



STATUTORY INSTRUMENTS.

**S.I. No. 166 of 2022**

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EUROPEAN UNION (WATER POLICY) (AMENDMENT) REGULATIONS  
2022

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S.I. No. 166 of 2022

**EUROPEAN UNION (WATER POLICY) (AMENDMENT) REGULATIONS  
2022**

I, DARRAGH O'BRIEN, Minister for Housing, Local Government and Heritage, in exercise of the powers conferred on me by section 3 of the European Communities Act 1972 (No. 27 of 1972) and for the purpose of giving further effect to Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000<sup>1</sup> establishing a framework for Community action in the field of water policy, as amended, hereby make the following regulations:

**PART 1  
PRELIMINARY AND GENERAL**

**Citation**

1. These Regulations may be cited as the European Union (Water Policy) (Amendment) Regulations 2022.

**Interpretation**

2. (1) In these Regulations, Principal Regulations means the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003).

(2) A word or expression that is used in these Regulations and is also used in Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000<sup>1</sup> establishing a framework for Community action in the field of water policy has, unless the contrary intention appears, the same meaning in these Regulations as in that Directive.

**PART 2  
AMENDMENTS TO PRINCIPAL REGULATIONS**

**Amendment of article 2(3) of Principal Regulations**

3. Article 2(3) of the Principal Regulations is amended by inserting the following definitions:

“ ‘poor or bad status’, in relation to a body of surface water, shall be construed in accordance with Regulation 38 of the

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<sup>1</sup> OJ No. L 327, 22.12.2000, p. 1

European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. No. 272 of 2009);

‘water services’ means all services which provide for households, public institutions or any economic activity –

- (a) abstraction, impoundment, storage, treatment and distribution of surface water or groundwater, or
- (b) waste water collection and treatment facilities which subsequently discharge into surface water;”.

### **Amendment of article 7(1) of Principal Regulations**

4. Article 7(1) of the Principal Regulations is amended –

- (a) in subarticle (a), by the substitution of “map the location and boundaries of groundwater bodies and surface water bodies, in accordance with Seventh Schedule,” for “map the location and boundaries of groundwater bodies and surface water bodies,” and
- (b) by the substitution of the following subarticle for subarticle (b):
  - “(b) establish type-specific reference conditions for each surface water body type in accordance with the Sixth Schedule.”.

### **Amendment of article 7(2) of Principal Regulations**

5. Article 7(2) of the Principal Regulations is amended –

- (a) in paragraph (a), by substituting “characteristics,” for “characteristics, and”,
- (b) in paragraph (b), by substituting “groundwaters, and” for “groundwaters.”, and
- (c) by inserting after paragraph (b), the following paragraph:
  - “(c) an economic analysis of water use in accordance with the Eighth Schedule.”.

### **Amendment of article 7 of Principal Regulations**

6. Article 7 (as amended by Regulation 5 of the European Union (Water Policy) Regulations 2014 (S.I. No. 350 of 2014)) of the Principal Regulations is amended by inserting after subarticle (2) the following subarticles:

- “(3) The objectives and programmes of measures mentioned in article 6 shall be reviewed, and if necessary updated and published by the Minister every six years.

- (4) The EPA shall conduct the characterisation of surface water body types in accordance with the Fourth Schedule”.

### **Amendment of article 8 of Principal Regulations**

7. Article 8 of the Principal Regulations is amended by substituting “Article 6 of the Directive and the Ninth Schedule,” for “Article 6 of the Directive”.

### **Insertion of articles 9A to 9C into Principal Regulations**

8. The Principal Regulations are amended by inserting after article 9 the following articles:

#### **“Artificial and heavily modified surface water bodies**

9A. The quality elements applicable to artificial and heavily modified surface water bodies shall be those applicable to whichever of the following natural surface water categories most closely resembles the heavily modified or artificial water body concerned:

- (a) rivers;
- (b) lakes;
- (c) transitional waters;
- (d) coastal waters.

#### **Procedure for the setting of chemical quality standards**

9B. (1) In deriving environmental quality standards for pollutants listed in paragraphs 1 to 9 of Schedule 1 to the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) for the protection of aquatic biota, the Minister, having consulted with the EPA, may set standards for water, sediment or biota.

(2) In setting the standards referred to in paragraph (1), where possible, both acute and chronic data shall be obtained for the taxa set out in paragraph (3) which are relevant for the water body type concerned as well as any other aquatic taxa for which data are available.

(3) The ‘base set’ of taxa, referred to in paragraph (2), are the following:

- (a) algae or macrophytes;
- (b) daphnia or representative organisms for saline waters;
- (c) fish.

### **Setting the environmental quality standard**

9C. The following procedure applies to the setting of a maximum annual average concentration:

- (a) Appropriate safety factors shall be set in each case consistent with –
  - (i) the nature and quality of the available data and the guidance given, as may be amended by the Commission from time to time, in section 3.3.1 of Part II of the ‘Technical guidance document in support of Commission Directive 93/67/EEC on risk assessment for new notified substances and Commission Regulation (EC) No 1488/94 on risk assessment for existing substances’, and
  - (ii) the safety factors set out in the Table to this article;
- (b) where data on persistence and bioaccumulation are available, these shall be taken into account in deriving the final value of the environmental quality standard;
- (c) the standard thus derived should be compared with any evidence from field studies and where anomalies appear, the derivation shall be reviewed to allow a more precise safety factor to be calculated;
- (d) the standard derived shall be subject to peer review and public consultation including to allow a more precise safety factor to be calculated.

