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STATUTORY INSTRUMENTS

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**1997 No. 1331**

**WATER RESOURCES, ENGLAND AND WALES**

**The Surface Waters (Fishlife) (Classification) Regulations 1997**

<i>Made</i>	- - - -	<i>19th May 1997</i>
<i>Laid before Parliament</i>		<i>22nd May 1997</i>
<i>Coming into force</i>	- -	<i>12th June 1997</i>

The Secretary of State for the Environment and the Secretary of State for Wales, acting jointly in exercise of the powers conferred on them by sections 82, 102 and 219(2) of the Water Resources Act 1991(1) and of all other powers enabling them in that behalf, hereby make the following Regulations:

**Citation, commencement and interpretation**

1.—(1) These Regulations may be cited as the Surface Waters (Fishlife) (Classification) Regulations 1997 and shall come into force on 12th June 1997.

(2) Expressions used in these Regulations which are also used in Directive 78/659/EEC(2) (the quality of fresh waters needing protection or improvement in order to support fish life) shall have the same meaning as in that Directive.

**Classification of waters**

2. The classifications SW (“salmonid waters”) and CW (“cyprinid waters”), and the criteria for those classifications, set out in the Schedule to these Regulations shall apply for classifying inland freshwaters which need protection or improvement in order to support fish life.

**Compliance with relevant requirements**

3.—(1) Subject to paragraphs (2) and (3) below, any waters classified under these Regulations shall be treated in relation to any period of twelve months as complying with the requirements specified in the Schedule to these Regulations for waters of the relevant class for any parameter if in that period in relation to those waters—

- (a) in the case of the parameter for pH, non-ionised ammonia, total ammonium, total residual chlorine or total zinc, 95 per cent of the samples taken for that parameter in accordance with regulation 4 below comply with the requirements;

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(1) 1991 c. 57; see section 221(7) as to the joint exercise of functions exercisable concurrently.  
(2) O.J. No. L 222, 14.8.1978, p. 1.

(b) in the case of the parameter for temperature or dissolved oxygen, the percentage specified in that Schedule of samples taken for that parameter in accordance with regulation 4 below comply with the requirements.

(2) When the frequency of sampling is lower than one sample per month for any parameter mentioned in sub-paragraph (1)(a) above in relation to any waters classified under these Regulations, 100 per cent of samples taken for that parameter in accordance with regulation 4 in relation to those waters must comply with the requirements for that parameter specified in the Schedule to these Regulations for waters of the relevant class.

(3) Non-compliant samples shall be ignored for the purposes of paragraphs (1) and (2) above if they are the result of a flood or any other natural disaster.

### **Sampling and analysis**

4.—(1) The Environment Agency shall ensure that waters classified under these Regulations are sampled and samples are analysed in accordance with the following provisions of this Regulation.

(2) Samples in relation to any waters classified under these Regulations shall always be taken at the same sampling point.

(3) The Environment Agency shall fix the exact position of the sampling point, and the depth at which samples are to be taken, having regard in particular to—

- (a) the distance of the sampling point to the nearest point where pollutants are discharged; and
- (b) local environmental conditions.

(4) Subject to paragraphs (5) and (6) below, sampling for any parameter shall be carried out at least at the minimum frequency specified in the Schedule to these Regulations for that parameter for waters of the relevant class.

(5) Where the Environment Agency's records show that the quality of any waters classified under these Regulations is appreciably higher for any parameter than the minimum required by these Regulations for waters of that class, the Agency may reduce the sampling frequency for that parameter or, if there is no pollution and no risk of deterioration of its quality, it may dispense with sampling for that parameter altogether.

(6) Where sampling shows that the requirements of regulation 3 above are not being complied with, the Environment Agency shall establish whether this is the result of chance, a natural phenomenon or pollution and shall adopt appropriate measures.

(7) Samples for any parameter shall be analysed using the reference methods of analysis specified in the Schedule to these Regulations in relation to that parameter or methods which are at least as reliable as the reference methods.

### **Derogations**

5.—(1) The Agency may derogate from the requirements of these Regulations—

- (a) in the case of requirements marked (0) in the Schedule to these Regulations, because of exceptional weather or special geographical conditions; or
- (b) where waters classified under these Regulations undergo natural enrichment in certain substances as a result of which they do not comply with the requirements specified in the Schedule to these Regulations for waters of the relevant class.

