

COUNCIL DIRECTIVE

of 16 June 1975

concerning the quality required of surface water intended for the abstraction of drinking water in the Member States

(75/440/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 100 and 235 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament ⁽¹⁾;

Having regard to the Opinion of the Economic and Social Committee ⁽²⁾;

Whereas the increasing use of water resources for the abstraction of water for human consumption necessitates a reduction in the pollution of water and its protection against subsequent deterioration;

Whereas it is necessary to protect public health and, to this end, to exercise surveillance over surface water intended for the abstraction of drinking water and over the purification treatment of such water;

Whereas any disparity between the provisions on the quality required of surface water intended for the abstraction of drinking water already applicable or in preparation in the various Member States may create unequal conditions of competition and thus directly affect the functioning of the common market; whereas it is therefore necessary to approximate laws in this field as provided for in Article 100 of the Treaty;

Whereas it seems necessary for this approximation of laws to be accompanied by Community action so that one of the aims of the Community in the sphere of protection of the environment and improvement of the quality of life can be achieved by wider regulations; whereas certain specific provisions to this effect should therefore be laid down; whereas Article 235 of the Treaty should be invoked

as the powers required for this purpose have not been provided by the Treaty;

Whereas the programme of action of the European Communities on the environment ⁽³⁾ provides that quality objectives are to be jointly drawn up fixing the various requirements which an environment must meet *inter alia* the definition of parametric values for water, including surface water intended for the abstraction of drinking water;

Whereas the joint fixing of minimum quality requirements for surface water intended for the abstraction of drinking water precludes neither more stringent requirements in the case of such water otherwise utilized nor the requirements imposed by aquatic life;

Whereas it will be necessary to review in the light of new technical and scientific knowledge the parametric values defining the quality of surface water used for the abstraction of drinking water;

Whereas the methods currently being worked out for water sampling and for measuring the parameters defining the physical, chemical and microbiological characteristics of surface water intended for the abstraction of drinking water are to be covered by a Directive to be adopted as soon as possible,

HAS ADOPTED THIS DIRECTIVE:

Article 1

1. This Directive concerns the quality requirements which surface fresh water used or intended for use in the abstraction of drinking water, hereinafter called 'surface water', must meet after application of appropriate treatment. Ground water, brackish water and water intended to replenish

⁽¹⁾ OJ No C 62, 30. 5. 1974, p. 7.

⁽²⁾ OJ No C 109, 19. 9. 1974, p. 41.

⁽³⁾ OJ No C 112, 20. 12. 1973, p. 3.

water-bearing beds shall not be subject to this Directive.

2. For the purposes of applying this Directive, all surface water intended for human consumption and supplied by distribution networks for public use shall be considered to be drinking water.

Article 2

For the purposes of this Directive surface water shall be divided according to limiting values into three categories, A1, A2 and A3, which correspond to the appropriate standard methods of treatment given in Annex I. These groups correspond to three different qualities of surface water, the respective physical, chemical and microbiological characteristics of which are set out in the table given in Annex II.

Article 3

1. Member States shall set, for all sampling points, or for each individual sampling point, the values applicable to surface water for all the parameters given in Annex II.

Member States may refrain from setting the values of parameters in respect of which no value is shown, in the table in Annex II, pursuant to the first subparagraph pending determination of the figures in accordance with the procedure under Article 9.

2. The values set pursuant to paragraph 1 may not be less stringent than those given in the 'I' columns of Annex II.

3. Where values appear in the 'G' columns of Annex II, whether or not there is a corresponding value in the 'I' columns of that Annex, Member States shall endeavour to respect them as guidelines, subject to Article 6.

Article 4

1. Member States shall take all necessary measures to ensure that surface water conforms to the values laid down pursuant to Article 3. Each Member State shall apply this Directive without distinction to national waters and waters crossing its frontiers.

2. In line with the objectives of this Directive, Member States shall take the necessary measures to ensure continuing improvement of the environ-

ment. To this end, they shall draw up a systematic plan of action including a timetable for the improvement of surface water and especially that falling within category A3. In this context, considerable improvements are to be achieved under the national programmes over the next 10 years.

The timetable referred to in the first subparagraph will be drawn up in the light of the need to improve the quality of the environment, and of water in particular, and the economic and technical constraints which exist or which may arise in the various regions of the Community.

The Commission will carry out a thorough examination of the plans referred to in the first subparagraph, including the timetables, and will, if necessary, submit appropriate proposals to the Council.