**TABLE**

	<b>Safety factor</b>
<b>At least one acute L(E)C<sub>50</sub> from each of three trophic levels of the base set</b>	1,000
<b>One chronic NOEC (either fish or daphnia or a representative organism for saline waters)</b>	100
<b>Two chronic NOECs from species representing two trophic levels (fish and/or daphnia or a representative organism for saline waters and/or algae)</b>	50
<b>Chronic NOECs from at least three species (normally fish, daphnia or a representative organism for saline waters and algae) representing three trophic levels</b>	10
<b>Other cases, including field data or model ecosystems, which allow more precise safety factors to be calculated and applied</b>	Case-by-case assessment

### **Amendment of article 10 of Principal Regulations**

9. Article 10 of the Principal Regulations is amended by inserting after subarticle (8) (inserted by Regulation 4 of the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2015 (S.I. No. 386 of 2015)) the following subarticle:

“(9) Where it considers it necessary following a characterisation and impact assessment carried out under these Regulations, the EPA shall review and update monitoring programmes established under these Regulations for each period to which a river basin management plan applies.”.

### **Insertion of articles 10A to 10K into Principal Regulations**

10. The Principal Regulations are amended by inserting after article 10 the following articles:

#### **“Monitoring of ecological status and chemical status for surface waters**

10A. (1) The EPA shall establish and maintain a monitoring network in accordance with the requirements of subarticle (2) and article 10(1).

(2) The monitoring network, under subarticle (1), shall be designed so as to provide a coherent and comprehensive overview of ecological and chemical status within each river basin and shall permit classification of water bodies into 5 classes consistent with the normative definitions in the Tenth Schedule.

(3) River basin management plans shall provide a map showing the surface water monitoring network under this article.

(4) On the basis of the characterisation under article 7 and impact assessment carried out in accordance with articles 3 and 5, for each period to which a river basin management plan applies, the EPA shall establish a surveillance monitoring programme, an operational monitoring programme and, where appropriate, a programme of investigative monitoring.

(5) The EPA shall carry out, or make arrangements to have carried out, the following:

- (a) the monitoring of parameters which are indicative of the status of each relevant quality element;
- (b) in selecting parameters for biological quality elements, the identification of the appropriate taxonomic level required to achieve adequate confidence and precision in the classification of the quality elements.

(6) Estimates of the level of confidence and precision of the results provided by the monitoring programmes established under this article shall be –

- (a) given in the plan, and

(b) set out in accordance with the standards mentioned in article 10K.

**Presentation of monitoring results and classification of ecological status and ecological potential**

10B. (1) In the presentation of monitoring results and in the classification of ecological status and ecological potential, the EPA shall format the presentation in accordance with Tables 1 and 2 to this article.

(2) The EPA shall indicate, by a black dot on a relevant map, those bodies of water where failure to achieve good status or good ecological potential is due to non-compliance with one or more environmental quality standards which have been established for that body of water in respect of specific synthetic and non-synthetic pollutants (in accordance with the compliance regime concerned).

(3) In Table 2 to this article, the ecological potential classification for heavily modified and artificial water bodies is required to be represented by the lower of the values for biological and physiochemical monitoring results.

TABLE 1

Ecological status classification	Colour code
High	Blue
Good	Green
Moderate	Yellow
Poor	Orange
Bad	Red

TABLE 2

Ecological potential classification	Colour code	
	Artificial Water Bodies	Heavily Modified
Good and above	Equal green and light grey stripes	Equal green and dark grey stripes
Moderate	Equal yellow and light grey stripes	Equal yellow and dark grey stripes
Poor	Equal orange and light grey stripes	Equal orange and dark grey stripes
Bad	Equal red and light grey stripes	Equal red and dark grey stripes

### **Groundwater monitoring network**

10C. (1) The EPA shall ensure that the groundwater monitoring network established under article 10 shall comply with the requirements of Articles 7 and 8 of the Water Framework Directive.

(2) The groundwater monitoring network, referred to in subarticle (1), shall –

- (a) be designed so as to provide a reliable assessment of the quantitative status of all groundwater bodies or groups of bodies including assessment of the available groundwater resource, and
- (b) provide a map showing the groundwater monitoring network in the river basin management plan concerned.

### **Density of monitoring sites**

10D. (1) The EPA shall ensure that the groundwater monitoring network established under article 10 shall include sufficient representative monitoring points to estimate the groundwater level in each groundwater body or group of bodies taking into account short and long-term variations in recharge and, in particular, the following:

- (a) for groundwater bodies identified as being at risk of failing to achieve environmental objectives under article 12(1)(a), ensure sufficient density of monitoring points to assess the impact of abstractions and discharges on the groundwater level;
- (b) for groundwater bodies within which groundwater flows across a boundary of the State, ensure sufficient monitoring points are provided to estimate the direction and rate of groundwater flow across the State boundary.