(2) In this Regulation, “natural enrichment” means a process whereby without human intervention a given body of water receives from the soil certain substances contained therein.

### **Modifications of the Water Resources Act 1991**

6.—(1) Section 83 of the Water Resources Act 1991 shall have effect—

- (a) as if it imposed a duty on the Secretary of State to exercise the powers conferred on him by that section to classify appropriately under these Regulations such waters as are appropriate for the purpose of giving effect to Directive [78/659/EEC](#) in England and Wales; and
- (b) in relation to the performance of that duty, as if subsections (4) and (5) of that section were omitted.

(2) Section 104(1) of the Water Resources Act 1991 (meaning of “controlled waters”) shall have effect for the purpose of giving effect to Directive [78/659/EEC](#) as if “inland freshwaters” included all waters which are fresh waters for the purposes of that Directive.

(3) Section 202(2) of the Water Resources Act 1991 (information in connection with the control of pollution) shall have effect as if it conferred power on the Secretary of State and the Environment Agency to require the furnishing of information reasonably required for the purposes of giving effect to Directive [78/659/EEC](#).

19th May 1997

*John Prescott*  
Secretary of State,  
Department of Environment

Signed by authority of the Secretary of State for Wales

19th May 1997

*Win Griffiths*  
Parliamentary Under Secretary of State, Welsh  
Office

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SCHEDULE

Regulations 2, 3 and 4

PART I

CRITERIA FOR CLASSIFICATION OF WATERS  
AS SALMONID AND CYPRINID WATERS

No. in Annex I to 78/659/EEC	Parameter	Requirement to be satisfied for salmonid waters	Requirement to be satisfied for cyprinid waters	Methods of analysis or inspection	Minimum sampling and measuring frequency	Observations
1	Temperature (°C)	<p><b>1.</b> Temperature measured downstream of a point of thermal discharge (at the edge of a mixing zone) must not exceed the unaffected temperature by more than 1.5°C for salmonid waters and 3°C for cyprinid waters</p>		Thermometry	Weekly, both upstream and downstream of the point of thermal discharge	Over-sudden variations in temperature must be avoided
		<p>Derogations limited in geographical scope may be decided by the Environment Agency if the Agency can show that there are no harmful consequences for the balanced development of the fish population</p>				
		<p><b>2.</b> Thermal discharges must not cause the temperature downstream of the point of thermal discharge (at the edge of the mixing zone) to exceed—</p>				
		<p>(a) 10°C (0) during the breeding season in the case of waters which contain species which need cold water for reproduction;</p>				
		<p>(b) at other times or in the case of</p>				

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No. in Annex I to 78/659/EEC	Parameter	Requirements to be satisfied for salmonid waters	Requirements to be satisfied for cyprinid waters	Methods of analysis or inspection	Minimum sampling and measuring frequency	Observations
			waters which do not contain such species, 21.5°C (0) for salmonid waters and 28°C (0) for cyprinid waters			
			Temperature limits may, however, be exceeded for 2% of the time			
2	Dissolved oxygen (mg/l O <sub>2</sub> )	50%>=9  When the oxygen concentration falls below 6 mg/l, the Environment Agency shall comply with regulation 4(6) and the Agency must prove that this situation will have no harmful consequences for the balanced development of the fish population	50%>=7  When the oxygen concentration falls below 4 mg/l, the Environment Agency shall comply with regulation 4(6) and the Agency must prove that this situation will have no harmful consequences for the balanced development of the fish population	Winkler's method or specific electrodes (electro-chemical method)	Monthly, minimum one sample representative of low oxygen conditions on the day of sampling  However, where major daily variations are suspected, a minimum of two samples in one day shall be taken	
3	pH	6 to 9 (0)  Artificial pH variations with respect to the unaffected values shall not exceed ±0.5 of a pH unit within the limits falling between 6 and 9 provided that these variations do not increase		Electrometry calibration by means of two solutions with known pH values, preferably on either side of, and	Monthly	

