
STATUTORY INSTRUMENTS

1997 No. 2471 (S. 163)

WATER, SCOTLAND

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

<i>Made</i>	- - - -	<i>9th October 1997</i>
<i>Laid before Parliament</i>		<i>28th October 1997</i>
<i>Coming into force</i>	- -	<i>18th November 1997</i>

The Secretary of State, in exercise of the powers conferred on him by sections 30B and 104(1) of the Control of Pollution Act 1974⁽¹⁾, and, being a Minister designated⁽²⁾ for the purposes of section 2(2) of the European Communities Act 1972⁽³⁾ in relation to measures relating to the prevention, reduction and elimination of pollution of water, in exercise of the powers conferred on him by that section, hereby makes the following Regulations:

Citation, commencement and interpretation

1.—(1) These Regulations may be cited as the Surface Waters (Fishlife) (Classification) (Scotland) Regulations 1997 and shall come into force on 18th November 1997.

(2) Expressions used in these Regulations which are also used in Directive 78/659/EEC⁽⁴⁾ (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 controlled waters which are fresh waters which need protection or improvement in order to support fishlife.

(1) 1974 c. 40; section 30B was inserted, as part of a substitution of a new Part II of the Act, by the Water Act 1989 (c. 15), section 169 and Schedule 23, paragraph 4, and section 104(1) was amended by the Water Act 1989, section 169 and Schedule 23, paragraph 7 and by the Environment Act 1995 (c. 25) Schedule 22, paragraph 29(34).
(2) S.I. 1989/2393.
(3) 1972 c. 68.
(4) O.J. No. L222, 14.8.1978, p.1.

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-ionized 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;
- (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 paragraph (1)(a) above in relation 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 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 Scottish Environment Protection 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 Scottish Environment Protection 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 Scottish Environment Protection 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 Scottish Environment Protection 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 Scottish Environment Protection 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.

Modification of section 30C of the Control of Pollution Act 1974

6. Section 30C of the Control of Pollution Act 1974(5) (water quality objectives) 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 under these Regulations such waters as are appropriate for the purposes of giving effect to Directive 78/659/EEC in Scotland; and
- (b) in relation to the performance of that duty, as if subsections (4) and (5) of that section were omitted.

Information required in connection with implementation of the Directive

7.—(1) The Scottish Environment Protection Agency may serve on any person a notice requiring that person to furnish the Agency within a period or at times specified in the notice, and in a form and manner so specified, with such information as is reasonably required by the Agency for the purposes of giving effect to Directive 78/659/EEC.

(2) A person who fails without reasonable excuse to comply with the requirements of a notice served on him under this regulation shall be guilty of an offence and liable—

- (a) on summary conviction, to a fine not exceeding the statutory maximum;
- (b) on conviction on indictment, to a fine or to imprisonment for a term not exceeding two years, or both.

St Andrew’s House,
Edinburgh
9th October 1997

Sewel
Parliamentary Under Secretary of State, Scottish
Office

(5) c.40; section 30C was inserted by section 169 and paragraph 4 of Schedule 23 to the Water Act 1989 (c. 15) and was amended by section 120 and paragraph 29(2) and (4) of Schedule 22 to the Environment Act 1995 (c. 25).

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SCHEDULE

Regulations 2, 3 and 4

PART I

CRITERIA FOR CLASSIFICATION OF WATERS
AS SALMONID AND CYPRINID WATERS

<i>No. in Annex 1 to 78/659/— EEC</i>	<i>Parameter</i>	<i>Requirements to be satisfied for salmonid waters</i>	<i>Requirements to be satisfied for cyrpinid waters</i>	<i>Methods of analysis or inspection</i>	<i>Minimum sampling and measuring frequency</i>	<i>Observations</i>
1.	Temperature (°C)	<p>1. 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 cyrpinid waters.</p> <p>Derogations limited in geographical scope may be decided by the Scottish Environment Protection Agency if the Agency can show that there are no harmful consequences for the balanced development of the fish population.</p> <p>2. 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</p> <p>(b) (b) at other times or in the case of waters which do not contain such species,</p>		Thermometry.	Weekly, both upstream and downstream of the point of thermal discharge.	Over-sudden variations in temperature must be avoided.

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No. in Annex 1 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
		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 ₂)	50% ≥ 9 When the oxygen concentration falls below 6mg/l, the Scottish Environment Protection 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 4mg/l, the Scottish Environment Protection 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)		Electrometry calibration by means of two solutions with known pH values, preferably on either side of, and close to the	Monthly	
		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 the harmfulness of other				

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		substances present in the water.		pH being measured		
8.	Phenolic compounds (mg/1C ₆ H ₅ 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. 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/1 NH ₃)	≤ 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/1 NH ₄)	In order to diminish the risk of toxicity due to non-ionised ammonia, of oxygen consumption due to nitrification and of eutrophication, the		Molecular absorption spectrophotometry using indophenol blue or	Monthly.	

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		concentrations of total ammonium should not exceed 1 mg/l.		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 Scottish Environment Protection 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 HOCl)	≤ 0.005		DPD-method (diethyl-p-phenylenediamine)	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 ₃ . For hardness levels between 10 and 500 mg/l corresponding limit values can be found in

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						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 CaCO₃

<i>Classification of waters</i>	<i>Water hardness (mg/l CaCO₃)</i>			
	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 waters which need protection or improvement in order to support fishlife.

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 fishlife) 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) (Scotland) Directions 1997, transpose Directive [78/659/EEC](#).

Copies of the Surface Waters (Fishlife) (Scotland) Directions 1997 may be obtained from the Environment Protection Unit, Scottish Office Agriculture, Environment and Fisheries Department, Victoria Quay, Edinburgh EH6 6QQ.

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