### **Monitoring frequency**

10E. (1) The EPA shall conduct observations, for the purposes of the groundwater monitoring network established under article 10, at sufficient frequency to allow assessment of the quantitative status of each groundwater body or group of bodies taking into account short and long-term variations in recharge and shall comply, in particular, with the matters mentioned in subarticle (2).

(2) The matters referred to in subarticle (1) are the following:

- (a) for groundwater bodies identified as being at risk of failing to achieve environmental objectives under Article 4 of the Water Framework Directive, the EPA shall ensure sufficient frequency of measurement to assess the impact of abstractions and discharges on the groundwater level;

- (b) for groundwater bodies within which groundwater flows across a boundary of the State, the EPA shall ensure sufficient frequency of measurement to estimate the direction and rate of groundwater flow across that boundary.

### **Groundwater monitoring network**

10F. (1) The EPA shall ensure that the groundwater monitoring network established under article 10 is designed so as to provide a coherent and comprehensive overview of groundwater chemical status within each river basin and to detect the presence of long-term anthropogenically induced upward trends in pollutants.

(2) On the basis of the characterisation and impact assessment carried out in accordance with Article 5 of, and Annex II to, the Directive, the EPA shall establish a surveillance monitoring programme for each period to which a river basin management plan applies.

(3) The results of the programme, referred to in subarticle (2), shall be used to establish an operational monitoring programme to be applied for the remaining period of the plan.

(4) The EPA shall ensure that estimates of the level of confidence and precision of the results provided by the monitoring programmes under this article shall be given to the Minister for inclusion in the relevant river basin management plan.

### **Surveillance monitoring**

10G. (1) Surveillance monitoring shall be carried out, by the EPA, in order to –

- (a) supplement and validate the impact assessment procedure, and
- (b) provide information for use in the assessment of long term trends both as a result of changes in natural conditions and through anthropogenic activity.

(2) When conducting surveillance monitoring under this article, it shall select sufficient monitoring sites for each of the following:

- (a) bodies identified as being at risk following the characterisation under article 7 and Section 2.2 of Annex II to the Water Framework Directive;
- (b) bodies which cross a boundary of the State.

### **Selection of parameters**

10H. (1) The following set of core parameters shall be monitored in all the selected groundwater bodies under article 10G(2):

- (a) oxygen content;
- (b) pH value;
- (c) conductivity;
- (d) nitrate;
- (e) ammonium.

(2) Bodies which are identified in accordance with Annex II to the Directive as being at significant risk of failing to achieve good status shall also be monitored for those parameters which are indicative of the impact of those pressures.

(3) Transboundary water bodies shall also be monitored for those parameters which are relevant for the protection of all of the uses supported by the groundwater flow.

### **Operational monitoring**

10I. (1) The EPA shall undertake operational monitoring in the periods between surveillance monitoring programmes in order to -

- (a) establish the chemical status of all groundwater bodies or groups of bodies determined as being at risk, and
- (b) establish the presence of any long term anthropogenically induced upward trend in the concentration of any pollutant.

(2) Operational monitoring shall be carried out by the EPA for all those groundwater bodies or groups of bodies which on the basis of both the impact assessment carried out in accordance with Annex II to the Directive and surveillance monitoring under article 10 are identified as being at risk of failing to meet objectives under Article 4 of the Directive.

(3) The selection of monitoring sites by the EPA, under this article, shall also reflect an assessment of how representative monitoring data from that site is of the quality of the relevant groundwater body.

(4) Operational monitoring shall be carried out by the EPA for the periods between surveillance monitoring programmes at a frequency sufficient to detect the impacts of relevant pressures but at a minimum of once per annum.

### **Identification of trends in pollutants**

10J. (1) The EPA shall use data from both surveillance monitoring, under article 10G, and operational monitoring, under article 10I, in the identification of long term anthropogenically induced upward trends in pollutant concentrations and the reversal of such trends.

(2) The base year or period from which trend identification under subarticle (1) is to be calculated shall be identified.

(3) The calculation of trends shall be undertaken by the EPA for a body or, where appropriate, group of bodies of groundwater.

(4) Reversal of a trend shall be demonstrated statistically by the EPA and it shall state the level of confidence associated with the identification.

### **Standards for monitoring of quality elements**

10K. The EPA shall ensure that the methods used for type parameters shall –

- (a) conform to the international standards listed in the Tables to this article in so far as they cover monitoring, or
- (b) to such other national or international standards in a manner that shall ensure the provision of data of an equivalent scientific quality and comparability.

**TABLE 1 - Standards for sampling of biological quality elements**

Generic methods for use with the specific methods given in the standards relating to the following biological quality elements:

EN 5667- 3:2012	ISO	Water quality — Sampling — Part 3: Preservation and handling of samples
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**TABLE 2 - Standards for phytoplankton**

EN 15204:2006	Water quality — Guidance standard on the enumeration of phytoplankton using inverted microscopy (Utermöhl technique)
EN 15972:2011	Water quality — Guidance on quantitative and qualitative investigations of marine phytoplankton
ISO 10260:1992	Water quality — Measurement of biochemical parameters — Spectrometric determination of the chlorophyll-a concentration

