

## Statutory Instrument 1996 No. 1564 (S.137)

### **The Protection of Water Against Agricultural Nitrate Pollution (Scotland) Regulations 1996**

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#### STATUTORY INSTRUMENTS

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#### **1996 No. 1564 (S.137)**

#### **WATER, SCOTLAND**

#### **The Protection of Water Against Agricultural Nitrate Pollution (Scotland) Regulations 1996**

*Made 13th June 1996*

*Laid before Parliament 28th June 1996*

*Coming into force 22nd July 1996*

The Secretary of State for Scotland, being a Minister designated<sup>[1]</sup> for the purposes of section 2(2) of the European Communities Act 1972<sup>[2]</sup> in relation to measures relating to the prevention, reduction and elimination of pollution of water, in exercise of the powers conferred on him by the said section 2(2) and of all other powers enabling him in that behalf, hereby makes the following Regulations:-

**Citation, commencement and extent**

1. These Regulations may be cited as the Protection of Water Against Agricultural Nitrate Pollution (Scotland) Regulations 1996, shall come into force on 22 July 1996 and shall extend to Scotland.

**Interpretation**

2. —(1) In these Regulations, unless the context otherwise requires-
- "action programme" means an action programme established in accordance with regulation 6;
  - "chemical fertiliser" means any fertiliser which is manufactured by an industrial process;
  - "the 1991 Directive" means Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources<sup>[3]</sup>;
  - "the 1980 Directive" means Council Directive 80/778/EEC relating to the quality of water intended for human consumption<sup>[4]</sup>;
  - "the 1975 Directive" means Council Directive 75/440/EEC<sup>[5]</sup> concerning the quality of surface water intended for the abstraction of drinking water in Member States, as amended by the 1980 Directive and the 1991 Directive;
  - "eutrophication" means the enrichment of water by nitrogen compounds, causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned;
  - "fertiliser" means any substance containing a nitrogen compound or nitrogen compounds utilised on land to enhance growth of vegetation, and may include livestock manure, the residues from fish farms and sewage sludge;
  - "freshwater" means naturally occurring water having a low concentration of salts, which is often acceptable as suitable for abstraction and treatment to produce drinking water;
  - "groundwater" means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil;
  - "land application" means the addition of materials to land whether by spreading on the surface of the land, injection into the land, placing below the surface of the land or mixing with the surface layers of the land;
  - "livestock" means all animals kept for use or profit;
  - "livestock manure" means waste products excreted by livestock or a mixture of litter and waste products excreted by livestock, even in processed form;
  - "nitrate vulnerable zone" has the meaning given in regulation 3;

"nitrogen compound" means any nitrogen-containing substance except for gaseous molecular nitrogen;

"the Objectives" means the objectives specified in Article 1 of the Directive, that is to say-

- (a) reducing water pollution caused or induced by nitrates from agricultural sources; and
- (b) preventing further such pollution;

"pollution" means the discharge, directly or indirectly, of nitrogen compounds from agricultural sources into the aquatic environment, the results of which are such as to cause hazards to human health, harm to living resources and to aquatic ecosystems, damage to amenities or interference with other legitimate uses of water;

"SEPA" means the Scottish Environment Protection Agency;

and other expressions used in the 1991 Directive have the same meaning as in that Directive. (2) Any reference in these Regulations to a numbered regulation or Schedule is a reference to the regulation or Schedule so numbered in these Regulations.

#### **Nitrate vulnerable zones**

3.—(1) In these Regulations "nitrate vulnerable zone" means the area of land at Balmalcolm in the local government area of Fife, more particularly shown outlined in black on the plan annexed and signed as relative to this regulation, being the only known area of land in Scotland which drains into and contributes to pollution of the waters which the Secretary of State has identified, in accordance with the criteria set out in Schedule 1, as waters affected by pollution and waters which could be affected by pollution if action pursuant to regulation 6 were not taken.

(2) The Secretary of State shall, by 19 December 1997, and at least every four years thereafter, review and if necessary revise or add to the designation of nitrate vulnerable zones to take into account changes and factors unforeseen at the time of the previous designation.

#### **Monitoring**

4.—(1) For the purpose of the designation and revision of designations of nitrate vulnerable zones, SEPA-

- (a) subject to paragraph (2) below, shall have monitored by 19th December 1997 and at least every four years thereafter shall monitor the nitrate concentration in freshwaters over a period of one year-
  - (i) at surface water sampling stations laid down in Article 5(4) of the 1975 Directive or at other sampling stations which are representative of surface waters, or at both, at least monthly and more frequently during flood periods; and
  - (ii) at sampling stations which are representative of the groundwater aquifers, at regular intervals and taking into account the provisions of the 1980 Directive; and

(b) shall review the eutrophic state of fresh surface waters, estuarial and coastal waters by 19th December 1997 and every four years thereafter.

(2) Where the nitrate concentration in all previous samples taken in pursuance of the 1991 Directive at any sampling station has been below 25 mg/l and no new factor likely to increase the nitrate content has appeared, paragraph (1)(a) above shall have effect in relation to that sampling station as if the reference to 1997 and the reference to four years were references to 2001 and eight years respectively.

