authority in each case, according to the provisions of annex II, part B, section 7
- c) Laboratories that carry out the analyses provided for in paragraph b) should comply with the requirements established in article 20.
- 4. In the case of priority premises, alongside the provisions of section 3 and prior to the commissioning of the apparatus, the owner should make available the results of a tap control analysis at the apparatus outlet for the local or supra-municipal administration or health authority, carried out by a laboratory with methods of analysis accredited by standard UNE-EN ISO/IEC 17025, with the specification indicated in annex III, parts C and D.

Section 3. Structural leaks

Article 47. Control of structural leaks.

- 1. Pursuant to articles 14 and 15 of the Hydrological Planning Regulation, approved by Royal Decree 907/2007, of 6 July, the operators of type 3, 4, 5 and 6 supply areas should evaluate the levels of structural leaks of water intended for human consumption and raw water and the owner of the infrastructures affected should take the necessary corrective and preventive measures needed to reduce any avoidable leaks.
- 2. To do so, they shall measure and report a series of parameters related to the level of structural leakage and the level of efficiency of the infrastructure in accordance with the description in annex X.
- 3. The parameters that are most appropriate for making accurate calculations shall be obtained for each supply area or territorial division. If they are applied to a unit different from the supply area, the operator should clearly identify it, justifying the choice for reasons of operational efficiency.
 - 4. Said assessment should:
- a) Take into consideration public health, and environmental, technical and economic aspects;
- b) Be carried out on water intended for human consumption from the outlet of the header reservoir to the service connection. Leaks in tanks, networks and service connections shall be included;
 - c) Also be carried out on piping and reservoirs of raw water.

Section 4. Staff

Article 48. Training staff for supply areas.

- 1. Operators of treatment plants, reservoirs and distribution networks in the supply area should ensure that all directly employed or subcontracted staff involved in the activities provided for in this royal decree have at least the minimum professional qualifications for the activity they carry out in said facilities, as long as they are operational activities that might have an effect on water quality.
- 2. However, the provisions of the foregoing section shall not be a requirement if the staff member only carries out disinfection activities in the reservoir or distribution network with type 4 or 5 biocidal

products, in which case the operator should comply with the provisions of Royal Decree 830/2010, of 25 June.

Article 49. Professional training for plumbing work on indoor systems.

- 1. The owners of buildings with public or commercial activities should ensure that the directly employed staff or the contracted plumbing company involved in operational activities and whose work may have an effect on the quality of the water intended for human consumption, have the minimum professional qualifications to carry out their work.
- 2. However, the provisions of the foregoing section shall not be a requirement if the staff member only carries out disinfection activities in the indoor tank or indoor system with type 4 or type 5 biocidal products, in which case the operator should comply with the provisions of Royal Decree 830/2010, of 25 June.

CHAPTER IV

Risk assessment and management

Article 50. General aspects of risk assessment and management.

- 1. The safe supply of water requires the application of a guaranteed method of risk assessment and management that covers the entire supply chain. The method shall consist of the following features:
- a) Assessment and management of the risks in the catchment areas of water used to produce water intended for human consumption that corresponds to the water administration;
- b) Assessment and management of the risks in the supply areas, at each infrastructure that forms part of same from the abstraction point, piping, treatment, storage and distribution up to the service connection, for which the operator or operators of each infrastructure are responsible. The information taken from their Protocol and the risk assessment and management for the catchment area of the water used to produce the water shall be used for reference purposes;
- c) Assessment and management of the risks in an indoor system for priority premises, for which the owner of the premises shall be responsible. The information from the risk assessment and management in the supply area shall be used for the assessment.
- 2. An electronic information exchange system should be established between the three parties responsible for assessing and managing the risks.
- 3. The risk assessment and management can be adapted for catchment areas and supply area when there are special limitations due to geographical circumstances such as distance or limited access to the water supply area.

Section 1. Risk assessment and management for catchment areas

Article 51. Risk assessment and management of catchment areas.

- 1. Notwithstanding the provisions of Royal Decree 907/2007, of 6 July, the assessment and management of risks in catchment areas of water intended for human consumption shall always be carried out under the proviso that they produce an average volume of at least 10 cubic metres a day or supply more than fifty people.
- 2. To provide greater uniformity, the Ministry for the Ecological Transition and the Demographic Challenge shall publish a guide with the technical specifications on risk assessment and management for catchment areas of water used to produce water intended for human consumption.
- 3. Risk assessments and management processes shall be carried out for the first time before 2 January 2027 and shall be reviewed every six years or updated, when necessary, in consideration of the provisions of article 35.c) a') of

the Hydrological Planning Regulation, approved by Royal Decree 907/2007, of 6 July.

Article 52. Components of risk assessment in catchment areas.

The risk assessment of catchment areas shall include the following components:

- a) Characterisation of the catchment areas;
- b) Detection of hazards and hazardous events in the catchment areas:
- c) Adequate control of the surface and ground waters (or both) in the catchment areas;
- d) The risk assessment shall specifically include the risks caused by climate change, in order to identify the measures required to effectively adapt to same.

Article 53. Characterisation of catchment areas.

- 1. The characterisation of the catchment areas includes:
- a) Demarcation and mapping;
- b) Mapping of the protective perimeters, when they have been established in accordance with article 57 of the Hydrological Planning Regulation, approved by Royal Decree 907/2007, of 6 July:
 - c) The geographical references of all the abstraction points;

Given that said data may be of a sensitive nature, particularly in terms of health protection and public safety, efforts shall be made to ensure that said data is protected and issued solely to the appropriate authorities and water operators:

- d) Description of the uses of the soil, runoff and feeding processes in the catchment areas.
- 2. To this end, use may be made of the information compiled as part of the hydrological planning for characterisation of water bodies and protected areas, in accordance with sections 2 and 4 of chapter I, title 1 of the Hydrological Planning Regulation, approved by Royal Decree 907/2007, of 6 July.
- 3. The catchment areas shall be identified in the Registry of protected areas in the hydrological demarcation provided for in article 99 bis of the consolidated text of the Law on Water, approved by Royal Legislative Decree 1/2001, of 20 July.

Article 54. Detection of hazards and hazardous events in catchment areas.

- 1. The detection of hazards and hazardous events in catchment areas includes:
- a) the detection of hazards and hazardous events in catchment areas; and
- b) an assessment of the risks posed to water quality. To this end, the potential risks of deterioration of water quality when they may constitute a risk to human health shall be assessed.
- 2. To this end, a study may be used of the repercussions of human activity and information about pressures that are significant or that exceed a defined threshold which, if exceeded, may imply a risk to compliance with the environmental objectives of a water body, compiled in accordance with sections 3 and 5 of chapter I, title I of the Hydrological Planning Regulation, approved by Royal Decree 907/2007, of 6 July.
- 3. The risks caused by climate changes that might affect the quality of the water intended for human consumption shall also be taken into consideration.

Article 55. Adequate control of water in catchment areas.

1. Adequate controls of the parameters, substances and contaminants in water in catchment areas in surface and ground waters should be based on the following:

- a) Parameters that appear in annex I, part A. Microbiological parameters and part B. Chemical parameters;
- b) Contaminants of groundwaters that appear in annex I of Royal Decree 1514/2009, of 2 October, and contaminants of groundwaters and contamination indicators for which threshold values have been established in accordance annex II of said royal decree;
- c) Priority substances and other contaminants that appear in annex IV of Royal Decree 817/2015, of 11 September;
- d) Specific contaminants of basins established in each hydrological demarcation in accordance with Royal Decree 817/2015, of 11 September;
- e) Other relevant contaminants in water intended for human consumption based on the information compiled in accordance with article 54:
- f) Substances naturally present that might constitute a potential risk to human health when the water intended for human consumption is used;
- g) Substances and compounds included in the watch list established in accordance with article 19.
- 2. Depending on the hazards and hazardous events detected in accordance with article 54, or the information provided by operators in accordance with article 56, the water administration shall select the parameters, substances and contaminants from section 1 that it regards as relevant for control purposes.
- 3. In order to make the controls effective, especially when detecting new substances that are hazardous for human health through the use of water intended for human consumption, water administrations may make use of controls carried out in accordance with article 8.1.a) of Royal Decree 817/2015, of 11 September, and Royal Decree 1514/2009, of 2 October, when applicable.

Article 56. Obligations regarding information from operators about controls in catchment areas.

- 1. Operators who carry out controls in catchment areas or on untreated waters should inform the competent authorities, in particular the water and health administration, of the evolution of the parameters, substances and contaminants subject to control and about any unusual quantities or concentrations in same.
- 2. To this end they should use the SINAC platform in accordance with the description in article 62 and annex XI.

Article 57. Risk management measures in catchment areas.

- 1. Based on the results of the risk assessment carried out in accordance with article 51 onwards, the water administration shall ensure that the following risk management measures are taken to prevent or control said risks, as appropriate, starting with the preventive measures:
 - a) Preventive measures:
- 1. Preventive measures shall be defined and applied in the catchment areas, along with the preventive measures provided for in article 44.a) of the Hydrological Planning Regulation, approved by Royal Decree 907/2007, of 6 July, whenever it is necessary to safeguard water quality.
- 2. Where appropriate, these preventive measures shall be included in the programmes of measures referred in section 8., chapter I, title I of the of the Hydrological Planning Regulation.
- 3. Efforts shall be made in collaboration with operators and other interested parties to ensure that any contaminating parties take preventive measures in accordance with the applicable legislation on water.
 - b) Mitigation measures:
- 1. Mitigation measures shall be defined and applied in the catchment areas, along with the preventive measures provided for in article 44.a) of the Hydrological Planning Regulation,

approved by Royal Decree 907/2007, of 6 July, whenever it is necessary to safeguard water quality.

- 2. Where appropriate, the mitigation measures shall be included in the programmes of measures referred in section 8., chapter I, title I of the of the Hydrological Planning Regulation.
- 3. Efforts shall be made in collaboration with operators and other interested parties to ensure that any contaminating parties take mitigation measures in accordance with the applicable legislation on water.
 - c) Adequate control measures for water in catchment areas:
- 1. Efforts should be made to ensure adequate control of parameters, substances and contaminants in surface or ground waters (or both) in catchment areas that might a constitute a risk to human health when consuming water or lead to an unacceptable deterioration in water quality and that have not been taken into consideration in accordance with Royal Decree 817/2015, of 11 September, and Royal Decree 1514/2009, of 2 October, when applicable.
- 2. Where appropriate, said controls of surface and ground waters from catchment areas shall be included in the "Programme for control of water used for supply" mentioned in article 8.1.a) of Royal Decree 817/2015, of 11 September.
 - d) Application of protective perimeters:

The need to create or adapt protective perimeters for surface and ground waters shall be assessed, in accordance with article 57 of Royal Decree 907/2007, of 6 July, and article 172 onwards of Royal Decree 849/1986, of 11 April.

- 2. When a substance or component included in the watch list established in accordance with article 19 and annex IV, is found in concentrations that exceed the values set in said list, the water administration shall consider the measures available and ensure that adequate preventive and mitigation measures are taken in the catchment areas.
- 3. The water administration shall ensure that the effectiveness of all the measures referred to in this article are regularly reviewed.

Article 58. Change of quality control for water intended for human consumption.

- 1. The water administration shall ensure that the operators, health authority and other competent authorities have access to the information mentioned in article 51 onwards. In particular, the relevant operators and the health authority shall have access to the results of the control obtained pursuant to article 55.
- 2. The health authority may do the following based on the information mentioned in article 51 onwards:
- a) Demand that the operators carry out further controls or additional treatment of certain parameters;
- b) Authorise the operators to reduce the frequency of the controls of a parameter or eliminate a parameter from the list of parameters that the operator has to control pursuant to article 14, without having to carry out a risk assessment in the supply area, as long as:
 - 1. The parameter is not *Escherichia coli*, intestinal enterococci or turbidity, and,
- 2. There is no likelihood of a factor that might reasonably be predicted to cause a deterioration in water quality.
- 3. When an operator is authorised to reduce the frequency of controls for a parameter or eliminate one from the list of parameters that should be controlled, as indicated in section 2.b, the health authority should ensure that adequate controls of said parameters are completed when reviewing the risk assessment and management of the catchment areas, in accordance with article 51 onwards.

Section 2. Risk assessment and management for supply areas and priority premises

Article 59. Water Safety Plan.

1. A WSP is used to carry out a risk assessment and management process in a supply area or priority premises. The use of a WSP enables a system to be applied that ensures that the water is wholesome and clean, acceptable to users and that service provision is continuous, sufficient and at adequate pressure levels.

The WSP is a methodology based on a comprehensive risk assessment and management that covers all the stages of supply; from abstraction, treatment, storage and distribution up to the point of compliance and indoor systems, in accordance with the provisions of article 50.

- 2. The Ministry of Health shall make the following resources available:
- a) Methodological guidelines for operators and a tool (*PSA-GEPSA Manager*) to facilitate preparation of the WSP;
- b) Methodological guidelines for owners of priority premises and a tool (*PSA EDIPSA Manager*) to facilitate preparation of the WSP in said premises;
 - c) Methodological guidelines for the health authority to facilitate supervision of the WSP.
- 3. Food companies included in the scope of application of Regulation (EC) No. 852/2004 of the European Parliament and of the Council, of 29 April 2004, on the hygiene of foodstuffs, shall be exempt from the need to prepare a WSP, with the exception of those companies that form part of a priority premises.

Article 60. Water Safety Plan in supply areas.

- 1. A WSP in supply areas should always be based on the results and experience of the Protocol that operators have implemented in previous years. Once the WSP is completed and implemented, said Protocol shall be attached to same as an annex.
- 2. Operators in supply areas should prepare the WSP before the date indicated in the ninth additional provision. Operators should continue to use an updated Protocol until the WSP has been implemented.
- 3. The WSP should follow the guidelines set out in annex VII. The results of the risk assessment and management process for the catchment areas carried out by the water administration, and the risks caused by climate change and the index of structural leaks shall be taken into consideration.
- 4. In the case of supply areas with different operators in each infrastructure, the upstream operator shall make available the risk assessment and the test results obtained at each infrastructure to ensure that the WSP is effectively prepared.
- 5. The operators of the infrastructures in a supply area shall make the documentation defined in annex VII, part B and records of the preparation and application of the WSP available to the health authority when it requests them.
- 6. Once the WSP is prepared, it should be approved by the relevant health authority. The infrastructure manager shall continue to use the Protocol and manage the supply until the WSP is approved.
 - 7. The operator shall continuously review the WSP and update it every year.

Article 61. Water Safety Plan in priority premises.

- 1. In order to reduce the potential public health risk caused by the inadequate quality of water intended for human consumption, the owners of priority premises should draw up a WSP based on the provisions of annex VIII.
- 2. If an owner of a priority premises detects a risk to human health arising from the domestic supply system or the products and materials used in same, or if checks at the taps show that the parametric values

that appear in annex I, parts A and B are not complied with, the owner of the building should take the measures described in articles 23 to 25.

- 3. In the case of premises with public or commercial activities that are not defined as priority premises in annex VIII, the risks to water should be assessed and managed if the health authority considers it necessary.
 - 4. Owners of priority premises shall continuously review the WSP and update it every year.

CHAPTER V

Information transparency and management

Article 62. National Information System of Water for Human Consumption (SINAC).

- 1. The Ministry of Health and health authorities shall administer and manage the information system on supply areas and the quality of water intended for human consumption called the National Information System of Water for Human Consumption, (hereinafter SINAC).
 - 2. The use of the SINAC application on the Internet is obligatory for:
- a) All public or private entities or legal entities that manage type 2, 3, 4, 5 and 6 supply areas, that manage the infrastructures of same, that control the quality of water intended for human consumption or carry out the controls indicated in articles 13 and 56;
- b) Health authorities that carry out health inspections and/or authorise declarations of exceptional situations;
- c) Water administrations and administrations with competences in ground and surface water supply areas (inland and marine).
- 3. Type 0 and type 1 supply areas can use the SINAC on a voluntary basis, unless the health authority considers it to be obligatory.
- 4. Each form in the application should be fully completed. Operators, municipalities, laboratories, health authorities and water administrations shall be responsible for updating and verifying the data uploaded to the SINAC.
 - 5. The characteristics of the SINAC are described in annex XI, part A.

Article 63. Information transparency and access.

- 1. Local administrations, or operators, health authorities and water administrations where applicable, shall make available relevant and up-to-date information mentioned in this royal decree to citizens in an easily accessible format.
- 2. Local administration and parties that are legally responsible, regardless of whether management is direct, indirect, delegated or mixed, shall publish online the information indicated in point 1, part B.1 annex XI within 72 hours after receiving the analytical reports and shall give notification of the URL in the SINAC.
- 3. If a local administration of type 1 or 2 supply areas does not have a website or corporate portal and therefore cannot comply with the provisions of the above section:
- a) It shall make the analysis bulletins available to citizens, using the means that it considers to be the most adequate for the purpose, within 24 hours after receiving the analytical reports from the laboratory;
- b) The other information that appears in part B.1, annex XI, should be sent to the user on paper with the bill, in a separate email or other form of transmission every year in January.
- 4. The health authorities of the autonomous communities and the cities of Ceuta and Melilla shall prepare a report on the quality of the water intended for human consumption at least every five years, publishing it on the website of its corporate portal, where it shall be made accessible to citizens, and giving notification of the URL to the Ministry of Health via the SINAC.

- 5. The Ministry of Health shall provide an online summary of information in accordance with the description in part C, annex XI, taken from the data reported in the SINAC about the supply area and water quality. This information shall be linked to updated notifications of data from operators, municipalities, water administrations and health authorities.
- 6. The Ministry of Health shall publish a yearly national report on the quality of water intended for human consumption and the characteristics of the supply areas, based on data reported to the SINAC by operators, health authorities and water administrations, and shall make said report available to citizens, administration and operators on its corporate portal.
- 7. The Ministry of Health shall publish a report every three years on the quality of information and deficiencies in notifications on the SINAC for presentation to the Public Health Commission and the representatives of the autonomous communities and the cities of Ceuta and Melilla, with a view to finding solutions to said deficiencies.
- 8. The health authorities of the relevant autonomous communities or cities shall make a complaints channel available on its website where citizens may send information about any potential legal infringements to enable the health authorities to carry out additional or complementary inspections on operators if this is considered to be necessary.

Article 64. Exchanges of information.

- 1. Local administrations, or operators, laboratories or health authorities where applicable, of the autonomous communities and the cities of Ceuta and Melilla that have their own information system, may issue notification of all the data required in the SINAC via file sharing compatible with the SINAC.
- 2. Water administrations may give notification of the information in the NABIA information system about the conditions and quality of inland waters and of the information that it compiles about the characteristics of the supply systems related to this royal decree to send to SINAC via the exchange files.
- 3. To this end, the internal structure of the information contained in the SINAC shall be declared so that it can be adapted to same to enable data to be transferred to the SINAC via an exchange file in due time and form.
- 4. The deadlines for notifications of analytical results and updates of the data on infrastructures, laboratories and inspections shall not exceed the periods established in annex XI.

CHAPTER VI

Water quality in food companies

Article 65. Quality criteria for water intended for human consumption used in food companies.