**TABLE 3 - Standards for macrophyte and phytobenthos**

EN 15460:2007	Water quality — Guidance standard for the surveying of macrophytes in lakes
EN 14184:2014	Water quality — Guidance for the surveying of aquatic macrophytes in running waters
EN 15708:2009	Water quality — Guidance standard for the surveying, sampling and laboratory analysis of phytobenthos in shallow running water
EN 13946:2014	Water quality — Guidance for the routine sampling and preparation of benthic diatoms from rivers and lakes

EN 14407:2014	Water quality — Guidance for the identification and enumeration of benthic diatom samples from rivers and lakes
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**TABLE 4 - Standards for benthic invertebrate**

EN ISO 10870:2012	Water quality — Guidelines for the selection of sampling methods and devices for benthic macroinvertebrates in fresh waters
EN 15196:2006	Water quality — Guidance on sampling and processing of the pupal exuviae of Chironomidae (order Diptera) for ecological assessment
EN 16150:2012	Water quality — Guidance on pro rata multi-habitat sampling of benthic macro-invertebrates from wadeable rivers
EN ISO 19493:2007	Water quality — Guidance on marine biological surveys of hard-substrate communities
EN ISO 16665:2013	Water quality — Guidelines for quantitative sampling and sample processing of marine soft-bottom macro-fauna

**TABLE 5 - Standards for fish**

EN 14962:2006	Water quality — Guidance on the scope and selection of fish sampling methods
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EN 14011:2003	Water quality — Sampling of fish with electricity
EN 15910:2014	Water quality — Guidance on the estimation of fish abundance with mobile hydroacoustic methods
EN 14757:2005	Water quality — Sampling of fish with multi-mesh gillnets

**TABLE 6 - Standards for hydromorphological parameters**

EN 14614:2004	Water quality — Guidance standard for assessing the hydromorphological features of rivers
EN 16039:2011	Water quality — Guidance standard on assessing the hydromorphological features of lakes
EN 1650:2014	Water quality — Guidance standard for assessing the hydromorphological features of transitional and costal waters

**TABLE 7 - Standards for physico-chemical parameters**

Any relevant CEN/ISO standards”.

#### **Amendment of article 12(1) of Principal Regulations**

11. Article 12(1) (amended by Regulation 5 of the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2015 (S.I. No. 386 of 2015)) of the Principal Regulations is amended by the substitution of the following subparagraphs for subparagraph (a):

- “(a) establish environmental objectives in relation to each river basin district in accordance with Article 4 of the Directive and, in the case of any particular objective

- relating to a given body of water, the most stringent requirement in that Article shall apply,
- (ab) Where monitoring or other data indicate that the objectives set under Article 4 of the Directive for the body of water concerned are unlikely to be achieved –
- (i) the relevant local authority shall ensure that the causes of the possible failure are investigated,
  - (ii) the relevant local authority shall ensure that the relevant permits and authorisations are examined and reviewed as appropriate,
  - (iii) the EPA shall ensure that the monitoring programmes are reviewed and adjusted as appropriate, and
  - (iv) the Minister shall ensure that the additional measures as may be necessary in order to achieve those objectives are established, including, as appropriate, the establishment of stricter environmental quality standards following the procedures laid down in Annex V to the Directive,
- (ac) Where –
- (i) the objectives set under Article 4 of the Directive for the body of water concerned are unlikely to be achieved and such failures are the result of circumstances of natural cause or force majeure which are exceptional and could not reasonably have been foreseen, in particular extreme floods and prolonged droughts, subject to Article 4(6) of the Directive, and
  - (ii) the EPA has advised the Minister that additional measures are not practicable,
- the Minister shall –
- (I) adopt such further supplementary measures as he or she considers necessary to ensure that all practicable steps are taken to prevent further deterioration in status and in order not to compromise the objectives of the Directive in other bodies of water not affected by those circumstances, and
  - (II) include those further supplementary measures in next update of the river basin management plan concerned.

- (ad) In implementing measures pursuant to this article, the local authority concerned shall take all appropriate steps not to increase pollution of marine waters,
- (ae) Without prejudice to existing legislation, the application of measures taken pursuant to this article may on no account lead, either directly or indirectly, to increased pollution of surface water and this requirement shall not apply where it would result in increased pollution of the environment as a whole,
- (af) The Minister shall ensure that the programmes of measures under these Regulations shall be established at the latest 9 years after the date of entry into force of the Directive and all the measures shall be made operational at the latest 12 years after that date.”.

### **Amendment of article 12(2) of Principal Regulations**

12. Article 12 of the Principal Regulations is amended by the substitution of the following subarticle for subarticle (2):

- “(2) A programme of measures shall include –
- (a) the basic measures specified in Article 11(3) of the Directive,
  - (b) such supplementary measures specified in Article 11(4) of the Directive as the relevant authorities consider appropriate, and
  - (c) the legislation specified in Article 10 of, and Annex VI to, the Directive.”.

### **Amendment of article 12 of Principal Regulations**

13. Article 12 of the Principal Regulations (as amended by Regulation 7 of the European Union (Water Policy) Regulations 2014 (S.I. No. 350 of 2014)) is amended by inserting after subarticle (2) the following subarticles:

“(3) The Minister shall establish the programmes of measures under these Regulations not later than 9 years after the date of entry into force of the Directive and all the measures shall be made operational not later than 12 years after that date of entry into force.

