L.N. 339 of 2001

ENVIRONMENT PROTECTION ACT, 2001
(ACT NO. XX OF 2001)

Quality required of Surface Water intended for the Abstraction of Drinking Water Regulations, 2001

BY virtue of the powers conferred by articles 9 and 28 of the Environment Protection Act, 2001, the Minister for the Environment has made the following regulations:-

Citation and entry into force.

1. (1) The title of these regulations is the Quality required of Surface Water intended for the Abstraction of Drinking Water Regulations, 2001.

(2) These regulations shall come into force on such date as the Minister responsible for the environment may by notice in the Gazette appoint and different dates may be so appointed for the different provisions and different purposes of these regulations.

(3) A notice under sub-regulation (2) of this regulation may make such transitional provisions as appear to the Minister to be necessary or expedient in connection with the provisions thereby brought into force.

Classification of drinking water.

2. (1) These regulations concern 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 water-bearing beds shall not be subject to these regulations.

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

Values for sampling points.

3. For the purpose of these regulations, 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.

More stringent values.

4. (1) The competent authority, 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:

Provided that the values set by the competent authority pursuant to subregulation (1) may not be less stringent than those given in the "I" columns of Annex II.

(2) 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, the competent authority shall endeavour to respect them as guidelines, subject to regulation 7.

Implementation not to lead to deterioration.

5. (1) The competent authority shall take all necessary measures to ensure that surface water conforms to the values laid down pursuant to regulation 4. The competent authority shall apply these regulations without distinction to the waters, over which Malta has jurisdiction.

(2) The competent authority shall in line with the objectives of these regulations, take the necessary measures to ensure continuing improvement of the environment by drawing up a systematic plan of action including a timetable for the improvement of surface water and especially that falling within category A3:

Provided that the timetable referred to in this subregulation 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.

(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:

Provided that 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.

(4) The competent authority shall publish by notice in the Gazette 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.

Regulations may be waived.

6. (1) For the purposes of regulation 5 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) The competent authority shall define the frequency of sampling and the analysis of each parameter, together with the methods of measurement 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 subregulation (2), shall not be taken into consideration in the calculation of the percentages referred to in subregulation (1) when they are the result of floods or natural disasters or abnormal weather conditions:

Provided that sampling shall mean, the place at which surface water is abstracted before being sent for purification treatment.

Conformity with values.

7. The competent authority may at any time fix more stringent values for surface water than those laid down in these regulations.

Values and parameters may be revised.

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

Regulations may be waived.

9. (1) These regulations 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.

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

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

(2) The competent authority shall whenever it waives the provisions of these regulations, publish by notice in the Gazette the reasons and the periods anticipated.

Offences under these regulations.

10. Any person shall be guilty of an offence under these offences under these regulations if:

(a) he fails to comply with any provision of these regulations or with any order lawfully given in terms of any provision of these regulationsġ or

(b) he contravenes any restriction, prohibition or requirement imposed by or under these regulationsġ or

(c) he acts in contravention of any of the provisions of these regulationsġ or

(d) he conspires or attempts, or aids, or abets, any other person by whatever means, including advertising, counselling or

procurement to contravene the provisions of these regulations or to fail to comply with any such provisions, including any order lawfully given in terms of any of the provision of these regulations, or to contravene any restriction, prohibition or requirement imposed by or under the said regulations.

Penalties.

11. Any person who commits an offence against these regulations shall, on conviction, be liable:

(a) on a first conviction to a fine (*multa*) of not less than ten thousand liri but not exceeding one hundred thousand liri;

(b) on a second or subsequent convictions, to a fine (*multa*) of not less than fifty thousand liri, but not exceeding two hundred thousand liri or to imprisonment for a term not exceeding two years, or to both such fine and imprisonment:

Provided that whenever any person is found guilty of committing an offence under these regulations by means of a vehicle or ship, the owner of the said vehicle or ship, where applicable, is held liable in the same manner and degree:

Provided further that the court shall order any person who has been found guilty of committing an offence against these regulations to pay for the expenses incurred by the competent authority or any public entity or any other persons acting on their behalf involved in the implementation of these regulations, and restitution of the environment as a result of the said offence, and the confiscation of the *corpus delicti*.