- 1. Water used in food companies for manufacturing, preparing or treating foodstuffs, and for washing materials that come into contact with foodstuffs, should comply with the quality criteria established in section 1, chapter II.
- 2. Food companies included in article 69. 2, a) and b), shall be responsible for water quality from the point of delivery at the service connection.
- 3. Food companies that receive water from cistern tankers or mobile tanks shall be responsible for all the phases that it is involved in and that are described in the self-regulation systems based on the principles of the Hazard Analysis and Critical Control Points (HACCP).
- 4. Notwithstanding the above sections, food companies may use clean water in accordance with the provisions of annex I of Regulation (EC) No. 852/2004 of the European Parliament and of the Council, of 29 April 2004, on the hygiene of foodstuffs, and with Regulation (EC) No. 853/2004 of the European Parliament and of the Council, of 29 April 2004, laying down specific hygiene rules for food of animal origin.

5. Food company sectors may prepare and apply national guides on correct hygiene practices, in accordance with articles 7 and 8 of Regulation (EC) No. 852/2004, of the European Parliament and of the Council, of 29 April 2004, on the hygiene of foodstuffs, for specific controls of water intended for human consumption used in same, within the context of self-regulation systems based on the principles of the HACCP.

Article 66. Point of compliance in a food company.

The point of compliance in a food company is:

- a) The bottling point when the water intended for human consumption is packaged in bottles or other recipients;
- b) The point at which the water intended for human consumption is used by the food company.

Article 67. Sampling point in a food company.

Food companies shall define the sampling points for water used in the company according to HACCP principles.

Article 68. Types of controls used to ensure the quality of drinking water in the food company.

- 1. The supplier of a food company that has its own source of water and acts as the water operator should comply with the provisions of this law in the same manner as any other water operator.
- 2. The operator of the food company shall carry out self-regulation controls on the point of compliance to guarantee the quality of the water intended for human consumption that is used in the company.
- 3. The parameters used in analysis that are based on HACCP principles should match the values established in annex I, parts A and E, and the watch list in annex IV.

Article 69. Types of analysis and frequency of controls for water intended for human consumption in food companies.

- 1. The food company operator shall carry out a range of analyses to ensure that the water intended for human consumption used by the company is of sufficient quality. Said analyses shall be included in the system based on the HACCP principles applied in the company.
 - 2. Food companies shall be classified according to the type of abstraction system used:
 - a) Companies that abstract the water directly from a public or private distribution network;
- b) Companies that abstract the water from a public or private network and have an intermediate tank before the point of compliance;
 - c) Companies that abstract water from their own source.
- 3. Depending on the above classification, food companies shall draw up a sampling programme based on HACCP principles. Said plan should include the reasoning behind the types of analysis, the parameters included in each one and the frequency of analysis.
- 4. Food companies shall refer to the provisions in annex II, parts A, B and C when preparing the sampling programme, and shall explain the decisions regarding the types, parameters and frequency of the analyses used in the company's self-regulation systems based on HACCP principles.
- 5. In any case, the minimum number of samples in the self-regulation should be representative of the amount of water used by the food company for its activities and should be uniformly distributed throughout the year, making sure that controls are uniform and representative at all times of the year.
- 6. The health authority shall use the information and documentation provided by the operator of the food company as a basis, and depending on the type of water abstraction, it shall assess the contents and results of the food company's sampling programmes.

7. Notwithstanding the foregoing, when the health authority reviews the data provided by the parties responsible for the food company and considers that there is evidence to indicate that there are risks involving water quality, it shall ensure that the parameters in terms of the frequency of controls and sampling processes are changed.

Article 70. Sampling, laboratories and methods of analysis for water intended for human consumption in food companies.

The operator of the food company shall ensure that the sampling processes, laboratories and methods of analysis used in self-regulation to ensure water quality comply with the provisions of annex III.

Article 71. Exemptions applicable to food companies.

- 1. Notwithstanding the provisions of this chapter, competent health authorities may exempt operators of food companies from totally or partially complying with the provisions of this royal decree with regard to water intended for human consumption, in particular with reference to types of analysis, parameters and control frequencies.
- 2. To this end, the operator of the food company shall guarantee, within the framework of the procedures based on the principles of hazard analysis and critical control points, that the water used in the company under its responsibility shall comply with the criteria for drinking water pursuant to the provisions of Regulation (EC) No. 852/2004 of the European Parliament and of the Council, of 29 April 2004, on the hygiene of foodstuffs, and not endanger the safety of the end product.
- 3. The health authority shall monitor the exemptions granted, using the information provided by the operator of the food company.

CHAPTER VII

Penalties

Article 72. Infringements.

- 1. A breach of the provisions established in this royal decree with regard to catchment areas, contained in article 31, section 1, chapters IV and V of this law and the annexes and related provisions of same, shall be penalised in accordance with the provisions of title VII of Royal Legislative Decree 1/2001, of 20 July, which approves the consolidated text of the Water Law, and title V of the Regulations on Public Water Supply that implement preliminary titles I, IV, V, VI, VII and VIII of the consolidated text of the Water Law, approved by Royal Legislative Decree 1/2001, of 20 July.
- 2. A breach of the provisions of this royal decree with regard to marketing materials and products that come into contact with water intended for human consumption, contained in article 44 of this law and the annexes and related provisions, shall be penalised in accordance with the provisions of title V of Law 21/1992, of 16 July, on Industry.
- 3. A breach of the provisions of this royal decree with regard to water quality in food companies contained in chapter VI of this law and the annexes and related provisions of same, shall be penalised in accordance with the provisions of chapter IX of Law 17/2011, of 5 July, on Food Safety and Nutrition.
- 4. A breach of the provisions of this royal decree with regard to public health shall be penalised in accordance with the provisions of title VI of Law 33/2011, of 4 October, on General Public Health and with the provisions of article 73 of this royal decree, without prejudice to the violations that may be established by regional or local legislation.

Article 73. Infringements and penalties in public health.

1. A breach of the provisions in this royal decree shall have the status of an administrative violation of the healthcare and public health regulations, in accordance with the provisions of Law 14/1986, of 25 April, on General Public Health, and Law 33/2011, of 4 October, on General Public Health.

- 2. Violations shall be scaled as follows:
- a) The following violations shall be regarded as minor infringements, in accordance with the provisions of article 35.A)1 of Law 14/1986, of 25 April, and article 57.2.c)1. of Law 33/2011, of 4 October:
 - 1. Breaches of the deadlines mentioned in articles 23, 24 and 64 of this royal decree;
 - 2. False data entered in the SINAC;
 - 3. Non presentation of the documentation referred to in chapter III, sections 1. and 2.;
 - 4. Breaches of frequency of sample taking described in annex II;
 - 5. Not making the information indicated in annex XI available to the public;
 - 6. Breaches of the values mentioned in annex I, parts A, B and E.
 - b) The following are regarded as serious violations:
- 1. Behaviour or omissions that might cause serious risks or damage to health from consuming water, when this does not constitute a very serious violation, and which fall within the provisions of articles 35.b)6. of Law 14/1986, of 25 April, and 57.2.b)1. of Law 33/2011, of 4 October.
- 2. A breach of instructions received from a competent authority, if damage to health is involved, when this does not constitute a very serious violation, and which falls within the provisions of articles 35.b)4. of Law 14/1986, of 25 April, and 57.2.b)3. of Law 33/2011, of 4 October.
- 3. Resistance to or obstruction of legally required activities in accordance with the provisions of this royal decree, and which fall within the provisions of articles 35.b)1. of Law 14/1986, of 25 April, and 57.2.b)4. of Law 33/2011, of 4 October.
- 4. A breach of communicating information and the other obligation pursuant to the provisions of this royal decree, when they are of a serious nature and fall within the provisions of articles 35.b)1. of Law 14/1986 of 25 April, and 57.2.b)5. of Law 33/2011 of 4 October.
- 5. Recurrent slight violations committed in a previous twelve-month period that fall within the provisions of articles 57.2.b)6. of Law 33/2011, of 4 October.
- 6. Not having prepared a self-regulation protocol that is updated or at the disposal of the health authority in accordance with the provisions of article 14 of this royal decree, where said breach falls within the provisions of articles 35.a) 1. of Law 14/1986, of 25 April, and 57.2.c)5.1 of Law 33/2011 of 4 October.
- 7. Not preparing a water health as provided for in article 59 of this royal decree, where said breach falls within the provisions of article. 35.a) 1. of Law 14/1986, of 25 April, and 57.2.c) 1. of Law 33/2011 of 4 October.
- c) The following are regarded as very serious violations, in accordance with the provisions of article 35.C)1. of Law 14/1986, of 25 April, and article 57.2. a)1. of Law 33/2011, of 4 October:
- 1. Not informing citizens of an incident or of the corrective and preventive measures taken with regard to same in accordance with article 23;
- 2. Not taking preventive or corrective measures in the twenty-four period after an incident is confirmed, if this involves a very serious health risk.
 - 3. Penalties in public health:

Violations of public health shall incur the penalties provided for in article 58, title VI of Law 33/2011, of 4 October, on General Public Health.

First additional provision. Updating of water bodies due to presence of radon.

- 1. The updating of the classification of bodies of groundwater used to abstract and then produce water intended for human consumption shall take place before 2 January 2029.
- 2. This update shall be carried out by the health authority in coordination with the Ministry of Health, with guidance, when necessary, from the Nuclear Safety Council. Information from the initial classification carried out before 2019 shall be used as a basis, along with analytical data available in the supply areas, historical data, supporting documents and any other reliable information that is available. It may also be further updated when new information is made available that makes said update advisable.
- 3. The updates shall include determining the scale and nature of possible exposures to radon in water intended for human consumption caused by the geology and hydrology of the affected area, the radioactivity of the rocks or soil and the type of catchments, so that said information can be used to assess the risks to human health and offer guidance in areas where high exposure levels are likely.

Second additional provision. Competencies of the Ministry of Defence.

- 1. When the provisions of this royal decree affect units, centres and organisations that report to or are attached to the Ministry of Defence, they shall be applied through the Undersecretary of Defence by the General Defence Inspectorate of Health, coordinating the necessary measures with the relevant authorities of the Ministry of Health, autonomous communities, municipalities and other operators, where applicable.
- 2. With regard to the SINAC, the Ministry of Defence shall inform the Ministry of Health by electronic means of the information required by said information system that it obtains in the exercise of the competencies provided for in the foregoing section. This information shall be made available to the health authority when it so requires.

Third additional provision. Information concerning monitoring the application of this law.

- 1. The Ministry of Health shall prepare a report entitled "National Report of Risk Assessments in priority premises" before 1 December 2025. This report consists of an evaluation of the risks of indoor systems of priority premises, with information taken from the SINAC or other information systems for this subject. It shall be sent to the European Commission in the format indicated by same. Said report shall be updated and sent to the European Commission every six years.
- 2. The Ministry for the Ecological Transition and the Demographic Challenge shall prepare a report in collaboration with the Ministry of Health entitled "Report on Structural Leaks" before 1 December 2025, using data from its information systems on the water basin management plans in the SINAC. The report shall contain an assessment of the levels of water leaks in Spain and the potential for improvement in reduction, including, where applicable, the corrective measures applied or to be applied. It shall be sent to the European Commission before 12 January 2026, with the parameters and indicators mentioned in annex X. The report shall also include at least the water suppliers who supply more than 10,000 m³ a day or that supply at least 50,000 people.

In the two years after the adoption by the European Commission of a maximum threshold for structural leaks, based on data sent by Member States, the owners of affected infrastructures should prepare an action plan to comply with said threshold before 31 December 2029.

- 3. The Ministry for the Ecological Transition and the Demographic Challenge shall prepare a report entitled "National Report of Risk Assessment and Management in Catchment Areas" before 1 July 2027. The report shall be sent to the European Commission in the format indicated by same. Said report shall be updated and sent to the European Commission every six years, and shall include the following information:
 - a) Information about catchment areas;

- b) Results of completed controls;
- c) Concise details of the type, measures taken and progress made.
- 4. The Ministry with competencies in Social Rights shall prepare a report entitled "National Report on Access to Water", before 1 December 2028. The report shall consider the measures taken to improve access to water intended for human consumption, and the percentage of the population that has access to water intended for human consumption, with the information contained in the SINAC or other similar information system. The Ministry shall send the report to the European Commission in the format indicated by same. Said report shall be updated and sent to the European Commission every six years.
 - 5. The Ministry of Health shall prepare a report entitled "National Report on Quality of Water for Human Consumption", based on information taken from the SINAC. The Ministry shall send the Report to the European Commission every year before 1 October of the year following the one mentioned in the report:
- a) A summary of the results of non-compliance of the values of the parameters in annex I, parts A and B, and the corrective measures taken if there were any infringements the year before:
- b) A summary of any incidents that took place the previous year incidents relating to water intended for human consumption that involved a potential risk to human health, where applicable, regardless of whether a parametric value was breached, and that lasted for more than ten days consecutively and affected at least 1,000 people, including the causes of same and the corrective measures:
 - c) A summary of all the declarations of exceptional situations that have been authorised;

The first report shall be for 2024.

Fourth additional provision. Mutual recognition.

For the purpose of the provisions in article 44 and the sole temporary provision on materials and products, the products legally marketed in another Member State of the of European Union, Turkey or a member state of the European Free Trade Association that has signed the agreement on the European Economic Space and that are legally marketed there, shall be regarded as complying with this royal decree, even when they do not comply with the technical conditions established herein, with the proviso that they meet a level equivalent to the one required with regard to safety and use. The application of this measure is subject to Regulation (EU) No. 2019/515 of the European Parliament and of the Council, of 19 March, on the mutual recognition of goods legally marketed in another Member State and repealing Regulation (EC) No. 764/2008.

Fifth additional provision. Staff training.

- 1. The Ministry of Education and Vocational Training, along with the sector and social partners, shall establish and update the training curricula and criteria to ensure minimum training levels for persons employed on the tasks described in this royal decree, and in particular to comply with the provisions of articles 48 and 49, before 2030.
- 2. The Ministry of Education and Vocational Training, along with the sector and social partners, shall facilitate the process for obtaining the professional certificate of competence based on the provisions of Royal Decree 34/2008, of 18 January, which regulates the certificates of professional competence, on ways to obtain certificates of professional competence, and Royal Decree 1224/2009, of 17 July, on the recognition of professional competence acquired by work experience, to comply with the provisions of articles 48 and 49, before 2030.

Sixth additional provision. Regional investment plan.

1. The competent regional authorities shall prepare a regional plan of public and private investments, with a view to implementing the measures established in this royal decree, and which should include investments to improve

infrastructures, equipment for analysis, improve digital, electronic and personnel resources for the period 2023 – 2030.

2. Once this plan is approved it should be submitted by electronic means to the Ministry of Health, which shall transfer it to the Ministry for the Ecological Transition and the Demographic Challenge so that it may be taken into consider when preparing the programmes for measures in hydrographic plans.

Seventh additional provision. Application of the provisions in annexes I, II and IV.

- 1. Operators should control the new parameters of annex I, part B: Bisphenol A, chlorite and chlorate, ∑5 haloacetic acids, 4 PFAS, uranium and the parameters of the national watch list, before 2 January 2024.
- 2. Operators should comply with the parametric values of the new parameters of annex I, part B: Bisphenol A, chlorite and chlorate, ∑5 haloacetic acids, 4 PFAS and uranium, before 2 January 2025.
- 3. Operators should control Σ 20 PFAS, before 2 January 2025 and comply with the parametric value before 2 January 2026.
- 4. The frequency of sampling and types of analysis indicated in annex II should be applied from 12 January 2023 onwards.

Eighth additional provision. Application of the provisions in annex III.

- 1. The provisions of annex III, parts C, D, E and F, on microbiological methods, characteristics of physical-chemical methods, validation of methods and use of kits should be applied from 2 January 2024 onwards.
- 2. The provisions of annex III, part A, on taking samples should be complied with from 1 July 2023 onwards.
- 3. The provisions of annex III, part B, on the accreditation of methods of analysis under standard UNE-EN ISO/IEC 17025. General requirements for the competence of testing and calibration laboratories. Laboratories should accredit all the parameters of annex I, parts A, B, C, E and F and annex IV that they analyse in their laboratories in the following cases:
- a) Laboratories that manage more than 5,000 samples of water intended for human consumption a year: before 2 January 2024;
- b) Laboratories that manage between 300 and 5,000 samples of water intended for human consumption a year: before 2 January 2028;
- c) While a method of analysis is not accredited, the laboratory should comply with the provisions of annex III, part E.
- 4. The operators, laboratories and health authorities included in the above point should accredit the sample taking before 2 January 2030, except in cases of operational and routine analyses.

Ninth additional provision. Application of the provisions in chapter IV.

- 1. The water administration shall carry out the risk assessment and management in catchment areas before 2 January 2027, following the guidelines in article 51. Notification of the results of the risk assessment and management shall be published in the SINAC and shall be accessible to operators.
 - 2. The deadlines for WSPs in the catchment areas are as follows:
- a) The WSPs for operators in types 5 and 6 catchment areas should be updated before 1 July 2023.
- b) The WSPs for operators in types 3 and 4 catchment areas should be documented before 2 January 2024 and the corrective measures should be applied before 2 January 2026.
- c) The WSPs for operators in types 1 and 2 catchment areas should be documented before 2 January 2025 and the corrective measures should be applied before 2 January 2027.
 - 3. Owners of priority premises shall:

- a) Register the required data and updated information for every priority premises in the SINAC or other similar information system before 2 July 2024.
- b) Document their WSP in accordance with the provisions of annex VIII, part C, before 2 January 2025, and should place it at the disposal of the health authority if it so requests.
 - c) Apply the corrective measures provided for in their WSP before 2 January 2027.

Tenth additional provision. *Interoperability of IT systems.*

- 1. The Ministry of Health and the Ministry for the Ecological Transition and the Demographic Challenge shall adapt their information technology systems to enable interoperability of same with regard to the data mentioned in this royal decree no later than 2 January 2027.
- 2. The Ministry for the Ecological Transition and the Demographic Challenge and the water administrations shall take the relevant measures to adapt all water rights related to the use of supply of urban centres for consumption before 1 December 2026 to permit the interoperability mentioned in section 1.

Eleventh additional provision. Adaptations.

Marketed products should be adapted to the new requirements referred to in article 44 before 2 January 2025.

Twelfth additional provision. Facilities with lead that comes into contact with water.

- 1. The owners of distribution networks, service connections and domestic systems of public or commercial buildings or rented accommodation should replace installed piping that contains lead and other products with lead components that come into contact with water, depending on the risk and always before 2 January 2030, when it is economically and technically feasible.
- 2. In any case, said elements in any existing premises shall be replaced when repair or rehabilitation work is carried out, and when new facilities are installed.
- 3. The parametric value of 5 $\mu g/L$ for lead in water intended for human consumption should be met before 2 January 2035.

Thirteenth additional provision. Schedule for evaluating structural leaks.