(4) The Minister shall review the programmes of measures and, if necessary, update them at the latest 15 years after the date of entry into force of the Directive and every 6 years thereafter and any new or revised measures established under an updated programme shall be made operational not later than 3 years after the date of their establishment.”.

### **Amendment of article 13 of Principal Regulations**

14. Article 13 of the Principal Regulations (as amended by Regulation 8 of the European Union (Water Policy) Regulations 2014 (S.I. No. 350 of 2014)) is amended by inserting after subarticle (4) the following subarticle:

“(5) The Minister shall review and update the river basin management plans not later than 15 years after the date of entry into force of the Directive and every 6 years thereafter.”.

### **Amendment of article 14 of Principal Regulations**

15. Article 14 of the Principal Regulations (as amended by Regulation 9 of the European Union (Water Policy) Regulations 2014 (S.I. No. 350 of 2014)) is amended by the substitution of the following subarticles for subarticles (1) and (2):

“(1) The Minister shall, subject to paragraph (3), in accordance with Article 14 of the Directive and supported by the EPA and with the assistance of local authorities working at both local and regional level, prepare and publish for each river basin district the following:

- (a) not later than 3 years before the beginning of the period to which the plan relates, a timetable and work programme for the production of a river basin management plan, including a statement as to the consultation measures to be taken;
- (b) not later than 2 years before the beginning of the period to which the plan relates, an interim overview of the significant water management issues identified in river basin districts;
- (c) not later than one year before the beginning of the period to which the plan relates, draft copies of the river basin management plans.

(2) On publication of the documents specified in subarticle (1), in order to allow active involvement and consultation, the Minister shall by notice published in a daily newspaper circulating in the river basin district concerned, invite the provision of comments in writing by any person and shall allow a period of not less than 6 months for the provision of such comments.

(3) The Minister shall ensure that appropriate administrative arrangements under this Regulation are in place for the application of the Directive to any portion of any international river basin in the State.”.

### **Insertion of Fourth to Tenth Schedules to Principal Regulations**

16. The Principal Regulations are amended by inserting after the Third Schedule the following Schedules:

## “FOURTH SCHEDULE

### *Article 7*

#### Characterisation of surface water body types

### SURFACE WATERS

1. Subject to paragraph 2, the EPA shall identify the location and boundaries of bodies of surface water and shall carry out an initial characterisation of all such bodies in accordance with the methodology set out in paragraphs 3 to 8.
  
2. The EPA may group surface water bodies together for the purposes of this initial characterisation.
  
3. The surface water bodies within the river basin district shall be identified as falling within either one of the following surface water categories:
  - (a) rivers;
  - (b) lakes;
  - (c) transitional waters;
  - (d) coastal waters;
  - (e) artificial surface water bodies or heavily modified surface water bodies.
  
4. For each surface water category, the relevant surface water bodies within the river basin district shall be differentiated according to type and these types are those defined using either ‘system A’ or ‘system B’ identified in the Fifth Schedule.
  
5. If system A is used, the surface water bodies within the river basin district shall first be differentiated by the relevant ecoregions in accordance with the geographical areas identified in the Fifth Schedule and shown on the relevant map in Annex XI to the Directive. The water bodies within each ecoregion shall then be differentiated by surface water body types according to the descriptors set out in the tables for system A.

6. If system B is used, the EPA shall achieve at least the same degree of differentiation as would be achieved using system A. Accordingly, the surface water bodies within the river basin district shall be differentiated into types using the values for the obligatory descriptors and such optional descriptors, or combinations of descriptors, as are required to ensure that type specific biological reference conditions can be reliably derived.
  
7. For artificial and heavily modified surface water bodies the differentiation shall be undertaken in accordance with the descriptors for whichever of the surface water categories most closely resembles the heavily modified or artificial water body concerned.
  
8. The EPA shall submit to the Commission a map (in a GIS format) of the geographical location of the types consistent with the degree of differentiation required under system A.

## **FIFTH SCHEDULE**

*Fourth schedule*

### **Ecoregions and surface water body types**

#### **1.2.1 - 1.2.4 of Annex II of Directive**

##### **1. Rivers**

System A	
Fixed typology	Descriptors
Ecoregion	Ecoregions shown on map A in Annex XI
Type	Altitude typology high: > 800 m mid-altitude: 200 to 800 m lowland: < 200 m Size typology based on catchment area small: 10 to 100 km <sup>2</sup> medium: > 100 to 1 000 km <sup>2</sup> large: > 1 000 to 10 000 km <sup>2</sup> very large: > 10 000 km <sup>2</sup> Geology

	calcareous siliceous organic
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## System B

Alternative characterisation	Physical and chemical factors that determine the characteristics of the river or part of the river and hence the biological population structure and composition
Obligatory factors	altitude latitude longitude geology size
Optional factors	distance from river source energy of flow (function of flow and slope) mean water width mean water depth mean water slope form and shape of main river bed river discharge (flow) category valley shape transport of solids acid neutralising capacity mean substratum composition chloride air temperature range mean air temperature precipitation