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No. in Annex I to 78/659/EEC	Parameter	Requirements to be satisfied for salmonid waters	Requirements to be satisfied for cyprinid waters	Methods of analysis or inspection	Minimum sampling and measuring frequency	Observations
			the harmfulness of other substances present in the water	close to the pH being measured		
8	Phenolic compounds (mg/l C <sub>6</sub> H <sub>5</sub> OH)	Phenolic compounds must not be present in such concentrations that they adversely affect fish flavour		By taste		An examination by taste shall be made only where the presence of phenolic compounds is presumed
9	Petroleum hydrocarbons	Petroleum products must not be present in the water in such quantities that they— (a) form a visible film on the surface of the water or form coatings on the beds of water-courses and lakes; (b) impart a detectable “hydrocarbon” taste to fish; (c) produce harmful effects on fish.		Visual and by taste	Monthly	A visual examination shall be made regularly once a month, with an examination by taste only where the presence of hydrocarbons is presumed
10	Non-ionised ammonia (mg/l NH <sub>3</sub> )	<=0.025		Molecular absorption spectrophotometry using indophenol blue or Nessler’s method associated with pH and temperature determination	Monthly	Values for non-ionised ammonia may be exceeded in the form of minor peaks in the daytime
11	Total ammonium (mg/l NH <sub>4</sub> )	In order to diminish the risk of toxicity due to non-ionised ammonia, of oxygen consumption due to nitrification and		Molecular absorption spectrophotometry using indophenol	Monthly	

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No. in Annex I to 78/659/EEC	Parameter	Requirement to be satisfied for salmonid waters	Requirement to be satisfied for cyprinid waters	Methods of analysis or inspection	Minimum sampling and measuring frequency	Observations
		of eutrophication, the concentrations of total ammonium should not exceed 1 mg/l		blue or Nessler's method associated with pH and temperature determination		
		In particular geographical or climatic conditions and particularly in cases of low water temperature and of reduced nitrification or where the Environment Agency can show that there are no harmful consequences for the balanced development of the fish population, the Agency may fix a value higher than 1 mg/l				
12	Total residual chlorine (mg/l Zn)	<=0.005		DPD-method (diethyl- <i>p</i> -phenylenediamene)	Monthly	The value corresponds to pH = 6  Higher concentrations of total chlorine can be accepted if the pH is higher
13	Total Zinc (mg/l Zn)	<=0.3	<=1.0	Atomic absorption spectrometry	Monthly	The values correspond to a water hardness of 100 mg/l CaCO <sub>3</sub>  For hardness levels between 10 and 500 mg/l corresponding limit values can be found in

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No. in Annex I to 78/659/EEC	Parameter	Requirement to be satisfied for salmonid waters	Requirement to be satisfied for cyprinid waters	Methods of analysis or inspection	Minimum sampling and measuring frequency	Observations
						the Table in Part II of this Schedule

## PART II

### ZINC CONCENTRATIONS (mg/l Zn) FOR DIFFERENT WATER HARDNESS VALUES BETWEEN 10 AND 500 mg/l CaCO<sub>3</sub>

Classification of waters	Water hardness (mg/l CaCO <sub>3</sub> )			
	10	50	100	500
Salmonid waters (mg/l Zn)	0.03	0.2	0.3	0.5
Cyprinid waters (mg/l Zn)	0.3	0.7	1.0	2.0

## EXPLANATORY NOTE

*(This note is not part of the Regulations)*

These Regulations prescribe a system for classifying the quality of inland freshwaters which need protection or improvement in order to support fish life.

The classifications SW (“salmonid waters”) and CW (“cyprinid waters”) reflect the mandatory values assigned by Directive [78/659/EEC](#) (on the quality of fresh waters needing protection or improvement in order to support fish life) to the parameters listed in the Schedule to these Regulations.

The Regulations also incorporate the reference methods of measurement, and the minimum frequency required for sampling and analysis, laid down in that Directive for those parameters.

The Regulations, together with the Surface Waters (Fishlife) Directions 1997, transpose Directive [78/659/EEC](#) in relation to England and Wales. Copies of the Surface Waters (Fishlife) Directions 1997 may be obtained from:

- Water Quality Division  
Department of the Environment,  
Romney House,



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43 Marsham Street,  
London SW1P 3PY.

- Environment Division,  
Welsh Office,  
Cathays Park,  
Cardiff CF1 3NQ.