- 1. The operators of type 3, 4, 5 and 6 supply areas shall carry out an evaluation of structural leaks in raw water and drinking water lines. The first evaluation shall take place before 31 March 2025.
- 2. Evaluation of structural leaks of water intended for human consumption in reservoirs, distribution networks and service connections:
- a) In the case of distribution networks that supply more than 10,000 cubic metres a day in periods of peak consumption, the first evaluation shall be carried out on existing structural leaks in 2024. Said evaluation should be submitted before 31 March 2025 and then every two years, to the Ministry for the Ecological Transition and the Demographic Challenge and to the SINAC in accordance with the provisions of article 64.
- b) In the case of distribution networks that supply between 100 and 10,000 cubic metres a day in periods of peak consumption, the first evaluation shall be carried out on existing structural leaks in 2024. Said evaluation should be submitted before 31 March 2025 and then every four years to the Ministry for the Ecological Transition and the Demographic Challenge and to the SINAC in accordance with the provisions of article 64.
- 3. The Ministry for the Ecological Transition and the Demographic Challenge shall use this information to prepare the "Report on Structural Leaks", mentioned in the third additional provision,

which shall be updated every two years for the areas included in section 2.a) and every four years for the municipalities included in section 2.b).

Fourteenth additional provision. Minimum filtering and disinfectant treatment.

If the turbidity values for existing abstraction points are over 1 NFU in 5% of yearly tests, a filtration system using sand or other filter medium should be installed before 2 January 2024.

Sole temporary provision. Application of the royal decree to materials in contact with water.

- 1. For the purposes of article 44, manufacturers of the materials and products referred to 44 should issue an affidavit of compliance with the requirements of article 44.1 until the delegated acts of the European Commission establishing the procedures for evaluating compliance of products and markings included in article 44.4 come into effect. The affidavit should justify compliance with the European positive lists of substances and comply with the applicable test and acceptance methodologies. Said declaration should be issued along with said materials and products during the marketing of same.
- 2. Manufacturers of said products and materials should guarantee that they comply with the provision of article 44.1 until the European positive lists are available. They should justify said compliance in accordance with the current technical state of the art, and issue the relevant affidavit.

Sole repealing provision. Regulatory repeal.

The provisions of equal or lesser status that oppose the provisions on this royal decree, and in particular Royal Decree 140/2003, of 7 February, which establishes the health criteria for the quality of water intended for human consumption, are repealed.

First final provision. Modification of Royal Decree 742/2013, of 27 September, which establishes the health and technical criteria for swimming pools.

Royal Decree 742/2013, of 27 September, which establishes the health and technical criteria for swimming pools, is modified as follows:

One. Article 8 is modified as follows:

"Article 8. Staff.

The servicing, maintenance and cleaning personnel of the equipment and facilities of a swimming should have the necessary and required training for the activities that they carry out there, as long as the activities are operational in nature and have an effect on the quality of the water in the swimming pool."

Two. Article 15 is modified as follows:

"Article 15. Transmission of Information.

- 1. The public swimming pools defined in article 2, point 2, should enter the data relating to annex IV of the previous year in the SILOE information system (https://siloe.sanidad.gob.es) before 30 April every year. If there is no variation in the information about the swimming pool with regard to parts A and B of annex IV, the data should be entered at least every 5 years.
- 2. The competent authority defined in article 2, point 11, shall ensure that the local administration and the owners of the facilities comply with the provisions of point 1." Three. A third additional provision is added, which reads as follows:

"Third additional provision. Staff training.

The employees or the third-party service company that carries out activities relating to the treatment programme, notwithstanding the provisions of

Article 4 of Royal Decree 830/2010, of 25 June, should possess the professional qualifications required for maintenance of swimming pools and other aquatic facilities (SEA757_2), contained in Royal Decree 46/2022, of 18 January, which establishes the professional qualifications for the professional groups of Image and Sound, Information Technology and Communications, Installation and Maintenance, Health, Safety and Environment and Sociocultural Services for the Community, which are included in the National Catalogue of Professional Qualifications. Other professional qualifications belonging to the professional groups are partially modified, these being Safety and Environment and Sociocultural Services for the Community, contained in the National Catalogue of Professional Qualifications or a professional certificate of competence that accredits the units of competence corresponding to the training established in said qualification, or any of the accreditations contained in article 4.1 of Royal Decree 830/2010, of 25 June, which establishes the regulations for training to work with biocidal products, before 2 January 2026."

Second final provision. Modification of Royal Decree 817/2015, of 11 September, which establishes the criteria for monitoring and evaluating the status of surface waters and environmental quality standards.

Royal Decree 817/2015, of 11 September, which establishes the criteria for monitoring and evaluating the status of surface waters and environmental quality standards, is modified as follows:

One. Paragraph a), section 1 of article 8 is modified and reads as follows:

"a) The bodies of surface and ground water used to produce water for human consumption, and that provide an average of over 100 cubic metres a day from one or more abstraction points, shall undergo additional controls of the parameters, substances and contaminants that might constitute a risk to human health from consuming said water or lead to an unacceptable deterioration in water quality, pursuant to the results of the risk assessment and management of the catchment areas used to produce water intended for human consumption provided for in chapter VII of Royal Decree 3/2023, of 10 January, which establishes the health and technical criteria for the quality of water intended for human consumption and the control and supply of same. In any case, the control of priority substances and contaminants dumped in significant quantities shall be guaranteed.

The sampling points or stations selected for this control shall be identified as a control programme for waters used for supply."

Two. Section 5 is added to article 30, and reads as follows:

"5. All the bodies mentioned in this article that are involved managing data about the status and quality of water should publicise their information through interoperable services to facilitate the exchange of information and immediate access by other administrations to said data, so that the application of policies based on geographical information is facilitated, as established in article 1 of Law 14/2010, of 5 July, taking into consideration the provisions of annex II.7 of same."

Three. Section C.1) of annex I reads as follows:

"C.1) Control of water used for supply.

Purpose. This control consists of a set of sampling points for surface and ground waters that permit the monitoring of areas protected for being areas where water is abstracted to produce water intended for human consumption.

Selection of the sampling points:

Bodies of surface and ground water that provide an average of over 100 cubic metres a day of water used to supply a population shall be controlled.

A sufficient number of sampling points shall be selected at the sampling points to evaluate the magnitude and impact of the pressures that said water body is subjected to.

Quality elements and frequency of sampling:

The parameters, substances and contaminants that might constitute a risk to human health from consuming said water or lead to an unacceptable deterioration in water quality should be controlled. The parameters, substances and contaminants shall be selected in accordance with the assessment of the risks in the abstraction points of water used to produce drinking water provided for in in chapter VII of Royal Decree 3/2023, of 10 January, which establishes the health and technical criteria for the quality of water intended for human consumption and the control and supply of same.

In any case, the control of priority substances and contaminants dumped in significant quantities that are a potential risk for catchment areas where water is used to produce water intended for human consumption shall be guaranteed.

Additional controls shall be carried out according to the frequency shown below:

Population supplied	Frequency
< 10,000 inhabitants.	Quarterly.
10,000 to 30,000 inhabitants.	8 times a year.
> 30,000 inhabitants.	Monthly.

The frequency of sampling for each parameter, substance and contaminant shall be determined in accordance with the criteria and frequencies mentioned in Section B of this annex, once they have been classified as an element of general biological chemical or physical-chemical quality, a specific contaminant or priority substance.

If microbiological parameters have been selected, the frequency of control shall be monthly, quarterly or bi-annual and shall be established in accordance with the table of frequencies in annex II.C.2 of Royal Decree 3/2023, of 10 January, which establishes the health and technical criteria for the quality of water intended for human consumption and the control and supply of same. In any case, the maximum frequency for controls is monthly."

Third final provision. Modification of Royal Decree 487/2022, of 21 June, which establishes the health requirements for the prevention and control of legionellosis.

One, Section 7 is added to article 11. Said section reads as follows:

"7. The analytical results for Legionella obtained from samples of domestic water in priority premises taken in accordance with articles 7 to 9 shall be entered in the National Information System of Water for Human Consumption (SINAC) in the time and form provided for in annex XI of Royal Decree 3/2023, of 10 January, which establishes the health and technical criteria for the quality of water intended for human consumption and the control and supply of same."

Two. Section 8 is added to article 11. Said section reads as follows:

"8. Any non-compliance in the domestic water system of priority premises of the parameters mentioned in Table 1 of annex III shall be reported in the SINAC as a type II incident and shall be managed, without prejudice to any control measures that the authority considers appropriate, in accordance to the provisions of the Control Plan established in article 7."

Fourth final provision. Legislative authority.

This royal decree is issued pursuant to the provisions of article 149.1.16. of the Spanish Constitution, which attributes powers to the State for the bases and general coordination of health, and article 149.1.22 of the Constitution which attributes powers to the State on legislation, management and concession of water resources and uses when waters pass through more than one autonomous community. The second final provision is excepted, which is issued pursuant to the title expressed in the purpose of modification.

Fifth final provision. Incorporation of European Union Law.

This royal decree partially incorporates into Spanish law Directive (EU) 2020/2184 of the European Parliament and of the Council, of 16 December 2020, on the quality of water intended for human consumption.

Sixth final provision. Regulatory authorisation.

- 1. The persons responsible for the Ministries of Health, Industry, Trade and Tourism, Agriculture, Fisheries and Food, for the Ecological Transition and the Demographic Challenge, and of Consumer Affairs, to issue within the scope of their respective competencies the provisions necessary to implement this royal decree.
- 2. In particular, the person responsible for the Ministry of Health is authorised within the scope of its competencies to issue the provisions necessary to update and modify annex VI, in order to adapt it to scientific and technical developments, and in particular to the modifications made by European legislation, after receiving a favourable report from the Nuclear Safety Council.
- 3. The person responsible for the Ministry for the Ecological Transition and the Demographic Challenge is authorised to modify, after consultation with the relevant interested parties, the provisions of annex X with regard to the parameters and indices relating to structural leaks, with a view to adapting them to the provisions of EU legislation and scientific and technical developments, and to issue any implementing regulations that are required for the correct application of the provisions contained in said annex.

Seventh final provision. Entry into force.

This royal decree shall enter into force on 12 January 2023.

Issued in Madrid, on 10 January 2023.

FELIPE R.

Minister of the Presidency, Parliamentary Affairs and the Democratic Memory, FÉLIX BOLAÑOS GARCÍA

ANNEX I

Parameters and parametric values

Part A. Microbiological parameters

Table 1. Parametric values of microbiological parameters.

	Parameter	Parametric Value	Unit	Note
1	Escherichia coli.	0	CFU or MPN in 100 ml	
2	Intestinal Enterococci.	0	CFU or MPN in 100 ml	
3	Clostridium perfringens (including spores).	0	CFU in 100 ml	1
4	Legionella spp.	100	CFU in 1 L	2 and 3

Notes:

- When the assay is positive and there is turbidity of over 4 FNU, tests shall be carried out at the outlet of the DWTP or header reservoir, Cryptosporidium or other microorganisms or parasites indicated by the health authority.
- When the parametric value is exceeded, it should be established if it is Legionella pneumophila and the serogroup. The provisions to be followed are those of Royal Decree 487/2022, of 21 June, which establishes
- The sanitary requirements to prevent and control legionellosis.
- In the case of hospital augmented care units, in sanitary taps, the parametric value of Legionella spp should be "undetectable"/L» and
- Pseudomonas aeruginosa should be controlled with a reference value of less than 1 CFU/100ml.

Part B. Chemical parameters

Table 2. Parametric values of chemical parameters.

	Parameter	Parametric Value	Unit	Note
5	Acrylamide (CAS 79-06-01).	0.10	μg/L	1
6	Antimony.	10	μg/L	
7	Arsenic.	10	μg/L	
8	Benzene (CAS 71-43-2).	1.0	μg/L	
9	Benzo(a)pyrene (CAS 50-32-8).	0.010	μg/L	
10	Bisphenol A (CAS 80-05-7).	2.5	μg/L	
11	Boron.	1.5	mg/L	2
12	Bromate.	10	μg/L	
13	Cadmium.	5.0	μg/L	
14	Total cyanide.	50	μg/L	
15	Chlorate.	0.25	mg/L	3
16	Chlorite.	0.25	mg/L	3
17	Vinyl Chloride (CAS 75-01-4).	0.50	μg/L	1
18	Copper.	2.0	mg/L	
19	Total chromium.	25	μg/L	4
20	1,2-Dichloroethane (CAS 107-06-2).	3.0	μg/L	
21	Epichlorohydrin (CAS 106-89-8).	0.10	μg/L	1
22	Fluoride.	1.5	mg/L	
23	Mercury.	1.0	μg/L	
24	Microcystin- LR.	1.0	μg/L	5
25	Nickel.	20	μg/L	
26	Nitrate.	50	mg/L	6
27	Nitrites.	0.50	mg/L	6 and 7
28	Individual pesticide.	0.10	μg/L	8 and 9
29	Lead.	5.0	μg/L	10
30	Selenium.	20	μg/L	11
31	Uranium.	30	μg/L	
	Sum parameters (Note 19):			
32	∑5 Haloacetic Acids (HHA).	60	μg/L	12
33	Σ 4 Polycyclic Aromatic Hydrocarbons (PAH).	0.10	μg/L	13
34	Σ20 PFAS.	0.10	μg/L	14 and 15
35	∑n Total pesticides.	0.50	μg/L	16
36	Σ2 Trichloroethene + Tetrachloroethene.	10	μg/L	17
37	Σ4 Trihalomethanes (THM).	100	μg/L	18

Notes:

- The parametric value refers to the concentration of residual monomer in the water, calculated in accordance with the specifications of the maximum liberation of corresponding polymer in contact with the water.
- A parametric value of 2.4 mg/L shall be used when the entire water source is transitional or coastal and the treatment process involves desalination, or in a supply area with abstraction points in groundwaters where the geological conditions may cause high boron levels.
- A parametric value of 0.7 mg/L shall be applied when the methods used to disinfect water intended for human consumption create chlorate or chlorite, especially chlorine dioxide and hypochlorite
- If the yearly average parametric value of 0.25 mg/L is exceeded, operators should adapt their facilities and use the best techniques available to reduce the value to below the parametric level, without compromising the effectiveness of the disinfection process.
- The parametric value shall be 50 mg/L until 2 January 2030. The value shall be Chromium III + Chromium VI.
- $\begin{tabular}{ll} 5 & When the water is partially or completely taken from a reservoir, lake or lagoon. \\ \end{tabular}$
- After purification, at least one condition should be met, that of [nitrate] / 50 + [nitrite] / 3 ≤ 1, d where the square brackets signify the concentrations in mg/L for nitrate (NO₃) and nitrite (NO₂), while the value of 0.10 mg/L for nitrites should be complied with at the outlet of the DWTP.
- This parametric value is for a distribution network, distribution basin or regulating reservoir.
- The parametric value shall be 0.10 mg/L for outlets of a DWTP or header reservoir.

Pesticide refers to any organic insecticide, herbicide; fungicide; nematicide; adarcicide; algicide; rodenticide; slimicide and related products (e.g., growth regulators) and their metabolites, as defined in article 3.32 of Regulation (EC) No. /2009, which are considered to be important factors in water intended for human consumption. A metabolite is regarded as important in water intended for human consumption if there are reasons to believe that it has intrinsic properties comparable to those of the original substance in terms of its purpose or if it implies a risk to a user's health (the metabolite itself or the result of its transformation products). 8 The minimum controls should be for pesticides that are suspected of being present in water intended for human consumption or in a supply area. The regional ministries or departments with competencies in agriculture shall inform the health authorities, water administrations and operators of the list of pesticides authorised and used in their region before 1 November every year. The health authorities shall use said lists to prepare a list of important pesticides and metabolites, taking into consideration their potential presence in water intended for human consumption. The value of 0.1 µg/L shall be applied to controlled pesticides that were authorised the year before. If the controlled pesticide is unauthorised or prohibited or in a situation where authorisation is not given, the parametric value of said pesticide should be below 0.03 µg/L. If it is detected, the health authority and the Hydrographical Confederation shall be immediately notified. The detection limit should always be below $0.03~\mu g/L$. The parametric value in distribution networks, cistern and tank outlets and DWTP outlets shall be 10 μg/L until 2 January 2030. The parametric value in the taps of domestic networks shall be 10 μg/L until 2 January 2035. 11 A parametric value of 30 μg/L shall be applied in supply areas where the geological conditions of bodies of groundwater may lead to high levels of selenium, after authorisation is given by the health authority as a result of a geological study of the terrain To be controlled when the disinfection method uses products that liberate or generated active chloride. Total parameter after determining 5 substances: Monochloroacetic acid CAS 79-11-8 12 - Dichloroacetic acid CAS 79-43-6 - Trichloroacetic acid CAS 76-03-9 Monobromoacetic acid CAS 79-08-3 Dibromoacetic acid CAS 631-64-1 The operator should make every effort to obtain as low a value as possible without compromising the disinfection process at any time. Total parameter after determining 4 substances Benzo(b)fluoranthene CAS 205-99-2 13 - Benzo(ghi)perylene CAS 191-24-2 - Benzo(k)fluoranthene CAS 207-08-9 Indeno(1,2,3-cd)pyrene CAS 193-39-5 Total parameter after determining perfluoroalkyl and polyfluoroalkyl substances regarded as contaminants of emerging concern in water intended for human consumption: - Perfluorooctanoic acid (PFOA) CAS: 335-67-1 - Perfluorooctane sulfonic acid (PFOS) CAS: 1763-23-1 - Perfluorononanoic acid (PFNA) CAS: 375-95-1 - Perfluorohexane sulfonic acid (PFHxS) CAS: 355-46-4 - Perfluorobutanesulfonic acid (PFBS) CAS: 375-73-5 - Perfluorobutanoic acid (PFBA) CAS: 375-22-4 - Perfluorodecane sulfonic acid (PFDS) CAS: 335-77-3 - Perfluorodecanoic acid (PFDA) CAS: 335-76-2 - Perfluorododecane sulfonic acid (PFDoS) CAS: 79780-39-5 - Perfluorododecanoic acid (PFDoDA) CAS: 307-55-1 Perfluoroheptane sulfonic acid (PFHpS) CAS: 375-92-8
 Perfluoroheptanoic acid (PFHpA) CAS: 375-85-9 - Perfluorohexanoic acid (PFHxA) CAS: 307-24-4 - Perfluorononanesulfonic acid (PFNS) CAS: 68259-12-1 - Perfluoropentanesulfonic acid (PFPeS) CAS: 2706-91-4 - Perfluoropentanoic acid (PFPeA) CAS: 2706-90-3 - Perfluorotridecane sulfonic acid (PFTris) CAS: -- Perfluorotridecanoic acid (PFTrDA) CAS: 72629-94-8 - Perfluoroundecane sulfonic acid (PFUnS) CAS: 749786-16-1 - Perfluoroundecanoic acid (PFUnDA) CAS: 2058-94-8 The main feature of this group of PFAS is that they contain perfluoroalkyl remnants with three or more carbons (i.e., -CnF2n-, $n \ge 3$) or remnants of perfluoroalkylether with two or more carbons (i.e., -CnF2nOCmF2m-, n and m \geq 1). A These 4 PFAS shall be controlled with the following parametric values (PV) before 2 January 2024 Perfluorooctanoic acid PFOA CAS 335-67-1 PV = 0.07 μg/L Ácido perfluorooctanosulfónico PFOS CAS 1763-23-1 VP = 0.07 μg/L 15 - Perfluorononanoic acid PFNA CAS 375-95-1 PV = 0.07 μg/L Perfluorohexanesulfonic acid (PFHxS) CAS: 355-46-4 VP= 0.07 μg/L EI The detection limit should always be below 0,07 $\mu g/L$. These parametric values shall only be valid up to 2 January 2026. The values of the total parameters shall be the outcome of the sum of the quantified values of the individualised pesticides that might be present in the water intended for human consumption. Total parameter after determining 2 substances:

- 17 Trichloroethene CAS 79-01-6
- Tetrachloroethene CAS 127-18-4

Total parameter after determining 4 substances: - Bromodichloromethane CAS 75-27-4

- 18 Bromoform CAS 75-25-2 Chloroform CAS 67-66-3
 - Dibromochloromethane CAS 124-48-1
 - The operator should make every effort to obtain as low a value as possible without compromising the disinfection process at any time.
- 19 The values of the total parameters shall be the outcome of the sum of the quantified values of the individualised parameters in each case.