## 2. Lakes

System A

Fixed typology	Descriptors
Ecoregion	Ecoregions shown on map A in Annex XI
Type	<p>Altitude typology</p> <p>high: &gt; 800 m</p> <p>mid-altitude: 200 to 800 m</p> <p>lowland: &lt; 200 m</p> <p>Depth typology based on mean depth</p> <p>&lt; 3 m</p> <p>3 to 15 m</p> <p>&gt; 15 m</p> <p>Size typology based on surface area</p> <p>0,5 to 1 km<sup>2</sup></p> <p>1 to 10 km<sup>2</sup></p> <p>10 to 100 km<sup>2</sup></p> <p>&gt; 100 km<sup>2</sup></p> <p>Geology</p> <p>calcareous</p> <p>siliceous</p> <p>organic</p>

System B

Alternative characterisation	Physical and chemical factors that determine the characteristics of the lake and hence the biological population structure and composition
Obligatory factors	<p>altitude</p> <p>latitude</p> <p>longitude</p> <p>depth</p>

	geology size
Optional factors	mean water depth lake shape residence time mean air temperature air temperature range mixing characteristics (e.g. monomictic, dimictic, polymictic) acid neutralising capacity background nutrient status mean substratum composition water level fluctuation

### 3. Transitional Waters

System A

Fixed typology	Descriptors
Ecoregion	The following as identified on map B in Annex XI: Baltic Sea Barents Sea Norwegian Sea North Sea North Atlantic Ocean Mediterranean Sea
Type	Based on mean annual salinity < 0,5 ‰: freshwater 0,5 to < 5 ‰: oligohaline 5 to < 18 ‰: mesohaline 18 to < 30 ‰: polyhaline 30 to < 40 ‰: euhaline Based on mean tidal range

	< 2 m: microtidal 2 to 4 m: mesotidal > 4 m: macrotidal
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## System B

Alternative characterisation	Physical and chemical factors that determine the characteristics of the transitional water and hence the biological population structure and composition
Obligatory factors	latitude longitude tidal range salinity
Optional factors	depth current velocity wave exposure residence time mean water temperature mixing characteristics turbidity mean substratum composition shape water temperature range

## 4. Coastal Waters

## System A

Fixed typology	Descriptors
Ecoregion	The following as identified on map B in Annex XI: Baltic Sea Barents Sea

	Norwegian Sea North Sea North Atlantic Ocean Mediterranean Sea
Type	Based on mean annual salinity < 0,5 ‰: freshwater 0,5 to < 5 ‰: oligohaline 5 to < 18 ‰: mesohaline 18 to < 30 ‰: polyhaline 30 to < 40 ‰: euhaline Based on mean depth shallow waters: < 30 m intermediate: (30 to 200 m) deep: > 200 m

## System B

Alternative characterisation	Physical and chemical factors that determine the characteristics of the coastal water and hence the biological community structure and composition
Obligatory factors	latitude longitude tidal range salinity
Optional factors	current velocity wave exposure mean water temperature mixing characteristics turbidity retention time (of enclosed bays) mean substratum composition water temperature range

## SIXTH SCHEDULE

### *Article 7*

**Establishment of type-specific reference conditions for surface water body types**

1. For each surface water body type characterised in accordance with the Fourth Schedule, type-specific hydromorphological and physicochemical conditions shall be established representing the values of the hydromorphological and physicochemical quality elements specified in point 1.1 in Annex V to the Directive for that surface water body type at high ecological status as defined in the relevant table in point 1.2 in Annex V to the Directive. Type-specific biological reference conditions shall be established, representing the values of the biological quality elements specified in point 1.1 in Annex V to the Directive for that surface water body type at high ecological status as defined in the relevant table in section 1.2 in Annex V to the Directive.
2. In applying the procedures set out in this section to heavily modified or artificial surface water bodies, references to high ecological status shall be construed as references to maximum ecological potential as defined in table 1.2.5 of Annex V to the Directive. The values for maximum ecological potential for a water body shall be reviewed every 6 years.
3. Type-specific conditions for the purposes of paragraphs 1 and 2 and type-specific biological reference conditions may be either spatially based or based on modelling, or may be derived using a combination of these methods.
4. Where it is not possible to use the methods in paragraphs 1 and 2, the EPA shall, not later than 22 December 2004, for the purposes of Article 5 of the Directive following consultation with such persons as it considers appropriate—
  - (a) establish type-specific reference conditions for each surface water body type, and
  - (b) prepare the information specified at paragraphs (a) to (d) of that Article in a form which is available for introduction into a geographical information system or the geographical information system of the European Commission.
5. For spatially based type-specific biological reference conditions, the EPA shall develop a reference network for each surface water body type. The network shall contain a sufficient number of sites of high status to provide a sufficient level of confidence about the values for the reference conditions, given the variability in the values of the quality elements corresponding to high ecological status for that surface water body type and the modelling techniques which are to be applied under paragraph 6.

6. Type-specific biological reference conditions based on modelling may be derived using either predictive models or hindcasting methods. The methods shall use historical, palaeological and other available data and shall provide a sufficient level of confidence about the values for the reference conditions to ensure that the conditions so derived are consistent and valid for each surface water body type.
7. Where it is not possible to establish reliable type-specific reference conditions for a quality element in a surface water body type due to high degrees of natural variability in that element, not just as a result of seasonal variations, then that element may be excluded from the assessment of ecological status for that surface water type. In such circumstances, the Minister shall state the reasons for this exclusion in the river basin management plan.