3. Surface water having physical, chemical and microbiological characteristics falling short of the mandatory limiting values corresponding to treatment type A3 may not be used for the abstraction of drinking water. However, such lower quality water may, in exceptional circumstances, be utilized provided suitable processes — including blending — are used to bring the quality characteristics of the water up to the level of the quality standards for drinking water. The Commission must be notified of the grounds for such exceptions, on the basis of a water resources management plan within the area concerned, as soon as possible, in the case of existing installations, and in advance, in the case of new installations. The Commission will examine these grounds in detail and, where necessary, submit appropriate proposals to the Council.

Article 5

1. For the purposes of Article 4 surface water shall be assumed to conform to the relevant parameters if samples of this water taken at regular intervals at the same sampling point and used in the abstraction of drinking water show that it complies with the parametric values for the water quality in question, in the case of:

- 95 % of the samples for parameters conforming to those specified in the 'I' columns in Annex II,
- 90 % of the samples in all other cases, and if in the case of the 5 or 10 % of the samples which do not comply:

- (a) the water does not deviate from the parametric values in question by more than 50 %, except

for temperature, pH, dissolved oxygen and microbiological parameters;

- (b) there can be no resultant danger to public health;
- (c) consecutive water samples taken at statistically suitable intervals do not deviate from the relevant parametric values.

2. Pending a Community policy on the matter, the frequency of sampling and the analysis of each parameter, together with the methods of measurement shall be defined by the competent national authorities which shall take into account the volume of water abstracted, the extent of the abstraction, the population served, the degree of risk engendered by the quality of the water and seasonal variations in the quality.

3. Higher values than those referred to in paragraph 2, shall not be taken into consideration in the calculation of the percentages referred to in paragraph 1 when they are the result of floods or natural disasters or abnormal weather conditions.

4. Sampling shall mean the place at which surface water is abstracted before being sent for purification treatment.

Article 6

Member States may at any time fix more stringent values for surface water than those laid down in this Directive.

Article 7

Implementation of the measures taken pursuant to this Directive may under no circumstances lead either directly or indirectly to deterioration of the current quality of surface water.

Article 8

This Directive may be waived:

- (a) in the case of floods or other natural disasters;
- (b) in the case of certain parameters marked (O) in Annex II because of exceptional meteorological or geographical conditions;
- (c) where surface water undergoes natural enrichment in certain substances as a result of which

it would exceed the limits laid down for categories A1, A2 and A3 in the table in Annex II;

- (d) in the case of surface water in shallow lakes or virtually stagnant surface water, for parameters marked with an asterisk in the table in Annex II, this derogation being applicable only to lakes with a depth not exceeding 20 m, with an exchange of water slower than one year, and without a discharge of waste water into the water body.

Natural enrichment means the process whereby, without human intervention, a given body of water receives from the soil certain substances contained therein.

In no case may the exceptions provided for in the first subparagraph disregard the requirements of public health protection.

Where a Member State waives the provisions of this Directive, it shall forthwith notify the Commission thereof, stating its reasons and the periods anticipated.

Article 9

The numerical values and the list of parameters given in the table in Annex II, defining the physical, chemical and microbiological characteristics of surface water may be revised either at the request of a Member State or on a proposal from the Commission, whenever technical and scientific knowledge regarding methods of treatment is extended or drinking water standards are modified.

Article 10

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

Article 11

This Directive is addressed to the Member States.

Done at Luxembourg, 16 June 1975.

For the Council

The President

R. RYAN

*ANNEX I***Definition of the standard methods of treatment for transforming surface water of categories A1, A2 and A3 into drinking water***Category A1*

Simple physical treatment and disinfection, e.g. rapid filtration and disinfection.

Category A2

Normal physical treatment, chemical treatment and disinfection, e.g. pre-chlorination, coagulation, flocculation, decantation, filtration, disinfection (final chlorination).

Category A3

Intensive physical and chemical treatment, extended treatment and disinfection e.g. chlorination to break-point, coagulation, flocculation, decantation, filtration, adsorption (activated carbon), disinfection (ozone, final chlorination).