Part C. Quality indicator parameters

Table 3. Quality indicator parameter values.

	Parameter	Parametric value	Unit	Note
38	Coliform bacteria.	0	CFU or MPN / 100 ml	1
39	Colony count at 22 ºC.	100	CFU / 1 ml	2
40	Somatic coliphages.	0	PFU / 100 ml	3
41	Aluminium.	200	μg/L	4
42	Ammonium.	0.50	mg/L	5
43	Total Organic Carbon.	5.0	mg/L	6
44	Combined residual chlorine.	2.0	mg/L	7
45	Free residual chlorine.	1.0	mg/L	8
46	Chloride.	250	mg/L	9
47	Conductivity.	2500	μS/cm at 20 ºC	10
48	Iron.	200	μg/L	11
49	Manganese.	50	μg/L	12
50	Oxidisability.	5.0	mg/L	13
51	pH.	6.5 a 9.5	pH units	14
52	Sodium.	200	mg/L	15
53	Sulphate.	250	mg/L	16
54	Turbidity.	4.0	FNU	17
55	Langelier index.	+/- 0.5	pH units	18

Notes:

- If the value is exceeded, this means that the water was not effectively disinfected or that it was re-contaminated, which means that corrective measures should be taken. The value for an unsuitable level is 100 CFU/100 ml
- 2 The value for an unsuitable level at the purification outlet is 1,000 CFU/1 ml
- If they appear in treated water, the operators should carry out a quantitative microbiological viral risk assessment in accordance with WHO criteria, alongside immediate and adequate corrective measures.
- Immediate corrective measures are recommended when results show +300 µg/L at the treatment outlet, since this outcome indicates that the DWTP has been ineffectively managed. The value for an unsuitable level is 600 µg/L

If products that release or generate active free chlorine are used, a high concentration of ammonium reduces the efficacy of disinfection, therefore the level should never exceed 1.00 mg/L. If monochloramines are used, the ammonium should be measured as an indicator of contamination before adding the ammonia required to generate monochloramine. If values are over 0.7 mg/L, immediate corrective measures are recommended.

The value for an unsuitable level is 1.00 mg/L

- Corrective measures should be taken immediately when values are over 6 mg/L.
- The value for an unsuitable level is 7.0 mg/L

The parametric value is for a distribution network, cistern tanker, distribution basin or regulating reservoir and tap.

If the presence of combined residual chlorine at the treatment outlet is over 1 mg/L for reasons other than the use of chloramination, immediate use of corrective measures is recommended and the levels of free residual chlorine should be reviewed.

If chloramination is used and the parametric value of combined residual chlorine is exceeded in the distribution network, immediate corrective measures are recommended. Furthermore, when the authority considers it necessary to respond to a level above 2 mg/L, the operator should determine: NDMA CAS: 62-75-9. The value for an unsuitable level is 3.0 mg/L

Levels of at least 0.2 mg/L in all the points of the distribution network are generally recommended.

To ensure the efficacy of the disinfection process, the recommendation is to maintain levels of free residual chlorine of at least 0.4 mg/L for 30 minutes with a pH below 8.0 and a maximum turbidity of 1 FNU.

The parametric value is for distribution networks, cistern tankers, distribution basins, regulating reservoirs

and taps. The value for an unsuitable level is 5.0 mg/L.

If chlorine dioxide is used, the residual to be measured is this one and a limit of 0.8 mg/L shall be applied.

If chloride levels are over the parametric value, testing the corrosive potential of the water is recommended (Langelier index, Larson index, etc.). The correct corrective measures shall be taken depending on the results.

High concentrations of chloride give a salty taste to the water.

The water should never be aggressive or encrusting. The result from a calculation with the Langelier index should be between +0.5 and - 0.5. Use of the Ryznar index is also recommended.

10 The value for an unsuitable level is 4,000. µS/cm at 20 °C

Immediate corrective measures are recommended when levels of iron exceed 300 µg/L. The water may be coloured and turbid when

11 the parametric level is exceeded

The value for an unsuitable level is 600 µg/l

The water may be coloured and turbid when the parametric level is exceeded, and may stain clothing and sanitary materials.

12 The value for an unsuitable level is 80 μg/l.

Immediate corrective measures should be taken when the parametric value is exceeded.

The value for an unsuitable level is 7.0 mg/L

The water should never be aggressive or encrusting. The result from a calculation with the Langelier index should be between +0.5 and - 0.5. Use of the Ryznar index is also recommended. The pH values should always match the disinfection system used, to ensure that it is effective. The values for unsuitable levels are less than 4.5 and more than 10.0.

If sodium levels are higher than the parametric value, testing the corrosive potential of the water is recommended (Langelier index, Larson index, etc.). The correct corrective measures shall 15 be taken depending on the results.

The value for an unsuitable level is 600 mg/L

When sulphate levels are over 500 mg/L, immediate corrective measures are recommended. The water should not be aggressive. The

16 Langelier index should be used.

The value for an unsuitable level is 750 mg/L.

This parametric value if for water intended for human consumption in distribution basins, regulating reservoirs, distribution networks and indoor

systems. The reference value at the outlet of the DWTP or header reservoir should be 0.8 FNU.

17 The reference value in the operational control in 95% of the yearly samples should be equal to or less than 0.3 FNU in the DWTP filter process outlet, in the outlet of the reservoir where purification is carried out, and at the outlet of the membrane technology treatment process in a desalination plant.

The value for an unsuitable level at the outlet of the DWTP or the header reservoir is 2 FNU, and 6 FNU in the network

18 The value of this parameter is related to the pH, chlorides, sulphates and conductivity.

Part D. Organoleptic properties

Table 4. Reference values of organoleptic properties (Note 1).

	Parameter	Reference value	Unit	Note
56	Colour	15	mg/L Pt/Co	
57	Smell	3	Dilution index	
58	Taste	3	Dilution index	

Note:

The parametric value of these parameters is "acceptable for the consumer and with no abnormal changes".

"Abnormal changes" are regarded as values that are over double the average value of ate least the last three years in the distribution network.

Part E. Radioactive Substances

Table 5. Parametric values of radioactive substances.

	Parameter	Parametric value	Unit	Note
59	Total alpha activity.	0.1	Bq/L	1
60	Total beta activity.	1.0	Bq/L	1
61	Radon.	500	Bq/L	2, 3
62	Tritium.	100	Bq/L	4
63	Indicative Dose (Σ radionuclides) ID.	0.10	MSv	5
				and 6

Notes:

1	The total alpha and other beta values are regarded as screening values to control the ID, and the provisions of annex V shall be followed.					
,	The actions of the operators should be geared towards optimising protection of the population when radon levels are below 500 Bq/L, whenever this is possible and without affecting the water					
4	supply itself.					
3	Corrective measures for reasons of radiological protection are regarded as justified, with no other factors to be taken into consideration, when concentrations of radon exceed 1,000 Bq/L.					
	Some high levels of tritium may indicate the presence of other	artificial radionuclides. If the concentra	tion of tritium is higher than its parametric value, an analysis to establish the presence of			
4	other artificial radionuclides is required.					
rindicative dose (ID)" is the effective committed dose from one year of ingestion of all the radionuclides that have been discovered in the water intended for human consumption, r						
1	"Indicative dose (ID)" is the effective committed dose from one year of ingestion of all the radionuclides that have been discovered in the water intended for human consumption, regardless of whether they are natural or artificial in origin, excluding tritium, potassium-40, radon and short-lived radon decay products.					
Г	Total parameters of all the radionuclides shown below:					
	- Am 241	- I 131	- Ra 226			
6	– C 14	- Pb 210	- Ra 228			
1	- Co 60	- Po 210	- Sr 90			
	- Cs 134	- Pu 239	- U 234			
	Co 127	Du 240	11 220			

1. Values for the most common natural and artificial radionuclides;

These are precise values calculated for a dose of 0.1 mSv and a yearly ingestion of 730 litres, using the dose coefficients contained in table A, annex III of Royal Decree 783/2001, of 6 July. The derived concentration for other radionuclides can be calculated by using the same base, while the values based on the most recent information recognised by the Ministry of Health can also be updated. This table only includes the radiological properties of uranium, not its chemical toxicity.

Table 6. Values of the derived concentrations of radionuclides.

	Parameter	Derived concentration	Unit
	U 238	3.0	Bq/L
	U 234	2.8	Bq/L
Nistrasi	Ra 226	0.5	Bq/L
Natural	Ra 228	0.2	Bq/L
	Pb 210	0.2	Bq/L
	Po 210	0.1	Bq/L

	Parameter	Derived concentration	Unit
	C 14	240	Bq/L
	Sr 90	4.9	Bq/L
	Pu 239	0.6	Bq/L
	Pu 240	0.6	Bq/L
Artificial	Am 241	0.7	Bq/L
	Co 60	40	Bq/L
	Cs 134	7.2	Bq/L
	Cs 137	11	Bq/L
	I 131	6.2	Bq/L

2. Calculation of Indicative Dose (ID)

The ID is calculated according to the concentrations of measured radionuclides and the coefficients of the doses contained in table A, annex III of Royal Decree 783/2001, of 6 July, which approves the regulations on health protection against ionising radiation, or from more recent information recognised by the health authority, based on the yearly ingestion of water (730 L for adults).

If the formula shown below is complied with, then the ID may be considered to be lower than the parametric value of 0.1 mSv, and no further investigation needs to be carried out:

$$\sum_{i=1}^{n} \frac{Ci \text{ (med)}}{Ci \text{ (der)}} \leq 1$$

where: Ci (med) = measured concentration of radionuclide i. Ci (der) = derived concentration of radionuclide i. n = number of radionuclides detected.

Part F. Classification of water

Table 7. Reference values of parameters that classify water.

	Parameter	Reference value	Unit	Note
64	Calcium.	100	mg/L	
65	Total hardness.	500	mg/L CaCO ₃	1
66	Magnesium.	30	mg/L	
67	Potassium.	10	mg/L	

Notes:

1. The minimum parametric value for desalinated or softened water should be at least 55 mg/L CaCO_3 .

ANNEX II

Types of analysis and frequency of sampling

Part A. General aspects

- 1. The controls of water intended for human consumption are as follows:
- a) Check that the measures established to control the risks to human health throughout the water supply chain: the catchment area in the protected zone, abstraction point, treatment and storage, up to the distribution system are effectively working and that the water at the point of compliance is wholesome and clean;

- b) Provide information about the quality of the water supplied for consumption to demonstrate that the obligations established in this law and the parametric values in annex I are complied with;
 - c) Identify the most adequate corrective measures to mitigate risks to human health.
- 2. The following analyses shall be carried out in accordance with the provisions of this annex:
- a) A "routine control" assesses the organoleptic properties of the water intended for human consumption and controls disinfection;
- b) A "control analysis" provides the operator and the health authority with information about the organoleptic and microbiological quality of the water intended for human consumption, and information about the effectiveness of the water purification process;
- c) A "complete analysis" provides the operator and the health authority with information needed to determine compliance with the parametric values of all the parameters contained in this law;
- d) A "radioactivity control" provides the operator and the health authority with information about the presence of natural or artificial radioactive substances in water intended for human consumption;
- e) An "operational control" is a rapid analysis that provides the operator with a view of the effectiveness of the treatment and of any water quality issues, and enables the operator to quickly set in motion pre-planned corrective measures;
- f) A "water classification" provides citizens with information about the general characteristics of the water.
- g) A "control at the tap" provides the owner of a premises, the operator and the health authority with information needed to determine water quality at the point of compliance of indoor systems. It includes controls carried out by local government on a user's tap, and analyses carried out by owners of a building in "controls of priority premises".
- h) A "control on vessels" provides the operator of a passenger vessel and the health authority with the necessary information to determine the quality of water intended for human consumption at the point of compliance in a vessel's interior water supply system.
- 3. An operator that has a WSP may apply to the health authority to vary the frequency of the control and complete analyses, in accordance with the provisions of annex VII.
- 4. An operator that has a WSP, in accordance with the provision of the section above, may not reduce the frequency of the sampling processes indicated in this royal decree for the following parameters: *E. coli, Intestinal Enterococci and Turbidity*. Furthermore:
- a) If the health authority considers it to be necessary, the operator may not reduce the frequency of tests for somatic coliphages and *Clostridium perfringens*, including the spores;
- b) Controls for *Pseudomona Aeruginosa* at taps in augmented care units at hospitals and health centres should not be reduced in frequency.

Part B. Parameters controlled in each type of analysis

1. Routine control.

This analysis can be carried out at the following types of sampling points:

- Distribution networks.
- Users' taps.
- On taps in passenger vessels.

At least the following parameters shall be checked:

	Organoleptic: Colour; Taste and Smell
Always	Turbidity; (with kit, at laboratory or online).
	pH; (with kit, at laboratory or online).
When disinfectous weed into the system of a consequence of the system of	Additional test:
When disinfectant products that release or generate active chlorine are used	Free residual chlorine (with kit, at laboratory or online).

Any other parameter that the health authority considers necessary

2. Control analysis:

This analysis may be carried out at the following types of sampling points:

- DWTP or header reservoir outlet.
- Distribution/regulating basin.
- Distribution network.
- Cistern tanker outlet.

At least the following parameters shall be checked:

Always.	E. coli; intestinal enterococci; coliform bacteria; colony count at 22 °C; Colour; Taste, Smell (with kit or at laboratory) pH; Conductivity, Turbidity;
When disinfectant products that release or generate active chlorine are used.	Additional test: Free residual chlorine (with kit or at laboratory).
When the results of these parameters have exceeded the parametric values in the last complete analysis .	Additional test: the following are checked until they reach their parametric value: Chlorite or chlorate, THM or Haloacetic Acid
When chloramination is carried out.	Additional test: controls of: Nitrites; combined residual chlorine and Ammonium
When aluminium or iron salts are used in purification processes.	Additional test: aluminium or iron levels shall be checked at the header reservoir or DWTP outlet
At outlet of DWTP or header reservoir.	Additional test: controls of: Clostridium perfringens (including spores)
	Any other parameter that the health authority considers necessary

3. Complete analysis.

This analysis may be carried out at the following types of sampling points:

- DWTP or header reservoir outlet
- Distribution basin or regulating reservoir outlet.
- Distribution network.

The following parameters shall be checked:

Always.	Escherichia coli, intestinal enterococci; Clostridium perfringens (including spores) Acrylamide; Antimony; Arsenic; Benzene; Benzo(a)pyrene; Bisphenol A, Boron; Bromate; Cadmium; Total cyanide; Vinyl Chloride; Copper; Total chromium; 1,2-Dichlorethane; Epichlorohydrin; Fluoride; Mercury; Nickel; Nitrate; Nitrites; Lead; Selenium; Uranium Pesticides: at least the ones indicated by the health authority; Σ20 PFAS; Ση Pesticides; Σ4 Aromatic Polycyclic Hydrocarbons; Σ2 Trichloroethene + Tetrachloroethene; Σ5 Haloacetic Acids, Σ4 Trihalomethanes, Coliform bacteria; Colony count at 22 °C; Somatic Coliphages Colour; Smell; Taste (with kit or at laboratory) pH; Aluminium; Ammonium; Chloride; Conductivity; Iron; Manganese; Langelier Index, Sodium; Sulphate. Turbidity Chlorate, Chlorite, Combined residual chlorine, Free residual chlorine
In type 1, 2 and 3 supply areas.	Additional test: Oxidisability.
In type 4, 5 and 6 supply areas.	Additional controls: Total Organic Carbon
When part or all of the water comes from a man- made reservoir, lake or lagoon	Additional test: Microcystin-LR
When the sampling point is a distribution network.	Possible additional tests: Fluoranthene (with reference value of 0.01 μg/L) Any other parameter that the health authority considers necessary

4. Radioactivity controls.

This analysis may be carried out at the following types of sampling points:

- Abstraction point.
- DWTP or header reservoir outlet.
- If there is no DWTP or header reservoir, the control shall be carried out at the outlet of the regulating or distribution bason.
- Distribution network if there is no reservoir between the abstraction point and distribution network.

The following parameters shall be checked, notwithstanding the provisions of annex VI:

Always.	Total alpha activity.
, and jo.	Other beta activity.
When the water comes from groundwater.	Additional test:
when the water comes from groundwater.	Radon.
When the water comes from surface water and there is a nuclear power station upstream.	Additional test:
	Tritium.
In accordance with annex I, part E.2, and annex VI.	Calculation of indicative dose.
	Any other parameter that the health authority considers necessary.

5. Operational controls.

- a) Operational controls take into consideration the results of the identification of hazards and hazardous events and assessments of supply risks, and set out to confirm the effectiveness of all the control measures in abstracting, treating, storing and distributing the water. The parameters mentioned in this section shall be reported in the SINAC.
- b) The controls shall be carried out on the following parameters at the sampling points assigned by the operator in the DWTP, the basin where disinfection takes place, the distribution network or passenger vessel. The frequency of the controls is defined in point 4, part C of this annex:

Always.	Turbidity;
After cleaning settling tanks, distribution tanks or interior network of passenger vessel	Additional test:
.	Clostridium perfringens including spores.
	Additional controls:
After disinfecting DWTP or other infrastructure.	pH
	Free residual chlorine.
	Any other parameter that the health authority considers necessary.

c) The following parameters shall be controlled at the sampling points assigned by the operator at the abstraction point. The frequency of the controls is defined in point 4, part C of this annex:

Always (except for seawater or if the WSP does not include it as a control parameter).	Somatic coliphages; If > 50 PFU/100 ml. Controls shall also be carried out at the treatment plant or header reservoir outlet:
When part or all of the water comes from a man-made reservoir, lake or lagoon.	Additional tests: Microcystin- LR, if >1 µg/L, chlorophyl a. shall be checked. If chlorophyl a is > 50 mg/m³, tests shall also be carried out to identify potential cyanobacteria and other cyanotoxins.
If the abstraction point is on farmland	Additional tests: Authorised individual pesticides that may be in the catchment area or if the WSP includes them as a control parameter.

6. Classification of water.

This analysis can be carried out at the distribution network. The following parameters shall be checked:

Always Hardness, Calcium, Magnesium and Potassium

7. Control at taps.

This analysis shall be carried out at the most commonly used tap assigned by the owner of the premises in the indoor system, preferably in housing and buildings built before 1980.

The following parameters shall be checked:

Always.	Escherichia coli; Colony count at 22 °C; Colour; Turbidity; pH; Conductivity; Free residual chlorine; Lead.
If chloramination is used.	Additional tests: Combined residual chlorine; Nitrites and Ammonium;
When it is suspected that metal piping was installed.	Additional controls: Copper; Total chromium; Nickel; Iron or other inorganic parameter, when it is suspected that the indoor system may have this type of material installed.