## **SEVENTH SCHEDULE**

### *Article 7*

#### **GROUNDWATERS**

##### **Initial characterisation**

1. The EPA shall carry out an initial characterisation of all groundwater bodies to assess their uses and the degree to which they are at risk of failing to meet the objectives for each groundwater body under Article 4 of the Directive. The EPA may group groundwater bodies together for the purposes of this initial characterisation. This analysis may employ existing hydrological, geological, pedological, land use, discharge, abstraction and other data but shall identify the following:
  - (a) the location and boundaries of the groundwater body;
  - (b) the pressures to which the groundwater body are liable to be subject including the following:
    - (i) diffuse sources of pollution;
    - (ii) point sources of pollution;
    - (iii) abstraction;
    - (iv) artificial recharge;
  - (c) the general character of the overlying strata in the catchment area from which the groundwater body receives its recharge;
  - (d) those groundwater bodies for which there are directly dependent surface water ecosystems or terrestrial ecosystems.

### Further characterisation

2. Following this initial characterisation, using, if required, typologies for groundwater characterisation when establishing natural background levels for the bodies of groundwater, the EPA shall carry out further characterisation of those groundwater bodies or groups of bodies which have been identified as being at risk in order to establish a more precise assessment of the significance of such risk and identification of any measures to be required under Article 11 of the Directive. Accordingly, this characterisation shall include relevant information on the impact of human activity and, where relevant, information on the following:

- (a) geological characteristics of the groundwater body including the extent and type of geological units;
- (b) hydrogeological characteristics of the groundwater body including hydraulic conductivity, porosity and confinement;
- (c) characteristics of the superficial deposits and soils in the catchment from which the groundwater body receives its recharge, including the thickness, porosity, hydraulic conductivity, and absorptive properties of the deposits and soils;
- (d) stratification characteristics of the groundwater within the groundwater body;
- (e) an inventory of associated surface systems, including terrestrial ecosystems and bodies of surface water, with which the groundwater body is dynamically linked;
- (f) estimates of the directions and rates of exchange of water between the groundwater body and associated surface systems;
- (g) sufficient data to calculate the long term annual average rate of overall recharge;
- (h) characterisation of the chemical composition of the groundwater, including specification of the contributions from human activity.

### Review of the impact of human activity on groundwaters

3. For those bodies of groundwater which cross the boundary of the State or are identified following the initial characterisation undertaken in accordance with paragraph (1) as being at risk of failing to meet the objectives set for each body under Article 4 of the Directive, the following information shall, where relevant, be collected and maintained for each groundwater body:

- (a) the location of points in the groundwater body used for the abstraction of water with the exception of the following:
  - (i) points for the abstraction of water providing less than an average of 10 m<sup>3</sup> per day;
  - (ii) points for the abstraction of water intended for human consumption providing less than an average of 10 m<sup>3</sup> per day or serving less than 50 persons;
- (b) the annual average rates of abstraction from such points;
- (c) the chemical composition of water abstracted from the groundwater body;
- (d) the location of points in the groundwater body into which water is directly discharged;
- (e) the rates of discharge at such points;
- (f) the chemical composition of discharges to the groundwater body;
- (g) land use in the catchment from which the groundwater body receives its recharge, including pollutant inputs and anthropogenic alterations to the recharge characteristics such as rainwater and run-off diversion through land sealing, artificial recharge, damming or drainage.

#### **Review of the impact of changes in groundwater levels**

4. Following consultation with the EPA, the Minister shall identify those bodies of groundwater for which lower objectives are to be specified under Article 4 of the Directive including as a result of consideration of the effects of the status of the body on the following:

- (a) surface water and associated terrestrial ecosystems;
- (b) water regulation, flood protection and land drainage;
- (c) human development.

#### **Review of the impact of pollution on groundwater quality**

5. Following consultation with the EPA, the Minister shall identify those bodies of groundwater for which lower objectives are to be specified under Article 4(5) of the Directive where, as a result of the impact of human activity, as determined in accordance with Article 5(1) of the Directive, the body of groundwater is so polluted that achieving good groundwater chemical status is infeasible or disproportionately expensive.

**EIGHTH SCHEDULE***Article 7***Economic Analysis**

The economic analysis referred to in article 7(2) shall contain enough information in sufficient detail (taking account of the costs associated with collection of the relevant data) in order to –

- (a) make the relevant calculations necessary for taking into account under Article 9 of the Directive the principle of recovery of the costs of water services, taking account of long term forecasts of supply and demand for water in the river basin district and, where necessary –
  - (i) estimates of the volume, prices and costs associated with water services, and
  - (ii) estimates of relevant investment including forecasts of such investments,
 and
- (b) make judgements about the most cost-effective combination of measures in respect of water uses to be included in the programme of measures under Article 11 of the Directive based on estimates of the potential costs of such measures.