ANNEX II

Characteristics of surface water intended for the abstraction of drinking water

| | Parameters | A1 G | A1 I | A2 G | A2 I | A3 G | A3 I |
|------------------|--------------------------------------|------------|----------|------------|---------|------------|---------|
| 1 | pH | 6.5 to 8.5 | | 5.5 to 9 | | 5.5 to 9 | |
| 2 | Coloration (after simple filtration) | 10 | 20 (O) | 50 | 100 (O) | 50 | 200 (O) |
| 3 | Total suspended solids | 25 | | | | | |
| 4 | Temperature | 22 | 25 (O) | 22 | 25 (O) | 22 | 25 (O) |
| 5 | Conductivity | 1 000 | | 1 000 | | 1 000 | |
| 6 | Odour | 3 | | 10 | | 20 | |
| 7* | Nitrates | 25 | 50 (O) | | 50 (O) | | 50 (O) |
| 8 ⁽¹⁾ | Fluorides | 0.7 to 1 | 1.5 | 0.7 to 1.7 | | 0.7 to 1.7 | |
| 9 | Total extractable organic chlorine | | | | | | |
| 10* | Dissolved iron | 0.1 | 0.3 | 1 | 2 | 1 | |
| 11* | Manganese | 0.05 | | 0.1 | | 1 | |
| 12 | Copper | 0.02 | 0.05 (O) | 0.05 | | 1 | |
| 13 | Zinc | 0.5 | 3 | 1 | 5 | 1 | 5 |
| 14 | Boron | 1 | | 1 | | 1 | |
| 15 | Beryllium | | | | | | |
| 16 | Cobalt | | | | | | |
| 17 | Nickel | | | | | | |
| 18 | Vanadium | | | | | | |
| 19 | Arsenic | 0.01 | 0.05 | | 0.05 | 0.05 | 0.1 |
| 20 | Cadmium | 0.001 | 0.005 | 0.001 | 0.005 | 0.001 | 0.005 |
| 21 | Total chromium | | 0.05 | | 0.05 | | 0.05 |
| 22 | Lead | | 0.05 | | 0.05 | | 0.05 |
| 23 | Selenium | | 0.01 | | 0.01 | | 0.01 |
| 24 | Mercury | 0.0005 | 0.001 | 0.0005 | 0.001 | 0.0005 | 0.001 |
| 25 | Barium | | 0.1 | | 1 | | 1 |
| 26 | Cyanide | | 0.05 | | 0.05 | | 0.05 |

| | Parameters | A1 G | A1 I | A2 G | A2 I | A3 G | A3 I |
|---------|---|----------------------|-------------------------------|-------------------------------|---------|---------|---------|
| 27 | Sulphates | 150 | 250 | 150 | 250 (O) | 150 | 250 (O) |
| 28 | Chlorides | 200 | | 200 | | 200 | |
| 29 | Surfactants (reacting with methyl blue) | 0.2 | | 0.2 | | 0.5 | |
| 30* (*) | Phosphates | 0.4 | | 0.7 | | 0.7 | |
| 31 | Phenols (phenol index) paranitraniline 4 aminoantipyrine | | 0.001 | 0.001 | 0.005 | 0.01 | 0.1 |
| 32 | Dissolved or emulsified hydrocarbons (after extraction by petroleum ether) | mg/l | 0.05 | | 0.2 | 0.5 | 1 |
| 33 | Polycyclic aromatic hydrocarbons | mg/l | 0.0002 | | 0.0002 | | 0.001 |
| 34 | Total pesticides (parathion, BHC, diel- drin) | mg/l | 0.001 | | 0.0025 | | 0.005 |
| 35* | Chemical oxygen demand (COD) | mg/l O ₂ | | | | 30 | |
| 36* | Dissolved oxygen saturation rate | % O ₂ | > 70 | > 50 | | > 30 | |
| 37* | Biochemical oxygen demand (BOD ₅) (at 20 °C without nitrification) | mg/l O ₂ | < 3 | < 5 | | < 7 | |
| 38 | Nitrogen by Kjeldahl method (except NO ₃) | mg/l N | 1 | 2 | | 3 | |
| 39 | Ammonia | mg/l NH ₄ | 0.05 | 1 | | 2 | 4 (O) |
| 40 | Substances extractable with chloroform | mg/l SEC | 0.1 | 0.2 | | 0.5 | |
| 41 | Total organic carbon | mg/l C | | | | | |
| 42 | Residual organic carbon after flocculation and membrane filtration (5 µ) TOC | mg/l C | | | | | |
| 43 | Total coliforms 37 °C | /100 ml | 50 | 5 000 | | 50 000 | |
| 44 | Faecal coliforms | /100 ml | 20 | 2 000 | | 20 000 | |
| 45 | Faecal streptococci | /100 ml | 20 | 1 000 | | 10 000 | |
| 46 | Salmonella | | Not present in 5 000 ml | Not present in 1 000 ml | | | |

I = mandatory.

G = guide.

O = exceptional climatic or geographical conditions.

* = see Article 8 (d).

(1) The values given are upper limits set in relation to the mean annual temperature (high and low).

(2) This parameter has been included to satisfy the ecological requirements of certain types of environment.