When it is suspected that plastic or PVC piping was	Additional tests:
installed.	Vinyl chloride and Bisphenol A.
In priority promises	Additional tests:
In priority premises.	Legionella spp.
In hospitals and health centres.	Additional tests. Pseudomona aeruginosa in augmented care units. Cold water temperature.
in nospitals and nearth centres.	Hot water temperature.
	Any other parameter that the health authority considers necessary.

8. Controls on vessels.

The following specific control for passenger vessels should be carried out alongside the routine control:

Alweye	Escherichia coli; Legionella spp.
Always.	Lead; Iron, Copper, Total chromium, Vinyl chloride and Bisphenol A.
If seawater is desalinated.	Boron.

- a) Passenger vessels that desalinate seawater should also carry out an operational control.
- b) Owners of passenger vessels that do not desalinate seawater and use water from a public distribution network for human consumption should request a bulletin of the last control analysis and complete analysis carried out on the water of the network by the operator of the distribution network.

Part C. Yearly frequency of samples

- 1. General aspects.
- a) The volumes of water distributed shall be calculated as averages in a calendar year. To determine the minimum frequency when the daily distributed volume of water is unknown, the number of inhabitants of an area can be used instead of the water volume, in which case the calculation shall be made in terms of water consumption of 200 litres a day per person.
 - b) The supply area is the one defined in article 2.1.
- c) Whenever possible, the number of samples should be uniformly distributed over time and the area.
- d) The routine control shall be carried out every week, as long as no control or complete analyses have been carried out that week.
 - e) The water classification test shall be carried out at least every six months.
 - 2. Minimum frequency of sampling.

Table 8. Frequency of yearly sampling in each supply area.

Type of SA	Control analysis	Complete analysis	Radioactivity control
Type 1 area <10 m ³	At the health authority's discretion		
Type 2 area >10 m³ and <100 m³	3	1	1 every 5 years
Type 3 area > 100 m³ and < 1,000 m³	4	2	1
Type 4 area > 1,000 m ³ and < 10,000 m ³		1 for the first 1,000 m ³ + 1 for each additional 4,500 m ³ or fraction of total volume.	1 for the first 1,000 m ³ + 1 for each additional 3,300 m ³ or fraction of total volume.
Type 5 area (>10,000 - <100,000 m³)	4 for the first 1,000 m ³ + 3 for each additional 1,000 m ³ or fraction of total volume.	3 for the first 10,000 m³ + 1 for each 10,000 m³ or fraction of total volume.	3 for the first 10,000 m ³ + 1 for each additional 10,000 m ³ or fraction of total volume.
Type 6 area (over 100,000 m³)		12 for the first 100,000 m ³ + 1 for each additional 25,000 m ³ or fraction of total volume.	12 for the first 100,000 m³ + 1 for each addition 25,000 m³ or fraction of total volume.

3. Minimum sampling frequency according to infrastructure.

Table 9. Yearly frequency of complete analysis according to infrastructure.

Volume of water (m³)	Outlet of DWTP or header reservoir Volume of water treated a day (m³)	Regulating or distribution basin Basin capacity (m³)	Distribution network Volume of water distributed a day (m³)
< 10 m ³	At the health authority's discretion		
> 10 to < 100 m ³	At the health authority's discretion		1
> 100 to < 1,000 m ³	1	1	1
> 1,000 to < 10,000 m ³	1 for each 5,000 m³/day and fraction of total volume	2	1 for each 5,000 m³/day and fraction of total volume
> 10,000 to < 100,000 m ³	2 + 1 for each 20,000 m ³ /day and fraction of total volume	4	2 + 1 for each 20,000 m³/ day and fraction of total volume
> 100,000 m ³	5 + 1 for each 50,000 m³/day and fraction of total volume	6	5 + 1 for each 50,000 m ³ / day and fraction of total volume

Notes:

The number of complete analyses to be carried out by the operator shall be the outcome of applying this frequency, unless said value is less than the one established in table 8. The number of samples in the distribution network for the complete analyses should therefore be increased to comply with the provisions of table 8.

Table 10. Yearly frequency of control analysis according to infrastructure (note 2).

Volume of water (m³)	Outlet of DWTP or header reservoir Volume of water treated a day (m³)	Regulating or distribution basin Basin capacity (m³)	Distribution network Volume of water distributed a day (m³)
< 10 m ³	At the health authority's discretion		
> 10 to < 100 m ³	1	1	1
> 100 to < 1,000 m ³	1	1	2
> 1,000 to < 10,000 m ³		12	
> 10,000 to < 100,000 m ³	1 for each 1,000 m³/day and fraction of total volume	18	1 for each 1,000 m³/day and fraction of total volume
> 100,000 m ³	·	24	

Notes:

The number of control analyses to be carried out by the operator shall be the outcome of applying this frequency, unless said value is less than the one established in table 8. The number of samples in the distribution network for the control analyses should therefore be increased to comply with the provisions of table 8.

2 A control analysis of cistern tankers shall be carried out when the health authority instructs the operators involved to do so.

4. Operational control.

Table 11. Frequency of yearly samples according to volume of water treated, apart from turbidity:

Volume of water treated (m³/day)		At abstraction point, or at a DWTP or OWDP: if there is no DWTP, at the header reservoir or basins where water is re-chlorinated
	≤ 100	6
> 100	≤ 1,000	12
> 1,000	≤ 10,000	24
> 10,000		52

The turbidity control for a DWTP: if there is not DWTP, the sample is taken at the header reservoir:

Volume of water treated in cubic metres or volume of water distributed/day	Minimum frequency
≤ 1,000	Weekly
> 1,000 to ≤ 10,000	Daily
>10,000	Online (note 1)

Note 1: The following shall be reported in the SINAC: the average daily value and the maximum daily value.

5. Minimum control of taps under municipal monitoring according to supply area.

Table 12. Minimum yearly frequency for control of taps:

Number of inhabitants supplied	Minimum number of samples a year
Type 1 supply area.	1
Type 2 supply area.	4
Type 3 supply area.	6
Type 4, 5 and 6 supply area.	6 for the first 5,000 + 1 for each 5,000 inhabitants and fraction

If the indoor tank has a capacity of more than 1.000 m³, the controls and frequency of same shall comply with table 9.

6. Control of taps for priority premises.

The number of samples will depend on the number of access points to the water: wet rooms (rooms where there are devices that consume water) and showers.

The taps used in augmented care units at hospitals and health centres shall all be sampled for microbiological parameters.

Table 13. Minimum number of samples a year.

No. of access points to water	Yearly analyses per building	
< 50	2	
>50 to <100	4	
>100 to <200	6	
>200	6 for the first 200 + 1 for each fraction 100 or fraction	

If the capacity of the indoor tank is over 1,000 m³, the controls and frequency shown in table 9 shall be complied with.

The samples shall be taken on a representative bases throughout the year: every two months if there are 6; every three months if there are 4, etc.

7. Controls on passenger vessels.

The frequency of the specific controls on passenger vessels should be at least on a quarterly basis.

This data and the characteristics of the vessels shall be entered in the SINAC.

ANNEX III

Sample taking and methods of analysis

Part A. Sample taking

Samples from taps.

Sampling from taps shall meet the following requirements:

- a) The samples taken for specific chemical parameters (in particular, copper, lead and nickel) shall be taken from one single tap without opening it previously. A random daily sample of one litre should be taken.
- b) When the above parameter levels exceed the parametric values and it has been established that the non-compliance is caused by issues in the interior system, in accordance with article 15.2, other sampling methods can be used:
- 1. The tap is run previously and the water left to settle for thirty minutes, after which the sample is taken, or
- 2. Proportional sample: a bottle is connected to the tap, and a small percentage of the water consumed in a week is collected. This sampling methods more accurately reflects users' average weekly consumption;
- c) The samples taken from a tap for microbiological parameters shall be taken and handled in accordance with standard UNE-EN ISO 19458. Water quality. Sampling for microbiological analysis, the objective being to classify any kind of contamination, the level

and any variations of same: random variation, trend or cycle (sampling with objective B).

- 2. Sampling from a distribution network or outlet of a DWTP or tank.
- a) The sample process shall be carried out in accordance with standard UNE-ISO 5667-5 Water quality. Sampling. Part 5: O Guidance on sampling of drinking water from treatment works and piped distribution systems;
- b) The samples for microbiological parameters shall be taken and handled in accordance with standard UNE-EN ISO 19458. Water quality. Sampling for microbiological analysis, to determine if the water intended for human consumption complies with the quality specifications of this royal decree.

Part B. General aspects

- 1. Public or private laboratories that carried out tests on water should comply with the provisions of article 20.
- 2. Laboratories should have all the methods of analysis for the parameters in annex I, parts A, B, C, E and F, accredited by standard UNE-EN ISO/IEC 17025. General requirements for the competence of testing and calibration laboratories, and with the specifications of annex III, parts C and D. Exceptions may be made for accrediting the parameters of operational and routine controls, with the proviso that the laboratory in question only carries out these two types of analysis.
- 3. If a laboratory does not have a method accredited by the UNE-EN ISO/IEC 17025, it should be validated and documented in accordance with annex III. part E and with the specifications defined in annex III, parts C and D.
- 4. The operators who carry out controls online or onsite with apparatuses, should have the devices regularly checked and adjusted, and possess documentation of the most recent calibration.
- 5. In the absence of an analytical method that complies with the minimum performance criteria established in part D, laboratories shall ensure that the analysis uses the best techniques available without being unnecessarily expensive.

Part C. Microbiological methods of analysis

- 1. Official methods of analysis for microbiological parameters.
- a) Escherichia coli (E. coli) and coliform bacteria (UNE-EN ISO 9308-1. Water quality. Enumeration of Escherichia coli and coliform bacteria. Part 1: Membrane filtration method for waters with low bacterial background flora or UNE-EN ISO 9308-2. Water quality. Enumeration of Escherichia coli and coliform bacteria. Part 2: Most probable number method);
- b) Intestinal enterococci (UNE-EN ISO 7899-2. Water quality. Detection and enumeration of intestinal enterococci. Part 2: Membrane filtration method);
- c) Colony count or heterotrophic plate counts at 22° C (UNE-EN ISO 6222. Water quality. Enumeration of cultivable microorganisms. Colony count by inoculation in a nutrient agar culture medium);
- d) *Clostridium perfringens* including spores (UNE-EN ISO 14189. Water quality. Enumeration of Clostridium perfringens. Membrane filtration method);
- e) Legionella spp (UNE-EN ISO 11731. Water quality. Enumeration of Legionella.); (Note 1)
- f) Somatic coliphages (UNE-EN ISO 10705-2. Water quality. Detection and enumeration of bacteriophages. Part 2: Enumeration of somatic coliphages) and (UNE-ISO 10705-3. Water quality. Detection and enumeration of bacteriophages. Part 3: Validation of methods for concentration of bacteriophages from water).

Note:

Other methods can be used as a complement to the culture such as the method described in UNE-ISO/TS 12869 Water quality. Detection and quantification of 1 Legionella spp. and/or Legionella pneumophila by concentration and genic amplification by quantitative polymerase chain reaction (qPCR). These methods should be validated and documented in accordance with standard UNE-EN ISO/IEC 17025, as described in part E of this annex.

2. Alternative methods of analysis for microbiological parameters:

Other methods that can be used alongside the microbiological methods described in this annex, are those that have been assessed with an exercise of equivalence of methods, and that have been approved and published by the Ministry of Health.

To assess the equivalence of alternative methods with the ones established in this annex, the following standards shall be used: UNE-EN ISO 17994. Water quality. Requirements for the comparison of the relative recovery of microorganisms by two quantitative methods, or UNE-EN ISO 16140. Microbiology of the food chain. Method validation.

Authorised alternative methods of analysis:

The following methods are authorised in accordance with standard UNE-EN ISO 17994. Water quality. Requirements for the comparison of the relative recovery of microorganisms by two quantitative methods:

- a) Alternative method of detection and enumeration of coliform bacteria and *Escherichia coli* in waters intended for human consumption by membrane filtration using chromogenic agar for coliforms (ACC);
- b) Alternative method of detection and enumeration of coliform bacteria and *Escherichia coli* in waters intended for human consumption by using the MPN (most probable number) in a liquid medium, using defined substrate technology (DST;
- c) Alternative method of determining *Clostridium perfringens* (including spores) utilising TSC-MUP as a culture medium;
- d) Alternative method of determining intestinal enterococci by using the Enterolert-DW Quanti-Tray.

Part D. Characteristics of results of physical-chemical analysis methods

1. Physical-chemical parameters.

With regard to the parameters established in annex I, parts B and C, the specified characteristic results mean that the analysis method used should be able to at least measure concentrations that are equal to the parametric value or reference value with a limit of quantification equal to or less than 30% of the relevant parametric value, as defined in article 3, section 25 of Royal Decree 817/2015, of 11 September, which establishes the criteria for monitoring and evaluating the status of surface waters and environmental quality regulations; and a uncertainty of measurement as specified in Table 15:

Limit of quantification: in an analytical determination, the constant multiple of the limit of detection that can be determined with an acceptable degree of accuracy and precision. The limit of quantification limit can be calculated by using an adequate standard or sample, and may be obtained from the lowest calibration point on the calibration curve, excluding the blank. The LQ should always be lower than the parametric value or reference value indicated in annex I.

Limit of detection: in an analytical determination, the output signal or concentration value above which it can be affirmed, with a stated level confidence that a sample is different from a blank sample containing no determinant of interest. The LD should always be lower than the parametric value or reference value referred to in annex I;

The result should always be expressed as the same number of decimal figures and units as the ones mentioned in annex I.

2. Radionuclides and radioactive substances.

Any method used for parameters and radionuclides should be able to at least measure the concentrations of activity with the limit of detection.

Table 14. Limit of detection for parameters and radionuclides.

Parameters and radionuclides	Limit of detection. (Notes 1 and 2)	Notes
Total alpha activity.	0.04 Bq/L	
Other beta activity.	0.4 Bq/L	
Radon.	10 Bq/L	
Tritium.	10 Bq/L	
Am-241.	0.06 Bq/L	
C-14.	20 Bq/L	
Co-60.	0.5 Bq/L	
Cs-134.	0.5 Bq/L	
Cs-137.	0.5 Bq/L	
I-131.	0.5 Bq/L	
Pb-210.	0.02 Bq/L	
Po-210.	0.01 Bq/L	
Pu-239.	0.04 Bq/L	
Pu-240.	0.04 Bq/L	
Ra-226.	0.04 Bq/L	
Ra-228.	0.02 Bq/L	3
Sr-90.	0.4 Bq/L	
U-234.	0.02 Bq/L	
U-238.	0.02 Bq/L	

Notes:

3. Uncertainty of measurement.

The uncertainty of measurement is a non-negative parameter that characterises the dispersion of the quantity values that are attributed to a measurand, based on the information used. The criterion of performance for the uncertainty of measurement (k = 2) is the percentage of the parametric value shown in the table or any other stricter value.

The uncertainty of measurement shall be estimated at the level of the parametric value or reference value, unless specified otherwise.

For the established parameters, the method of analysis used should at least be able to measure concentrations equal to the parametric value with a limit of quantification of 30% or less of the relevant parametric value and an uncertainty of measurement as specified in Table 15.

The uncertainty of measurement in the table below shall not be used as an additional tolerance to the parametric values established in annex I.

Table 15. Characteristics of uncertainty of measurements minimum performance.

Parameter	Uncertainty of measurement % of parametric value. (except for pH)	Notes
Haloacetic acids.	50	
Acrylamide.	30	
Alkalinity.	15	
Aluminium.	25	
Ammonium.	40	
Antimony.	40	
Arsenic.	30	
Benzene.	40	
Benzo(a)pyrene.	50	1
Bisphenol A.	50	
Boron.	25	
Bromate.	40	

limit of detection shall be calculated in accordance with standard UNE-EN ISO 11929: Determination of the characteristic limits (decision threshold, limit of detection and limits of the coverage threshold) for measurements of ionising radiation. Part 1: Elementary applications. Part 2: Advanced applications. Part 3: Application to unfolding methods.

The uncertainties of measurement shall be calculated and reported as combined typical uncertainties, or expanded typical uncertainties, with a factor of expansion of 1.96, as per the ISO Guide for the Expression of Uncertainty in Measurement

This limit of detection is solely applicable to the initial detection of the indicative dose for new water sources; if the initial determination shows that it is not feasible for Ra-228 to exceed 20 % of the derived concentration, the limit of detection can be increased to 0.08 Bq/L for the customary specific measurements of the Ra-228 nuclide until it is necessary to carry out another test.

Parameter	Uncertainty of measurement % of parametric value. (except for pH)	
Cadmium.	25	
Calcium.	15	
Total Organic Carbon.	30	2
Cyanide.	30	3
Chlorate.	40	
Chlorite.	40	
Combined residual chlorine.	20	
Free residual chlorine.	25	
Chloride.	15	
Vinyl Chloride.	50	
Copper.	25	
Concentration hydrogen ions Ph.	0,2	4
Conductivity.	15	
Chromium.	30	
1,2-dichloroethane.	40	
Hardness.	40	
Epichlorohydrin.	30	
Fluoride.	20	
Aromatic Polycyclic Hydrocarbons.	40	5
Iron.	30	
Magnesium.	15	
Manganese.	30	
Mercury.	30	
Microcystin-LR.	30	
Nickel.	25	
Nitrate.	15	
Nitrite.	20	
Oxidisability.	50	6
PFAS.	50	
Pesticides.	30	7
Lead.	30	
Potassium.	15	
Selenium.	40	
Sodio.	15	
Sulphate.	15	
Tetrachloroethene and Trichloroethene.	40	8
Trihalomethanes.	40	5
Turbidity.	30	9
Uranium.	30	

Notes:

- $1 \ | \ \text{If the uncertainty of measurement value cannot be reached, the best technique available (up to 60\%) should be selected.}$
- The uncertainty of measurement should be estimated at a level of 7 mg/L of total organic carbon (TOC). The guidelines of standard UNE-EN 1484 Water analysis. Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon shall be used to specify the uncertainty of the test method.
- 3 The method determines the total cyanide in all its forms.
- 4 The value of the uncertainty of measurement is expressed in units of pH.
- 5 The characteristics are applied to individual substances, specified at 25% of the parametric value in part B of annex I.
- The reference for the method of analysis is UNE-EN ISO 8467. Determination of permanganate index or other method with equivalent results.
- The characteristic results of each pesticide are for guidance purposes. Some pesticides may reach only 30% of the measurement of uncertainty, while other higher values of up to 80% can be permitted with others
- 8 The performance characteristics are applied to individual substances, specified at 50% of the parametric value in part B of annex I.
- 9 L The uncertainty of measurement should be estimated at the level of 1 FNU.

Laboratories should enter their accreditations in the SINAC, along with the uncertainty, limit of quantification and limit of identification of each method of analysis.

Part E. Validation of microbiological and physical-chemical methods

- 1. General aspects.
- a) Several guidelines are proposed for the validation of methods of analysis in physical, chemical and microbiological determinations to establish the suitability of same, and parameters such as correctness, precision and uncertainty of measurement should be evaluated in such cases.