**NINTH SCHEDULE***Article 8***PROTECTED AREAS**

1. The register of protected areas required under Article 6 of the Directive and article 8 shall include the following types of protected areas:

- (a) areas designated for the abstraction of water intended for human consumption under Article 7 of the Directive;
- (b) areas designated for the protection of economically significant aquatic species;
- (c) bodies of water designated as recreational waters, including areas designated as bathing waters under Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006<sup>2</sup> concerning the management of bathing water quality and repealing Directive 76/160/EEC;

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<sup>2</sup> OJ No. L 64, 04.03.2006, p. 37

- (d) nutrient-sensitive areas, including areas designated as –
  - (i) vulnerable zones under Council Directive 91/676/EEC of 12 December 1991<sup>3</sup> concerning the protection of waters against pollution caused by nitrates from agricultural sources, and
  - (ii) areas designated as sensitive areas under Council Directive 91/271/EEC of 21 May 1991<sup>4</sup> concerning urban waste-water treatment;
- (e) areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant Natura 2000 sites designated under –
  - (i) Council Directive 92/43/EEC of 21 May 1992<sup>5</sup> on the conservation of natural habitats and of wild fauna and flora, and
  - (ii) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009<sup>6</sup> on the conservation of wild birds.

2. The summary of the register required as part of the river basin management plan shall include maps indicating the location of each protected area and a description of the Community, national or local legislation under which they have been designated.

## TENTH SCHEDULE

*Articles 10A and 12*

### **Normative Definitions of ecological status classifications**

For the purposes of Parts 1 to 4 the following shall apply:

- (a) Waters achieving a status below moderate shall be classified as poor or bad;
- (b) Waters showing evidence of major alterations to the values of the biological quality elements for the surface water body type and in which the relevant biological communities deviate substantially from those normally associated with the surface water body type under undisturbed conditions, shall be classified as poor.
- (c) Waters showing evidence of severe alterations to the values of the biological quality elements for the surface water body type and in which large portions of the relevant biological communities normally associated

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<sup>3</sup> OJ No. L 375, 31.12.1991, p. 1

<sup>4</sup> OJ No. L 135, 30.05.1991, p. 40

<sup>5</sup> OJ No. L 206, 22.07.1992, p. 7

<sup>6</sup> OJ No. L 20, 26.01.2010, p. 7

with the surface water body type under undisturbed conditions are absent, shall be classified as bad.

## Part 1

### Ecological Status in Rivers

‘benthic invertebrate fauna’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘fish fauna’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘general conditions’ in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘hydrological regime’ in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘macrophytes and phytobenthos’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘morphological conditions’ in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘phytoplanton’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘specific non-synthetic pollutants’ in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘specific synthetic pollutants’ in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

‘river continuity’ in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.1 of Annex V to the Directive;

## Part 2

### Ecological Status in Lakes

‘benthic invertebrate fauna’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘fish fauna’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘general conditions’ in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘hydrological regime’ in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘morphological conditions’ in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘macrophytes and phytobenthos’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘phytoplanton’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘specific non-synthetic pollutants’ in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

‘specific synthetic pollutants’ in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.2 of Annex V to the Directive;

### Part 3

#### Ecological Status in Transitional waters

‘angiosperms’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘benthic invertebrate fauna’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘fish fauna’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘general conditions’, in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘macroalgae’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘morphological conditions’, in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘phytoplanton’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘specific non-synthetic pollutants’, in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘specific synthetic pollutants’, in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

‘tidal regime’, in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.3 of Annex V to the Directive;

#### Part 4

##### Ecological Status in Coastal waters

‘benthic invertebrate fauna’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

‘general conditions’, in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

‘macroalgae and angiosperms’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

‘morphological conditions’, in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

‘phytoplanton’, in the context of high, good or moderate status of biological quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

‘specific non-synthetic pollutants’, in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

‘specific synthetic pollutants’, in the context of high, good or moderate status of physico-chemical quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

‘tidal regime’, in the context of high, good or moderate status of hydromorphological quality elements, have the respective meanings given to them in Paragraph 1.2.4 of Annex V to the Directive;

## Part 5

### Ecological Potential for Heavily Modified or Artificial Water Bodies

‘biological quality elements’, in the context of maximum, good or moderate potential for heavily modified or artificial water bodies, have the respective meanings given to them in Paragraph 1.2.5 of Annex V to the Directive.

‘hydromorphological elements’, in the context of maximum, good or moderate potential for heavily modified or artificial water bodies, have the respective meanings given to them in Paragraph 1.2.5 of Annex V to the Directive.

‘general conditions’, in the context of maximum, good or moderate potential for heavily modified or artificial water bodies, have the respective meanings given to them in Paragraph 1.2.5 of Annex V to the Directive.

‘specific non-synthetic pollutants’, in the context of maximum, good or moderate potential for heavily modified or artificial water bodies, have the respective meanings given to them in Paragraph 1.2.5 of Annex V to the Directive.

‘specific synthetic pollutants’, in the context of maximum, good or moderate potential for heavily modified or artificial water bodies, have the respective meanings given to them in Paragraph 1.2.5 of Annex V to the Directive.”.

GIVEN under my Official Seal,  
31 March, 2022.

DARRAGH O'BRIEN,  
Minister for Housing, Local Government and Heritage.

L.S.

#### EXPLANATORY NOTE

*(This note is not part of the Instrument and does not purport to be a legal interpretation)*

These Regulations, made under section 3 of the European Communities Act 1972 (No. 27 of 1972), amend the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003) for the purposes of giving further effect to Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, as amended.

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