Applicability of the Criminal Code. Cap. 9.

12. (1) The provisions of article 23 and sub-article (1) of article 30 of the Criminal Code shall, *mutatis mutandis*, apply to proceedings, in respect of offences against these regulations, so however that the disqualification from holding or obtain a licence, permit or authority shall in no case be for less than one year.

(2) Notwithstanding the provisions of article 370 of the Criminal Code, proceedings for an offence against these regulations shall be taken before the Court of Magistrates (Malta) or the Court of Magistrates (Gozo), as the case may be, and shall be in accordance with the provisions of the Criminal Code regulating the procedure before the said courts as courts of criminal judicature.

(3) Notwithstanding the provisions of the Criminal Code, the Attorney General shall always have a right of appeal to the Court of Criminal Appeal from any judgement given by the Court of Magistrates

(Malta) or the Court of Magistrates (Gozo) in respect of proceedings for any offence against these regulations.

Values and parameters may be revised.

13. 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 by request of the competent authority whenever technical and scientific knowledge regarding methods of treatment is extended or drinking water standards are modified.

Language of Annexes.

14. Annexes I and II to these regulations are being published in the English language with the English text of these regulations.

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)	mg/l Pt scale	10	20 (O)	50	100 (O)	50	200 (O)
3	Total suspended solids	mg/l SS	25					
4	Temperature	° C	22	25 (O)	22	25 (O)	22	25 (O)
5	Conductivity	$\mu s/cm^{-1}$ at 20 °C	1 000		1 000		1 000	
6	Odour	(dilution factor at 25 °C)	3		10		20	
7*	Nitrates	mg/l NO_3	25	50 (O)		50 (O)		50 (O)
8 (1)	Fluorides	mg/l F	0·7 to 1	1·5	0·7 to 1·7		0·7 to 1·7	
9	Total extractable organic chlorine	mg/l Cl						
10*	Dissolved iron	mg/l Fe	0·1	0·3	1	2	1	
11*	Manganese	mg/l Mn	0·05		0·1		1	
12	Copper	mg/l Cu	0·02	0·05 (O)	0·05		1	
13	Zinc	mg/l Zn	0·5	3	1	5	1	5
14	Boron	mg/l B	1		1		1	
15	Beryllium	mg/l Be						
16	Cobalt	mg/l Co						
17	Nickel	mg/l Ni						
18	Vanadium	mg/l V						
19	Arsenic	mg/l As	0·01	0·05		0·05	0·05	0·1
20	Cadmium	mg/l Cd	0·001	0·005	0·001	0·005	0·001	0·005
21	Total chromium	mg/l Cr		0·05		0·05		0·05
22	Lead	mg/l Pb		0·05		0·05		0·05
23	Selenium	mg/l Se		0·01		0·01		0·01
24	Mercury	mg/l Hg	0·0005	0·001	0·0005	0·001	0·0005	0·001
25	Barium	mg/l Ba		0·1		1		1
26	Cyanide	mg/l Cn		0·05		0·05		0·05

	Parameters		A1 G	A1 I	A2 G	A2 I	A3 G	A3 I
27	Sulphates	mg/l SO_4	150	250	150	250 (O)	150	250 (O)
28	Chlorides	mg/l Cl	200		200		200	
29	Surfactants (reacting with methyl blue)	mg/l (laurylsulphate)	0·2		0·2		0·5	
30* (2)	Phosphates	mg/l P_2O_5	0·4		0·7		0·7	
31	Phenols (phenol index) paranitraniline 4 aminoantipyrine	mg/l C_6H_5OH		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, dieldrin)	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	1·5	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.