- b) The documents and procedures used by a laboratory should include all the activities that the laboratory carries out with regard to analyses and the support of same. Such activities include, taking samples, handling, transport and conservation of samples, the use and functioning of measuring equipment and instruments, validation and estimation of uncertainty, quality assurance of analyses, data analysis, assessment and processing, etc. The content should be such that it prevents errors of interpretation and enables the analytical activities to be reconstructed.
- c) As regards the content and structure of the documents where the methods of analysis are described, there are several alternative approaches, one of which is shown below:
 - 1. Suitable identification;
 - 2. Scope;
 - 3. Description of the type of sample to be tested:
 - 4. Parameters and ranges to be determined;
 - 5. Apparatuses and equipment, including technical specifications:
 - 6. Necessary standards and reference materials;
 - 7. Environmental conditions and stabilisation periods required;
 - 8. Description of the procedure, including the following:
- i. Placement of marks of identification, transport, storage and preparation of the objects to be analysed;
 - ii. Verifications required before starting work;
- iii. Verification of the correct functioning of the equipment and, when necessary, calibration and adjustment of the equipment before use;
 - iv. Method used to record observations and results;
 - v. Required safety measures;
 - 9. Criteria or requirements of acceptance/rejection;
 - 10. Data that should be recorded and method of analysis and presentation;
 - 11. Uncertainty or procedure to estimate uncertainty.

The validation should generally confirm that the method functions adequately in the entire customary range of concentrations and the analytical matrices. This process consists of a set of systematic and programmed tests that include all the stage of a routine analysis, including preparation (extraction, pre-concentration, etc.) and any treatment applied to them that enables the measurement characteristics on which the method of analysis is based to be checked.

The scope of the validation process depends on a number of factors, such as the nature of the method (qualitative or quantitative), the existence of any international regulations and equivalent matrices. The laboratory should record the results, the procedure used for validation and a declaration of the suitability of the methods for the intended use.

- 2. Validation of methods in physical-chemical analyses.
- a) The parameters used in classifying the validation of a method of physical-chemical analysis are as follows:
 - 1. Selectivity;
 - 2. Range of work;
 - 3. Linearity;
 - 4. Sensitivity;
 - 5. Limit of detection;
 - 6. Limit of quantification;
 - 7. Robustness;
 - 8. Precision;
 - 9. Correctness (bias);
 - 10. Uncertainty.
- b) Depending on the method used, the laboratory should evaluate all the above parameters or at least a part of them in the validation.

- 3. Validation of microbiological analyses.
- a) In much the same manner as in the physical-chemical analyses, the validation process for microbiological analyses should set out to reproduce the real conditions in which they take place. A particular feature to be considered in this type of analysis is the difficulty in having stable reference values, which has an effect on the development of the validation process when they are compared to physical-chemical analyses.
- b) Microbiological methods can be classified as follows, according to the result obtained from the method used:
- 1. Qualitative: Also called "qualitative research". These are methods of analysis where the outcome is the presence of absence of a microorganism that is directly or indirectly detected in a given amount of a sample;

Qualitative methods should be validated by estimating at least the limit of detection. When necessary, the scope of the validation shall be extended to parameters such as:

- i. Sensitivity;
- ii. Specificity;
- iii. False positives;
- iv. False negatives;
- v. Efficiency;
- vi. Selectivity.
- 2. Quantitative: Also called "detection and enumeration". These are methods of analysis where the result of the method of analysis is the number of microorganisms directly (enumeration by mass or volume) or indirectly detected (MPN, colour absorption, impedance, etc.) in a given amount of a sample;

In this case, validation includes recovery and precision studies and covers the whole range of work established in the method to enable reliable statistical processing of all the values to be carried out.

The levels of work shall be established according to the technique used:

- i. Plate incorporation;
- ii. Plate distribution;
- iii. Membrane filtration.

Estimations of the uncertainty in microbiological analysis is limited to enumeration methods, and the scope should take into account the type of matrix and microorganism subject to analysis. Qualitative methods and MNP are not applicable in this case.

4. Assigning uncertainty to the method.

According to the values of expanded uncertainty obtained in the studies (different levels, including the limit of quantification and the study matrices), an uncertainty of the method shall be established in accordance with the results obtained. The criteria to be applied may be:

- a) Establish different values of uncertainty for the method according to the level of concentration when they are very different;
- b) Take the most unfavourable methods evaluated in the levels of concentration as the method uncertainty. This criterion penalises the levels of concentration with lower uncertainties.

Part F. Method of analysis with kits

1. It is essential to use kits in a professional manner when carrying out determinations, ensuring that they are used adequately for the purpose for which they were designed, avoiding at all costs any defective or unreliable application of these analytical tools. Therefore, and notwithstanding the provisions of article 20, laboratories that use kits for determinations in the field or laboratory should follow the provisions of this part F.

- 2. Laboratories should establish procedures that ensure correct and objective selection of the kits used in each case, so that the results comply with the specifications of this annex.
- 3. The instructions in this section are applicable to any analytical determination that uses a kit, regardless of the type of measurement made (quantitative, qualitative, semi-quantitative, identification, etc.), the analytical technique used (spectroscopy, based on enzyme use, ELISA, PCR, etc.) and of the field of application (chemical, microbiological, molecular, etc.).
 - 4. The laboratory should demand that the kit manufacturer provides the following with the commercial product:
- a) All the technical information necessary to demonstrate that its kits are suitable and valid for each application, and assure the laboratories that it can offer sufficient evidence to show that the kits comply with the specific requirements for each particular use;
- b) Precise and detailed instructions to enable the test to be carried out by the laboratory in the manner established by the manufacturer;
- c) Any changes made to the instructions or technical specifications of the kit and confirmation that the intended specific use of the kit has been maintained;
 - d) Information about the validation of the kit, in particular:
- 1. Declaration about the range of measurement. Limits of detection and/or quantification (should include studies carried out with matrices);
 - 2. Studies of specificity, selectivity, sensitivity, precision, recovery/accuracy;
 - 3. Linearity (quantitative methods);
 - 4. Other characteristics: Robustness. V Inter-batch and intra-batch variability;
 - 5. Validation protocol used and test procedure applied in the validation;
 - 6. Information on the matrices analysed and the reference materials used;
 - 7. Statistical processing of results and calculations made;
 - 8. Limitations of applications of the kit.

ANNEX IV

Watch list

- 1. Pursuant to the Commission Implementing Decision, of 19 January 2022, establishing a watch list of substances and compounds of concern for water intended for human consumption as provided for in Directive (EU) 2020/2184 of the European Parliament and of the Council, the following national watch list shall be prepared.
- 2. This list shall include biological, chemical and physical contaminants that are considered to a potential risk to human health. The watch list shall consist of the following when this law comes into force:

Table 16. National watch list:

	Contaminant	CAS No.	EU No.	Reference value	Limit of quantification
68	17β-Estradiol	50-28-2	200-023-8	1 ng/L	< 1 ng/L
69	Nonylphenol	84852-15-3	284-325-5	300 ng/L	< 300 ng/L
70	Azithromycin	83905-01-5		100 ng/L	< 100 ng/L
71	Diclofenac	15307-86-5		100 ng/L	< 100 ng/L

- 3. Samples for the parameters of the watch list at the outlet of a treatment plant or header reservoir should be taken at least once every quarter in type 4, 5 and 6 supply areas, and at least once a year in type 2 and 3 areas.
- 4. Microplastics shall be included in the list when the European Commission adopts a standardised methodology to measure microplastics in water intended for human consumption.

ANNEX V

Application for declaration of exceptional situation

Part A. Applicant

- 1. Operator.
- 2. Entity or body submitting the request and tax ID number.
- 3. Address, postcode, town, province.
- 4. Contact email address and telephone number.

Part B. Supply area

- 5. Distribution area(s) and networks affected (name and SINAC code).
- 6. Volume of water distributed by each distribution network in m3.
- 7. Estimated population affected.
- 8. Connected priority premises and food companies.

Part C. Reason

- 9. Parameter to be excepted.
- 10. Reasons for application and written report.
- 11. Results of parameter in distribution network over the last 10 years.
- 12. New parametric value for the exceptional situation.
- 13. Expected duration of exceptional situation.

Part D. Proposed measures and controls

- 14. Defined sampling points for exceptional situation.
- 15. Frequency of sample taking.
- 16. Additional controlled parameters, when necessary.
- 17. Project for necessary corrective measures and investment plan for same.
- 18. Work schedule.
- 19. Tasks of reviewing and verifying the value of the excepted parameter within the parametric value.

ANNEX VI

Measures if radioactive substances are present in water intended for human consumption

Part A. General framework

- 1. The parameters provided for in annexes I, II and III shall be controlled in every supply area.
- 2. The controls for radioactive substances shall be carried out in such a way as to ensure that the values are obtained represent the quality of the water supplied throughout the year.
- 3. The sampling point to control radioactive substances shall be those provided for in annex II, part B point 4, as long as there are no reasons to suspect that an adverse change might take place in the concentration value of a radioactive substance between said point and the point of compliance provided for in article 7.
- 4. In the supply areas where the infrastructures are managed by several operators, the health authority shall consult with the operators involved and then determine the sampling point or points, as appropriate, to control the radioactive substances. In any case, efforts shall be made to ensure that the results obtained in said control are available to all the operators involved.
- 5. An operator can propose that the frequency of sample taking to control radioactive substances be reduced according to the criteria established in this annex. Said proposal should be approved by the relevant health authority.

- 6. Notwithstanding the provisions of the foregoing section, a new sample should be taken whenever changes take place in the supply that might have an effect on the concentrations of radionuclides in the water intended for human consumption.
- 7. A reduction in the frequency of sampling cannot be applied when specific treatment is being carried out reduce the level of a radionuclide in water intended for human consumption.
 - 8. The health authority may provide for the following to protect public health:
- a) Control of other radioactive substances that are a health risk and are suspected of being present in the water intended for human consumption,
 - b) The frequency of controls is increased,
 - c) The sampling point is changed,
 - d) The self-regulation protocol for "control of radioactive substances" is modified.
- 9. All the data generated from controls of radioactive substances in water intended for human consumption or in water used to produce water intended for human consumption should be entered in the National Information System of Water for Human Consumption (SINAC). The values of the specific radionuclides investigated to evaluate the indicative dose parameter shall be included when reporting said parameter.

Part B. Criteria for the control of radioactive substances

1. General principles.

When the previous results with regard to naturally present radionuclides have shown that the concentration of radionuclides is stable, the frequency of sampling shall be determined, taking into consideration the risk to human health, as an exception to the minimum sampling requirements laid down in this annex.

The presence of radon or tritium in water intended for human consumption shall not be controlled or the indicative dose established when representative studies, control data or other reliable information shows that levels of radon, tritium or the indicative dose have been below the respective parametric values shown in annex I part E, for at least five years.

When the operator applies the provisions of point 5, part A of this annex, and a modification of the control established in the above paragraphs is authorised, the health authority shall transfer all the documentation and the details of the authorisation to the Ministry of Health, which in turn shall inform the Nuclear Safety Council. This process shall be carried out in order to inform the European Commission.

2. Radon.

The radon in water intended for human consumption shall be controlled with the frequency indicated in annex II, when:

- a) The water source is partially or completely groundwater;
- b) The classification of the water body leads to a reasonable notion that the value corresponding to the radon may be in excess of 500 Bq/L;
 - c) The body of groundwater has not yet been classified.
 - 3. Tritium.

The tritium in water intended for human consumption shall be controlled with the frequency indicated in annex II, when:

- a) The water comes from surface water;
- b) The abstraction point may be affected by an anthropogenic source of tritium or other radionuclides, according to information provided by the Nuclear Safety Council.

When the Nuclear Safety Council becomes aware through established radiological monitoring programmes that the parametric value for tritium stated in part E of annex I has been exceeded, it shall inform the Ministry of Health, along with

the results of the determination of other artificial radionuclides and the indicative dose calculation. Said information shall be sent to the health authorities and affected operators via SINAC.

4. Indicative dose (ID).

The ID shall be calculated in water intended for human consumption when:

- a) There is a source of high natural or artificial radioactivity and other representative control programmes or other investigations cannot demonstrate that the level of the ID is below the parametric value shown in part E of annex I.
- b) In the case of radioactivity from a natural source: any reduction or elimination of frequency of sampling should involve at least an initial analysis.
- c) If artificial radioactivity is suspected, or when specific radionuclides are to be analysed, the frequency of sampling in annex II should always be complied with.

When controls are carried out on the ID of water intended for human consumption, the measurement of the index for total alpha activity and other beta activity shall be used, with the following methodology being applied:

- 1. If the concentration of the total alpha activity is less than or equal to 0.1 Bq/L and the concentration of the other beta activity (total beta activity, excluding potassium-40) is less than or equal to 1.0 Bq/L, it may be considered that the ID is less than or equal to 0.1 mSv/year, and if the concentration of tritium activity is below 100 Bq/L, no additional radiological investigations are required.
- 2. If the concentration of total alpha activity or other beta is over 0.1 Bq/L and 1 Bq/L respectively, and the concentration of tritium activity is less than or equal to 100 Bq/L, an analysis of specific radionuclides should be carried out as described in annex I, considering first the natural radionuclides. If these alone do not explain the values of total alpha and other beta activity, the analyses of artificial radionuclides shall be carried out.
- 3. If the concentration of the total alpha activity is less than or equal to 0.1 Bq/L and the concentration of the other beta activity is less than or equal to 1.0 Bq/L, and the concentration of tritium activity is over 100 Bq/L, an analysis of specific artificial radionuclides as described in annex I shall be carried out.
- 4. If the concentration of total alpha activity or other beta activity is over 0.1 Bq/L and 1 Bq/L respectively, and the concentration of tritium activity is over 100 Bq/L, an analysis of specific natural and artificial radionuclides as described in annex I shall be carried out.
- 5. If the analyses of specific radionuclides described in the above points have been carried, the ID shall be calculated according to the concentrations obtained from all the radionuclides (excluding potassium-40, radon and short-lived radon decay products) of natural and artificial origin.

If the value of the ID is less than or equal to 0.1 mSv/year, no further radiological investigations shall be required.

If the value of the ID is over 0.1 mSv/year, the provisions of part C of this annex shall be followed.

If a health authority so requests, the Ministry of Health, with the collaboration of the Nuclear Safety Council within the scope of its competences, may establish screening levels for total alpha activity and other beta activity that are different from 0.1 Bq/L and 1 Bq/L respectively, when it can demonstrate that the alternative levels meet the ID of 0.1 mSv.

Part C. Exceeded parametric values, corrective and preventive measures, and public announcements

1. When any overshoot of a parametric value in water intended for human consumption is detected by an operator, the municipality, the owner of the activity or the health authorities, it should:

- a) Be confirmed when one of the three following conditions is met:
- The overshoot of the parametric value has been detected for the first time.
- 2. The origin is believed to be artificial.
- The health authority considers it to be necessary.

To carry out a confirmation analysis, a new sample should be taken within the twenty-four hours after the analytical result that showed the potential overshoot was obtained.

- b) The health authority should be notified within twenty fours after the result is obtained. Said authority should in turn notify the Ministry of Health. If the cause is suspected to be artificial, the Ministry may ask the Nuclear Safety Council to carry out an immediate investigation of the origin and cause.
- 2. As soon as the presence of radioactive substances at levels above the parametric values is detected, the operator(s) should assess the impact of said situation in every network where water is supplied from the infrastructure that reported the overshoot and, if necessary, carry out controls on the network until values have returned to normal.
 - 3. The health authority shall assess:
- a) The importance and consequences of the overshoot of the parametric value for the health of the affected population.
 - b) The need for a risk assessment.
 - c) The need to issue recommendations to the affected population.
- d) The option of prohibiting water supply or consumption, restricting use or ordering the operator to take corrective measures to reduce or eliminate the potential risk to public health.

The health authority shall send the results of said assessment to the Ministry of Health, and to all the operators involved.

- 4. When an operator obtains a result that exceeds the parametric values, it should immediately investigate the probable origin and cause of same, and shall take one or more of the following measures, according to the aforementioned assessment of the health authority:
 - a) Take adequate corrective measures to prevent the supply of water in said conditions.
 - b) Evaluate the effectiveness of said corrective measures.
- c) If the risk assessment indicates that there is no risk to human health, the operator shall assess the need to take adequate preventive measures to prevent any future risk to human health.

It shall also report all the foregoing to the health authority, and to the other operators involved.

- 5. Notwithstanding the provisions of the above section, when the concentration of radon is over 1,000 Bq/L, the measures provided for in section a) above shall be taken for radiological protection purposes.
- 6. The operator shall decide on the appropriate measures in view of the health authority's assessment, and shall inform the affected population of the risk, the corrective and preventive measures taken and, if appropriate, any necessary recommendations to protect human health against radioactive substances, within twenty-four hours after being informed of same.
- 7. Once the corrective and preventive measures have been taken, the operator shall take further samples to ensure that the situation has returned to normal, and once said situation has been verified, it shall inform the health authority and the affected population within twenty-four hours after obtaining the results.
- 8. The operator(s) and the health authority shall be understood as complying with the obligations of notification and information established in this article when they use the National Information System of Water for Human Consumption (SINAC), established in article 62, for this purpose,

the exception being in this case any information that is issued to the public.

ANNEX VII

WSP in supply areas

Part A. Definitions

- 1. Hazardous event: incident or event that causes danger in the supply area and infrastructures or does not eliminate them.
- 2. Hazard: biological, chemical, physical or radiological agent present in water, or other condition of the water that may harm human health, including a lack of water for human consumption for more than twenty-four hours.
- 3. Control point: a point, operation or stage when programmed monitoring based on the Water Safety Plan takes place.
- 4. Critical point: a point, operation or stage that requires preventive, corrective or control measures to eliminate or reduce the risk to acceptable levels in accordance with the Water Safety Plan.
- 5. Risk: a combination of the probabilities of a hazardous event or hazard in a supply area or the infrastructures of same and the seriousness of the consequences if a hazardous event were to take place.

Part B. Methodology

A WSP is a methodology made up of many barriers that helps to establish control measures for risks throughout a supply area.

It is based on the general principles of risk assessment and management established in line with international standards such as the guidelines of the WHO in its "Water Safety Plan manual" or standard UNE-EN15975-2. Security of drinking water supply. Guidelines for risk and crisis management. Part 2: Risk management, or other similar regulations and standards that ensure an equivalent level of health protection.

Team training.

There may be one or more operators in a supply area, therefore it is necessary for all the parties involved to cooperate. A WSP should be drawn up by a multidisciplinary team whose members should have sufficient knowledge of the supply area in question, including the water authority with competencies in the water body where the catchment area is located. If necessary, external experts and the health authority can be consulted. Each member of the WSP team should be assigned a specific task.

2. Description of the supply area.

An updated description of the supply area should be drawn up, including the catchment area in the water body, abstraction point, purification treatment, storage and distribution up to the user delivery point. This description shall include a diagram of the supply area.

3. Identification of hazards and hazardous events.

This stage consists of identifying the hazards that might have an impact on the quality, quantity or access to water intended for human consumption; and the hazardous events that might cause said hazards. The identification process should be as precise as possible.

Before starting this process, there should be a record of the analytical results of at least the last 5 years, and a record of any hazardous events that have taken place in the supply area over the same period.

4. Risk assessment.

The basic WSP applies a semi-quantitative method, therefore the seriousness of the hazard and the likelihood of the hazardous event taking place if no corrective or preventive measures are taken should be assessed.

The operator may consider the option of amplifying the risk assessment by applying a quantitative approach.

The risk assessment matrices contribute to the process of individually prioritising the risks. Although the team may have its own tables with levels of probability and seriousness according to their characteristics, the following tables are recommended:

Table 17. Levels of seriousness of the hazards.

	Value	Parameter
Insignificant	1	Overshoot in parametric values of parameters in annex, part D.
Slight	2	Overshoot in parametric value of parameters in annex I, part C, except turbidity.
Moderate	4	Overshoot of parametric value of turbidity; Parameters of part B not in another level that are below the parametric value and parameters of part C that are above the value of unsuitable.
Serious	8	Parameters of annex I, part B, that are substances with a long-term impact on health and above the parametric value; overshoot in parametric value of the parameters in annex I, part E; Water shortage between 24 and 48 hours.
Very Serious	16	Parameters of annex I. part B, that are substances with a short-term impact on health and are carcinogenic, mutagenic or toxic for reproduction, or substances that have been identified as endocrine disruptors or toxic when ingested, in accordance with the provisions of Regulation (EC) No. 1272/2008, and which are above the parametric value; Parameters of annex I, part A; Continuous water shortage (more than 48 hours).

Table 18. Levels of probability.

	Value	For type 4, 5 and 6 SA	For type, 1, 2 and 3 SA
Highly improbable.	1	Happened once in the last 5 years.	Happened once in the last 10 years.
Improbable.	2	Happened once in the last 2 years.	Happened once in the last 5 years.
Neutral.	4	Happens once a year.	Happened once in the last 3 years.
Probable.	8	Happens between once and 4 times a year.	Happened once in the last 2 years.
Highly probable.	16	Happens more than 4 times a year.	Happened last year.

5. Prioritisation of the risks and identification of the control and critical points.

Table 19. Matrix of evaluation for prioritising risks.

		Seriousne ss				
		Insignificant Sligh Moderate Serio Very us Serious				
	Highly improbable.	1	2	4	8	16
Probability	Improbable.	2	4	8	16	32
1 Tobability	Neutral.	4	8	16	32	64
	Probable.	8	16	32	64	128
	Highly probable.	16	32	64	128	256

Any event with a score of 32, 64, 128 or 256 shall be regarded as a critical point in the supply area.

The following should be evaluated in the critical points:

- a) If corrective or preventive measures are in place and the need for same if none exist.
- b) If said measures are effective or not.
- c) If the risk is reduced by subsequent barriers further along the supply area. If this is the case, the score for the evaluation shall be reduced: if the risk is minimised, it shall be divided by 4, and if the risk is eliminated, it shall be divided by 8.

Events with a score of 2, 4, 8 or 16 should not be regarded as critical points, but rather as control points, given that there is the possibility of a hazardous event. When the situation described in point c) occurs and the score drops to below 32, the critical point shall be changed to a control point.

6. Risk mitigation.

Once the hazards are found, the risks are prioritised and the critical and control points are assigned, it will be necessary to immediately apply measures to mitigate the risks when this is necessary, or apply corrective or preventive measures to ensure that the hazardous event does not happen again. Said measures should be applied as soon as possible.

A control programme should also be planned to monitor the hazards.

7. Verification of the WSP.

After implementing the WSP in the supply area, the operator should prepare a yearly verification process to establish if the risk management is complete and adequate. The verification should include any potential hazard and hazardous event.

Part C. Documentation

The operators shall have the documentation of the WSP or the part of same that corresponds to the supply area in electronic format available for review by the health authority.

Said documentation should consist of at least the following:

- 1. General information.
- a) Supply area (name and territorial location).
- b) Diagram of the supply area.
- c) Infrastructures that make up the supply area and the operators for each one.
- d) Population supplied: registered on the census, estimated and maximum.
- e) Volume of water supplied, average m3/day.
- f) Components of work equipment and team.
- g) Data of preparation and approval of the WSP.
- 2. Information about each infrastructure.
- a) Origin of the water: water body; name and code; hydrographic confederation; pressures at abstraction point; [repeat items if there are more than 1]
- b) Abstraction point: name and diagram; type of abstraction point; volume of water abstracted (hm3/year); operator; concession by hydrographic confederation; [repeat items if there are more than 1]
- c) Piping: origin and destination of water; diagram; length in km; type of piping; pressures in piping; operator; [repeat items if there are more than 1]
- d) Purification plant (DWTP): origin and destination of water; name and diagram; unit processes of treatment; volume of water treated (m3/day); chemical substances used in purification; documentation about compliance with article 43; operator; [repeat items if there are more than 1]
- e) Treatment in distribution reservoir, network or other infrastructure: origin and destination of water; diagram; unit processes of treatment; volume of water treated (m3/day); chemical substances used in purification; operator; [repeat items if there are more than 1]
- f) Storage tank: origin and destination of water; name and diagram; type of tank; volume of water stored (m3); coating material; date of last cleaning; operator; [repeat items if there are more than 1]
- g) Distribution network; origin of water; name and diagram; type of network; volume of water distributed (m3/day); composition of piping and km installed of each type of material; operator; locations supplied (as per nomenclature of National Statistics Institute); [repeat items if there are more than 1]
- h) Cistern tanker: origin of water; diagram; volume of water transported; (m3); coating material; operator; [repeat items if there are more than 1]
- i) Besides the data mentioned in this section, the information for each infrastructure shall also include all the available descriptive data about same (location, sampling points, dates of construction and/or rehabilitation, protective measures, etc.)

3. Water quality. Log.

Information about the analytical results of the last 5 years for each infrastructure: year; number of determinations; average minimum and maximum quantified value and standard deviation; number of determinations with negative results.

Identification of hazards in each infrastructure.

For each infrastructure: hazardous events; hazards; seriousness; probability of hazard or hazardous event taking place.

5. Prioritisation of risks for each infrastructure.

For each infrastructure: value of risk; critical points; minimised or eliminated in subsequent phase; control point.

- 6. Measures.
- a) Immediate measures.
- b) Corrective measures.
- c) Preventive measures.
- 7. Investment and schedules.
- a) Detailed investment plan.
- b) Work schedule.
- 8. Proposed sampling plan.

Frequency of sampling for each critical point, control point and parameter

- 9. Administrative procedures completed.
- a) Local administration.
- b) Regional administration.
- c) Water administration.
- d) National Administration.
- 10. Planned date for review.
- 11. Coordination and communication mechanisms.
- a) Define coordination and communication mechanisms
- b) Ensure that coordination mechanisms are established between operators in the supply area
 - 12. Annex 1: Self-Regulation Protocol Document.
 - 13. Anexo 2.º: Document on assessment of structural leaks.
 - 14. Date of approval.

Part D. Frequency and parameters after the WSP

- 1. General aspects.
- a) The parameters of annex I and the watch list shall be taken into consideration when preparing the WSP.
- b) If the operator can prove that it has complied in the last three years with the frequency of sampling as defined in the regulations and the results of the quantified value of the parameter have been below 60% of the parametric value, it may apply for a reduction or elimination of the parameters and/or frequency of sampling if it complies with the provisions of the sections below (3 and4) when this royal decree comes into effect.
- c) If the operator has authorisation to reduce the parameters and frequency of sampling when this law takes effect, it shall be exempt from applying once again for authorisation for another period of three years.
 - 2. Increase of parameters and frequency of sampling.

Based on the results of the risk assessment, the operator shall amplify the list of parameters established in annex I and/or shall increase the frequency of

sampling established in tables 8, 9 and 10 of annex II, when one or more of the following conditions are met:

- a) The list of parameters or frequencies set down in annexes I and II does not meet the obligations imposed in chapter IV.
 - b) Other controls are required to comply with chapter IV.
 - c) It is necessary to achieve the objectives of the protocol provided for in article 14.
- d) Evidence based on the risk assessment and management of the catchment areas, or suspicions that there may be substances, compounds or microorganisms not included in annex I that may be present in the drinking water in quantities sufficient to represent a risk to human health.
 - 3. Reduction of parameters and frequency of sampling.

Based on the results of the assessment, the operator may reduce the list of parameters and frequency of sampling when it meets the following conditions:

- a) The frequency of sampling for *E. coli*, intestinal enterococci and turbidity may not be reduced under any circumstances.
 - b) As regards the other parameters:
- 1. The place and frequency of sampling shall be determined in relation to the origin of the parameter in the supply areas and to the long-term variabilities and trends in concentrations.
- 2. To reduce the minimum frequency of sampling for a parameter, as established in annex II, part C, the results of the samples included with the frequency established in this law at sampling points that are representative of the entire supply area should be below 60% of the parametric value for at least three years.
- 3. The frequency of sampling of a parameter in the parameter list may only be reduced if the risk assessment confirms that no factor that can be reasonably be predicted may lead to a deterioration in quality of the water intended for human consumption.
 - 4. Elimination of parameters.

Based on the results of the WSP, the operator may eliminate parameters when the following conditions are met:

- a) When the results obtained from the samples gathered at regular intervals for a minimum period of three years at sampling points that are representative of the entire supply area are under 30% of the parametric value.
- b) There is evidence based on the risk assessment and management in the catchment areas that confirm that human health is protected against the adverse effects of any type of contamination of the water intended for human consumption.
- c) If the risk assessment confirms that no factor that can be reasonably be predicted may lead to a deterioration in quality of the water intended for human consumption.

ANNEX VIII

WSP in priority premises

Part A. Priority premises and definitions

Priority premises at national levels are the ones described below:

Table 20. Priority premises and conditions for inclusion.

	From:
Hospitals and clinics.	200 beds and those with augmented care units.
Geriatric residences or other residences.	200 beds.

	From:
Hotels, tourist apartments, tourist buildings, etc.	500 rooms.
Educational centres.	1,000 places or more than 200 beds for boarders.
Covered sports centres.	3,000 square metres.
Prisons.	1,000 places.

- a) Augmented care units: hospital units in which medical or nursing procedures make patients more vulnerable to invasive diseases in the environment and opportunistic pathogens. Therefore, water quality should be at a higher microbiological standard than the one provided by the operator. The term includes intensive care units (adult, paediatric and neonatal), neonatal care units (from level 2), burns units and transplant units, along with any others considered to be eligible for inclusion after a risk assessment.
- b) Sanitary taps: specially designed taps for patient healthcare for tasks where a separate supply is required: washbasin, water fountains and oral preparation for medication, cleaning of clinical materials, washing and bathing the patient. Said areas and taps cannot be used to dispose of patients' bodily fluids (drains are used instead), medication, formula milk or as a shelf to store objects.

Part B. Methodology

The WSP is a methodology made up of multiple barriers that helps to establish risk control measures in a priority premises.

The WSP is based on the general principles of risk assessment and management established in the guidelines of the WHO in its "Water Safety Plan manual" (2009) and in its document entitled "Water safety in buildings" (2011).

Team training.

A WSP should be drawn up by a multidisciplinary team whose members should have sufficient knowledge of the indoor system of the priority premises, including the water authority with competencies in the water body where the catchment area is located. If necessary, external experts and the health authority can be consulted. Each member of the WSP team should be assigned a specific task.

2. Description of the priority premises.

An updated description of the indoor system of the priority premises should be prepared, including the entrance point of the water (service connection), the cold-water system, DHW system, points of use and the equipment installed. This description shall include a diagram of the interior system.

3. Identification of hazards and hazardous events.

This stage consists of identifying the hazards that might have an impact on the quality, quantity or access to water intended for human consumption; and the hazardous events that might cause said hazards. The identification process should be as precise as possible. Such hazards shall be environmental, physical or microbiological, or hazards that affect the continuity of supply of water intended for human consumption in the priority premises. The identification process should be as precise as possible, and should consist of identifying the potential hazards in the indoor system and the materials related to same, and if said potential hazards will affect the quality of the water at the point where its leaves the taps that are habitually used to consume water intended for human consumption.

It is also important to have a log of the analytical results for at least the last 3 years, and a log of the hazardous events that have occurred in the priority premises in the same time period.

4. Risk assessment.

The basic WSP applies a semi-quantitative method, therefore the seriousness of the hazard and the likelihood of the hazardous event taking place if no corrective or preventive measures are taken should be assessed.

The owner of the priority premises

may consider the option of amplifying the risk assessment by applying a quantitative approach.

The risk assessment matrices contribute to the process of individually prioritising the risks. Although the team may have its own tables with levels of probability and seriousness according to their characteristics, the following tables are recommended:

Table 21. Levels of seriousness in priority premises

	Value	Parameters
Insignificant.	1	Overshoot of taste and smell parametric value (on site).
Slight.	2	Overshoot of parametric values for colony count at 22.9C; colour; free residual chlorine.
Moderate.	4	Overshoot of parametric values for turbidity, iron, ammonium, copper. Water shortage between 6 and 24 hours.
Serious.	8	Overshoot of parametric values for HPA; nickel, vinyl chloride, Legionella spp. Water shortage between 24 and 48 hours.
Very serious.	16	Overshoot of parametric values for lead, chromium, E coli; bisphenol A; benzo(a)pyrene; presence of Legionella pneumóphila. Water shortage for more than 48 hours.

Table 22. Levels of probability in priority premises.

	Value	Priority premises
Highly improbable.	1	Happened once in last 10 years.
Improbable.	2	Happened once in last 5 years.
Neutral.	4	Happened once in last 3 years.
Probable.	8	Happened once in last 2 years.
Highly probable.	16	Happened last year.

5. Prioritisation of risks and identification of critical and control points.

The following matrix is proposed to evaluate the priority of the risk.

Table 23. Matrix for evaluating risk prioritisation.

		Seriousness					
		Insignificant	Sligh	t	Moderate	Serious	Very Serious
	Highly improbable.	1	2	4	3	3	16
	Improbable.	2	4	8	1	16	32
Probability.	Neutral.	4	8	10	6 3	32	64
	Probable.	8	16	3	2 6	64	128
	Highly probable.	16	32	6	4 1	128	256

Any event with a score of 32, 64, 128 or 256 shall be regarded as a critical point in the priority premises.

The following should be evaluated in the critical points:

- a) If corrective or preventive measures are in place and the need for same if none exist.
 - b) If said measures are effective or not.
 - c) If the risk is reduced by subsequent barriers throughout the indoor system. If this is the case, the score for the evaluation shall be reduced: if the risk is minimised, it shall be divided by 4, and if the risk is eliminated, it shall be divided by 8.

Events with a score of 2, 4, 8 or 16 should not be regarded as critical points, but rather as control points, given that there is the possibility of a hazardous event. When the situation described in point c) occurs and the score drops to below 32, the critical point shall be changed to a control point. When the hazardous event is caused by a change in microbiological parameters, the sanitary taps of augmented care areas shall be regarded as critical points.

6. Risk mitigation.

Once the hazards are found, the risks are prioritised and the critical and control points are assigned, it will be necessary to immediately apply measures to mitigate the risks when this is necessary, or apply corrective or preventive measures to ensure that the hazardous event does not happen again. Said measures should be applied as soon as possible.

The general measures shall be as follows:

- a) The competent authority in employment, education or housing should promote training for plumbers and other professionals involved in indoor systems and the installation of materials that come into contact with water intended for human consumption;
- b) With regard to lead, if it is possible from an economic and technical point of view, take measures to replace components manufactured with lead in indoor systems.

Measures that should be taken into consideration for mitigating risks are as follows:

- a) Promoting risk assessments of indoor systems by owners of public and private priority premises;
- b) Inform users and owners of public and private priority premises about measures designed to eliminate or reduce the risk of non-compliance;
 - c) Corrective and preventive measures and verification to establish if they are sufficient;
 - d) Preventive measures;
 - e) New determination of critical and control points;
 - f) WSP monitoring programme;
 - g) Planning of a control programme to monitor hazards.
 - 7. Verification of the WSP.

After implementing the WSP in the priority premises, the owner of said premises should prepare a yearly verification process to establish if the risk management is complete and adequate. The verification should include any potential hazard and hazardous event.

Part C. Documentation

The owners of priority premises shall have the documentation of the WSP in electronic format available for review by the local or supra-municipal, or in the absence of same, the health authority.

The documentation should consist of at least the following:

- 1. General information.
- a) Components of the work equipment and team.
- b) Priority premises: name and postal address.
- c) Type of activity.
- d) Owner of priority premises.
- e) Estimated number of persons who use the premises every day.
- f) Volume of water consumed a day.
- g) Useful square metres and number of floors, including cellars.
- h) Date of preparation and approval of the WSP.
- 2. Information about indoor system.
- a) Origin of water and points of entry: own supply; public or private distribution network (name and operator) [repeat items if there is more than 1]
 - b) Points of use: cold water system and DHW
- c) Cold water system: indoor tank(s) (capacity and location); diagram of plumbing installation; materials used in piping and taps
- d) Sanitary hot water system: indoor tank(s) (capacity and location); diagram of plumbing installation; materials used in piping and taps; boilers
 - e) Additional apparatuses [repeat items if there is more than 1]
 - 3. Water quality. Log.

Details of analytical results for parameters in the last 3 years: year; number of determinations; mean quantified value; minimum, maximum and standard deviation (ED) and number of determinations with negative results.

4. Identification of hazards.

Hazardous events; hazards; likelihood of event or hazard taking place.

5. Prioritisation of risks.

Value of risk; critical point(s); minimised or eliminated in subsequent phase; control point.

- 6. Measures.
- a) Immediate measures.
- b) Corrective measures.
- c) Preventive measures.
- 7. Investment and schedules.
- a) Detailed investment plan.
- b) Work schedule.
- 8. Proposed sampling plan.

Frequency of sampling for each critical point, control point and parameter.

- 9. Administrative procedures completed.
- a) Local administration.
- b) Regional administration.
- 10. Date of approval.
- 11. Scheduled date for review.

Part D. Monitoring of quality of water intended for human consumption

Water quality shall be monitored with the frequency established in this royal decree. The parameters to be monitored include:

a) The following microbiological parameters:

Legionella spp.

- b) Chemical parameters related to the materials used:
- 1. Metal: lead, iron; copper, chromium and any other recommended by the health authority;
- 2. Organic: bisphenol A, vinyl chloride, benzo(a)pyrene and aromatic polycyclic hydrocarbons;
 - c) Indicative parameters:
 - 1. Taste and smell (on site).
 - 2. Colour.
 - 3. Turbidity.
 - 4. Free residual chlorine.
 - 5. Colony count at 22.ºC.

ANNEX IX

Materials in contact with water

1. Organic materials.

The organic materials shall only be made of:

- a) Starting substances listed in the European Positive List of substances;
- b) Substances and any reactive sub-products of same whose presence in water for human consumption has been found to be below 0.1 μ g/l, unless more stringent values are required for specific substances with higher toxic levels.

Organic materials shall undergo testing in accordance with Table 24 using the testing methods specified in the relevant European regulations, or in the absence of same, a nationally or internationally recognised method, which should comply with

requirements stipulated therein. The results of the test for migration of substances shall be converted into the expected levels at the taps.

2. Metallic materials.

Only the metallic materials included in the European Positive List of composition established at European level shall be used. They should comply with the limitations established in the European Positive List with regard to the composition of such materials, their use for certain products and the utilisation of said products.

The composition shall be subjected to testing in accordance with Table 24 using the testing methods specified in the relevant European regulations, or in the absence of same, a nationally or internationally recognised method, which should comply with the requirements stipulated therein.

3. Cementitious materials.

Cementitious materials shall only be made of one or more of the following elements:

- a) The organic components that appear in the European Positive List of components established at European level;
- b) The organic components whose presence in water for human consumption has been found to be below $0.1 \mu g/l$;
 - c) Inorganic constituents.

Cementitious materials shall undergo testing in accordance with Table 24 using the testing methods specified in the relevant European regulations, or in the absence of same, a nationally or internationally recognised method, which should comply with the requirements stipulated therein. The results of the test for migration of substances shall be converted into the expected levels at the taps.

4. Enamels and ceramic materials.

Enamels and ceramic materials shall only be manufactured with the types of starting substances that appear in the European Positive List of components established at European level that appear in the European, after carrying out an evaluation of the elements used in said materials.

Enamels and ceramic materials shall undergo testing in accordance with Table 24 using the testing methods specified in the relevant European regulations, or in the absence of same, a nationally or internationally recognised method, which should comply with the requirements stipulated therein. The results of the test for migration of substances shall be converted into the expected levels at the taps.

5. Exceptions for evaluating materials used in minor and assembled components.

Assembled products, minor components, parts and materials shall be described in detail and the tests shall be correspondingly reduced. To this end, "minor" refers to a level of influence on the quality of water intended for human consumption that does not require a complete test.

Table 24. Tests related to types of materials.

Criteria	Organic (1)	Metal (2)	Cementitio us	Enamels and ceramic material s
European Positive List (EPL).				
Starting substances for organic materials.	YES	NO*	YES	NO*
Accepted metal composition.	NO*	YES	NO*	NO*
Components for cementitious materials.	NO*	NO*	YES	NO*
Composition for enamel and ceramic materials.	NO*	NO*	NO*	YES
Organoleptic tests.				
Smell and taste.	YES	NO*	YES	NO*
Colour and turbidity.	YES	NO*	YES	NO*

Criteria	Organic (1)	Metal (2)	Cementitio us	Enamels and ceramic materials
Hygiene assessment.				
Leaching of total organic carbon.	YES	NO*	YES	NO*
Surface residues (metals).	NO*	YES	NO*	NO*
Migration tests.				
Relevant parameters of the regulations.	YES	YES	YES	YES
MTCtap of substances in the positive list.	YES	NO*	YES (3)	NO*
Unexpected substances (GC-MS).	YES	NO*	YES (3)	NO*
Compliance of list of components.	NO*	YES	NO*	YES
Microbial growth.	YES	NO*	YES (3)	NO*

NO*:	Not necessary
	Maximum tolerable concentration at the tap (either derived from the opinion of ECHA for the purposes of inclusion of the substance in the European positive list, r based on a specific migration limit set in Commission Regulation No. 10/2011 and considering a 10% allocation factor and water consumption of 2 litres per day)
GC-MS	Gas chromatography -mass spectrometry (screening method)

Notes:

- 1 | Specific exceptions that shall be determined in accordance with section 5 of this annex.
- Metals shall not undergo organoleptic tests because it is generally accepted that if they comply with the parametric values laid down in annex I, they are unlikely to cause organoleptic problems
- 3 Depends on the presence of organic substances in the composition.

ANNEX X

Assessment of structural leaks

Part A. Obligations

- 1. The public administrations responsible for the urban supply of water intended for human consumption shall carry out a detailed assessment of leaks, if they are found in any of the following circumstances:
 - a) The supply singly or jointly provides water to a registered population equal to or over 10,000 inhabitants.
- b) The supply comes from water bodies declared to be at risk of not achieving a good quantitative start to provide more than 100 metres cubed or supply more than 500 inhabitants.
- 2. The other public administrations responsible for type 3, 4, 5 and 6 supply areas that are not included in section 1, shall carry out a basic assessment of the level of structural leaks.
- 3. Operators in these areas are obliged to provide information about leaks that take place within their part of the supply area, regardless of whether the leak is in the piping, reservoirs, distribution network or service connection, and inform the relevant public administration so that it can comply with its obligations with regard to notifications.

Part B. Definitions

The terms defined below are used in the assessments of structural leaks:

1. Management unit: territorial area that is made up of a set of infrastructures (abstraction point, purification plant, reservoir, distribution network) that are connected to each other, and that are uniform in terms of water efficiency, where an operator manages the supply service by applying the criteria of a management unit and in which there may be different water sources and where one or more municipalities may be included. The unit may also include one or more supply areas or parts of a supply area. The management should be circumscribed to one single owner of the supply concession, notwithstanding the possibility of several systems being under the same ownership.

- 2. Supplied water: total volume of water intended for human consumption that enters the distribution network in the part of the system managed by the operator;
- 3. Registered water: volume of water supplied at the end points of consumption and measured by the meters at the outlet of the part of the system managed by the operator;
- 4. Unregistered water: difference between the volume of water supplied and the registered volume;
- 5. Real losses of water: the volume of water caused by leaks in the distribution network and the service connections, as well as the leaks and overflows from tanks;
 - 6. Apparent losses of water: unauthorised consumption and errors in meters.

Part C. General aspects

- 1. For the purposes of controlling structural leaks and water efficiency, the management unit may be applied as the reference area instead of supply areas.
- 2. Real or physical losses of correspond to the volumes of water that are lost as a result of leaks in piping, reservoirs, distribution networks and service connections. There are many causes for such leaks, some of which are external and difficult for the operator to control. Others can be attributed to defective quality of the infrastructures and/or incorrect management by the operator.

Part D. Data to be gathered by the operators and public administrations

- 1. General information about the management unit.
- a) Management unit.
- b) Supply area(s) included.
- c) Demand unit(s) included.
- d) Connected population centres.
- e) Registered population supplied.
- f) Maximum population supplied.
- 2. Information for basic assessment.
- a) Volume of water supplied.
- b) Volume of water registered.
- 3. Information for detailed assessment.
- a) Unregistered water (estimate).
- 1. Unregistered legal consumption: street cleaning.
- 2. Real losses.
- i. Losses in main distribution piping.
- ii. Losses in reservoirs.
- iii. Losses in service connections.
- iv. Losses in connections to meters.
- 3. Apparent losses.
- i. Fraud and theft.
- ii. Errors in readings.
- a) Length of main piping (estimate).
- b) Number of service connections (estimate).
- c) Average length of service connections to meters (estimate).
- d) Average working pressure (estimate).

Part E. Indices to be calculated

1. For all assessments.

a) Unregistered water:

Volumen de agua no registrada = Vol. de agua suministrada - Vol. de agua registrada

$$ANR = \frac{\text{Volumen de agua no registrada}}{\text{Volumen de agua suministrada}} \times 100$$

[Volume of unregistered water Vol. of water supplied Vol. of registered water ANR = UW]

b) Network efficiency:

$$Eficiencia = \frac{Agua registrada}{Agua suministrada} \times 100$$

[Efficiency Registered water Water supplied]

2. For detailed assessments.

The European Commission and the Ministry for the Ecological Transition and the Demographic Challenge have yet to establish legislation with the indices to be applied, therefore until said legislation is enacted, the Structural Leaks Index or IFE shall be utilised, or an equivalent index that is currently used as a best technical practice. The IFE is a performance indicator specifically designed for technical comparisons of real losses from systems with different infrastructures and pressure characteristics.

The equation for the indicator is as follows:

$$IFE = \frac{PRAA}{PRAI}$$

Donde:

PRAA = Perdidas reales anuales actuales (m3/año)

PRAI = Pérdidas reales anuales inevitables o umbral mínimo de fugas (UMF) (m3/año)

$$PRAA = \frac{QPR}{N \ dp}$$

Donde:

QPR (m3/año) = Pérdidas reales anuales de agua

N_{dp} [-] = número de días en los que el sistema está presurizado

$$PRAI\left(\frac{m3}{a\tilde{n}o}\right) = P \cdot (6,57 \cdot Lm + 0,256 \cdot Nc + 9,13 \cdot Lt)$$

Donde:

Lm = longitud de tuberías (km)

Nc = número de acometidas (tuberías a línea de propiedad)

P = presión media de operación (mca)

Lt = longitud total en km de las acometidas, desde la tubería al contador

[Where:

ĪFE = SLI

PRAA = CRYL = Current real yearly losses (m3/year)

PRAI = URYL = Unavoidable real yearly losses or minimum threshold of leaks (MTL) (m3/year)

Where:

QPR (m3/year) = real yearly water losses

NDP = [-] number of days when system is pressurised

Where:

LP = Length of piping

Nc = Number of service connections (piping to property line)

P = Average operating pressure (mca)

Lt = Total length in km of service connections, from piping to meter]

Part F. Information to be entered in the SINAC

SINAC.

- 1. Date of assessment and notification of the data and indicators. Carried out in accordance with provisions of article 47.
 - 2. Action plan adopted to reduce structural leaks and date when measures were taken.

Data gathered in part D and E of this annex shall be entered in the SINAC or another system developed for this purpose.

ANNEX XI

SINAC and information for the citizen

Part A. National Information System of Water for Human Consumption (SINAC).

- Access to the SINAC.
- a) The SINAC may be accessed on the Internet through the portal of the Ministry of Health. Said address includes the user manual and updated technical procedures available to SINAC users, along with other documents of interest.
- b) A "professional user" is understood as referring to personnel of entities of public and private operators of supply areas, infrastructures (abstraction points, purification plants, reservoirs, distribution networks and cistern tankers), public or private laboratories that carry out controls of water intended for human consumption, owners of priority premises, health administrations, the Ministry of Health and the Ministry for the Ecological Transition and Demographic Challenge, and other public bodies with competencies in water intended for human consumption.
- c) To access the SINAC as a professional user, the Digital Certificate Class 2CA (personal certificate) of the Spanish National Stamp Factory and Mint or other compatible system is required.
 - 2. Types of users.
 - a) The scopes of professional users are as follows:
 - 1. Basic: public or private operators and laboratories.
 - 2. Regional: autonomous communities and cities.
 - 3. Hydrological: hydrographical confederations.
- 4. Ministerial: Ministry of Health and Ministry of the Ecological Transition and Demographic Challenge.
 - b) The groups of user types are as follows:
- 1. Administrator of the Application: General Directorate of Public Health of the Ministry of Health.
- 2. Hydrological administrator: General Directorate of Water of the Ministry of the Ecological Transition and Demographic Challenge.
 - 3. Regional/provincial administrator: health authority.
 - 4. Basic/municipal/laboratory administrator: operators, town halls and laboratories.
 - 5. Regional/provincial/hydrographic confederation user.
 - 6. Basic/laboratory/municipal/laboratory user.
 - c) Professional users can only be registered as part of an organisation.
 - 3. Registration of professional users.
- a) User management is decentralised; every autonomous community, town hall, laboratory and company shall manage its users and their permits for reading/modification/registration/deregistration of the information.
- b) To register regional administrators, the party responsible for the regional general directorate of public health should send an official written list by electronic means to the party responsible for the general directorate of public health of the Ministry of Health, containing the names, surnames and national ID card numbers of the persons who intend to apply for professional access with this profile to the SINAC.
- c) To register or deregister basic administrators, the person responsible for the company or town hall should send an official written list by electronic means to the regional administrator, containing the names, surnames and national ID card numbers of the persons who intend to apply for professional access with this profile to the SINAC.

The basic administrators should apply for registration of all the regional administrators territorially affected by the supply areas that their entity manages.

- d) The operator or town hall may contract a company to record the data of the infrastructures and supply areas that they manage.
- e) Registration as a professional user in the SINAC is valid for an unlimited time period unless the basic administrator applies for deregistration in writing to the health authority. Said application by regional administrators should be sent to the Ministry of Health.

4. Security Guarantee.

The Ministry of Health shall at all times take the necessary technical and organisational measures to guarantee the security of the data and prevent any unauthorised alteration, loss, processing or access, in view of the state of the art, the nature of the data stored and risks that they are exposed to from human activities or the physical or natural environment.

5. Personal data protection.

The processing of personal data of natural persons shall be carried out with strict adherence to the provisions of Regulation (EU) 2016/679 of the European Parliament and of the Council, of 27 April 2016, on the protection of natural persons with regard to the processing of their personal data and on the free movement of such data, and Organic Law 3/2018, of 5 December, on the Protection of Personal Data and the guarantee of digital rights.

6. Exchange files.

The structure of the exchange files with XML format shall be made available to professional users. These include but are not limited to the following:

- a) Registration of infrastructures and laboratories.
- b) Registration of bulletins, methods of analysis and sampling points.
- c) Registration of inspections.
- 7. Periods of notification of the SINAC and updates of information.
- a) The health authority shall review and update whenever necessary the information for the supply areas on a yearly basis, preferably before the end of the year.
- b) Public or private operators shall review and update whenever necessary the information for the infrastructures and laboratories on a yearly basis, preferably before the end of the year.
- c) The health authority may give notification of health inspections every quarter and always before the end of January of the following year.
- d) Analysis bulletins whose sampling points is a distribution network should be uploaded within four working days after drawing up the report of the analytical results. This deadline shall not be applied to the routine control.
- e) Other analysis bulletins, including those for interior systems and priority premises shall be reported within ten working days after drawing up the report of the analytical results, unless there has been an infringement, in which case the deadlines shall be the one mentioned in the section above.
- f) The deadline for reporting analysis bulletins in which the sample process took place in the last days of December shall be 30 January of the following year, notwithstanding the foregoing when there is an infringement.
- g) The quantified values of the parameters in annex I shall be reported in the same units and with the same number of decimals as the ones that appear in the parametric value of same.
- h) Given that the SINAC is a public document, the data should be true and consistent. The party responsible for the information is the user and the organisation that uploads the data, regardless of whether it is the operator or recorder.

Part B.1 Online information to citizens from local administrations

The local administration or the operator of the distribution network should make the following information available to online users on its corporate portal, notwithstanding the provisions of article 63:

- 1. Information regularly updated throughout the year:
- a) The ten last bulletins of the control analyses for the distribution networks, the last five bulletins of the complete analyses and radioactivity controls of the distribution network managed by same, with all the quantified parameters, the date when the sample was taken and the results of every parameter, with their units and mention of the type of analysis;
- b) The results of the following parameters: hardness, calcium, magnesium and potassium, updated at least once every six months.

If all the bulletins are reported in the SINAC in due time and form, the web page can be connected to the website of the Ministry of Health at https://sinac.sanidad.gob.es

- 2. Information updated annually in the first 20 days of each year:
- a) General data:
- 1. Structure and type of property; Owner of infrastructures: DWTP, reservoirs and networks (entity, tax number and website) and the operator (entity, tax number and website) that manages the distribution network and name of the network in the SINAC;
- 2. Supply area that the network depends on and estimated population supplied by said network;
- 3. Average daily domestic consumption in said distribution network, calculated on a harmonised basis (l/hb/d);
- 4. Unit treatment processes used to purify the water for the network: Sand Removal/Screening; Aeration; Pre-Oxidation; Coagulation/Flocculation; Sedimentation; Filtration; Ozonisation; Adsorption; Ph Correction; Remineralisation; Softening; Ion Exchange Resins; Nanofiltration; Ultrafiltration; Inverse Osmosis; Microfiltration; Reversible Electrodialysis; Disinfection; UV Rays; Fluoridation; Other Treatments; Rechlorination in reservoirs or distribution networks.
- 5. Type of water source; Groundwater: Gallery, Spring, Tube Well, Excavated Well; Surface Water: Coastal/Sea, Transitional, Lake/Lagoon, River/Canal, Reservoir; Rainwater.
- 6. The overall performance of the water system in terms of efficiency and indicator of structural leaks;
- 7. Advice to users on how to reduce water consumption, when appropriate, and responsible water use in accordance with local conditions.
- 8. When available, a summary and statistics of complaints from users received by operators about issues that fall within the scope of this law.
- 9. Assessment of risks in the supply area if one has been drawn up, indicating the hazards and corrective and preventive measures taken over the course of the year.
 - b) Data about water prices:
- 1. Frequency of billing; items included in the bill (supply, sanitation and others) and if the consumption of the household appears in the bill;
- 2. Link to website where approval of the prices for all the services in the urban water cycle is published:
 - 3. Price in euros/litre, and euros/m³ in billing for 7 m³, 15 m³ and 30 m³ a month;
- 4. When costs are recovered through tariffs or another system: information about the structure per metre cubed of water, including fixed and variable rates, and the costs associated with the measures taken by the operator with regard to measures to ensure access for all to water intended for human consumption, support and defence of said access for vulnerable groups and those at risk of social exclusion and promotion of tap water and level of coverage of costs;

5. Rebates on bills for vulnerable groups in the previous year and types of rebates;

Part B.2 Minimum information in consumers' water bills

- 1. Period invoiced, previous reading, current reading, consumption in metres cubed over the period invoiced;
 - 2. Type of use (domestic); meter number and diameter number;
- 3. Yearly domestic consumption trends, as long as this is technically feasible and said information is at the water operator's disposal;
- 4. Comparison between average consumption per household and yearly domestic water consumption;

Part C. Information for citizens from the health authority

- 1. The local or regional health authority shall issue health recommendations for water graded as unsuitable or unsuitable with health risks, which it shall upload to the SINAC and make available to users on its website if this process forms part of the authority's programme.
- 2. The Ministry of Health shall make the following information available to users, according to the autonomous community or city, province, municipality and locality, as long as the operator has reported it in the SINAC:
- a) The last ten bulletins of control, complete and radioactivity analyses that have been reported for the distribution networks;
 - b) Recommendations by the health authority in cases of unsuitable water with health risks;
- c) The most recent reported results for hardness, magnesium and potassium for each distribution network;
 - d) The sources and purification treatments of water in said distribution network;
- e) Price in euros/litre, and euros/m³ in billing for 7 m³, 15 m³ and 30 m³ a month and items included in the bill.
- 3. When this law comes into force, and the national report on the quality of water intended for human consumption for the previous year has been completed, the Ministry of Health shall make available a data base for citizens in its corporate portal, which shall include the following information: results of the controls of all the parameters in this law for distribution networks, of every supply area registered in the SINAC, as long as the operator has reported them. The data from 2016 onwards shall be shown.

Part D. Application for information

- 1. Users may be given access after submitting a reasoned request to the following:
- a) The local administration or the operator. Whenever it is technically feasible, the data shall be sent in another format and shall consist of historical data used to obtain information for the last 10 years that is stored in the SINAC and that forms part of its competencies.
- b) The regional health authority. Whenever it is technically feasible, the data shall be sent in another format and shall consist of historical data used to obtain information for the last 10 years with regard to results in the distribution network and supply areas of the autonomous community or city, when the local administration cannot comply with the foregoing section.
- 2. Users may apply to the Ministry of Health for data about the quality of drinking water in the distribution network, as long as:
 - a) The data is national and cannot be obtained according the provisions of point 1, part D.
 - b) They are for periods prior to 2016.
 - c) They are not personal data.

- 3. The application for information defined above should include the following information:
- a) Name of applicant and organisation that he/she belongs to.
- b) Details of data and year(s) requested.
- c) Purpose and use of said information.

Administrations shall facilitate said information within 3 months or give reasons as to why said data cannot be given or explain why a further three-month period is required before releasing said data.

4. For any other application for information, citizens should contact their municipality.

This consolidated text has no legal value.