(3) Monitoring under this regulation shall be carried out using the reference methods of measurement set out in Schedule 2.

**Codes of good agricultural practice**

5. Those parts of the Code of Good Practice for the Prevention of Environmental Pollution from Agricultural Activity published in 1992 by the Scottish Office which are aimed at providing all waters with a general level of protection against pollution shall have effect as the code of good agricultural practice established for the purposes of Article 4 of the Directive.

**Action programmes**

6.—(1) The Secretary of State shall, for the purpose of achieving the Objectives, by regulations under section 2(2) of the European Communities Act 1972, make provision establishing action programmes in respect of nitrate vulnerable zones.

(2) An action programme may relate to more than one nitrate vulnerable zone, and different action programmes may be established in respect of different nitrate vulnerable zones or parts of zones.

(3) An action programme in respect of a nitrate vulnerable zone shall be established-

- (a) in the case of the nitrate vulnerable zone designated under regulation 3(1), as soon as practicable; and
- (b) in the case of a nitrate vulnerable zone designated under regulation 3(2), one year after the designation of that zone.

(4) an action programme shall be implemented-

- (a) in the case falling within paragraph (3)(a) above, by 19th December 1999;
- (b) in any other case, within four years of its establishment.

(5) The Secretary of State shall draw up and implement suitable monitoring programmes to assess the effectiveness of action programmes.

(6) The Secretary of State shall, at least every four years, review and if necessary revise the action programmes, including any additional measures taken pursuant to regulation 7(2).

### **Contents of action programmes**

7.—(1) An action programme shall include-

- (a) the provisions described in Schedule 3; and
- (b) provisions embodying the measures contained in the code of good agricultural practice referred to in regulation 5, other than such provisions as have been superseded by the provisions described in Schedule 3.

(2) An action programme shall also contain such additional requirements, restrictions and prohibitions as the Secretary of State considers necessary if, at the outset or in the light of experience gained in implementing the programmes, it becomes apparent to him that the provisions referred to in paragraph (1) above will not be sufficient for achieving the Objectives.

(3) In determining the provisions of an action programme, the Secretary of State shall take into account-

- (a) available scientific and technical data, mainly with reference to respective nitrogen contributions originating from agricultural and other sources;
- (b) environmental conditions in the relevant regions.

(4) In selecting the additional provisions referred to in paragraph (2) above, the Secretary of State shall take into account the effectiveness and cost of such provisions relative to other possible preventive provisions.

### **Information required in connection with implementation of the Directive**

8.—(1) It shall be the duty of SEPA to give to the Secretary of State such information as he may by notice require to enable him to fulfil-

- (a) the obligations imposed under Article 10 of the 1991 Directive to provide the Commission with information; and
- (b) his duties under these Regulations.

(2) Any such notice may specify the form and manner in which, the period within which, or the times at which such information is to be given.

*Lindsay*

Parliamentary Under Secretary of State, Scottish Office  
St Andrew's House, Edinburgh

13th June 1996

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*Notes:*

[1] S.I. 1989/2393. [back](#)

[2] 1972 c. 68. [back](#)

[3] OJ No. L375, 31.12.91, p.1. [back](#)

[4] OJ No. L229, 30.8.80, p.11. [back](#)

[5] OJ No. L194, 25.7.75, p.26. [back](#)

## **SCHEDULE 1**

Regulation 3(1)

### **CRITERIA FOR IDENTIFYING WATERS REFERRED TO IN REGULATION 3(1)**

- 1.—(1) Waters referred to in regulation 3(1) shall be identified making use, *inter alia*, of the following criteria:
  - (a) whether surface freshwaters, in particular those used or intended for the abstraction of drinking water, contain or could contain, if action pursuant to regulation 6 is not taken, more than the concentration of nitrates laid down in accordance with the 1975 Directive;
  - (b) whether groundwaters contain more than 50 mg/1 nitrates or could contain more than 50 mg/1 nitrates if action pursuant to regulation 6 is not taken;
  - (c) whether natural freshwater lakes, other freshwater bodies, estuaries, coastal waters and marine waters are found to be eutrophic or in the near future may become eutrophic if action pursuant to regulation 6 is not taken.
2. In applying these criteria, the Secretary of State shall also take account of:
  - (a) the physical and environmental characteristics of the waters and land;
  - (b) the current understanding of the behaviour of nitrogen compounds in the environment (water and soil);
  - (c) the current understanding of the impact of the action to be taken pursuant to regulation 6.

## **SCHEDULE 2**

Regulation 4(3)

### **REFERENCE METHODS OF MEASUREMENT**

**Chemical fertiliser**

Nitrogen compounds shall be measured using the method described in Commission Directive 77/535/EEC of 22nd June 1977 on the approximation of the laws of the Member States relating to methods of sampling and analysis for fertilisers<sup>[6]</sup>, as amended by Directive 89/519/EEC<sup>[7]</sup>.

**Freshwaters, coastal waters and marine waters**

Nitrate concentration shall be measured in accordance with Article 4a(3) of Council Decision 77/795/EEC of 12th December 1977 establishing a common procedure for the exchange of information on the quality of surface fresh water in the Community<sup>[8]</sup>, as amended by Decision 86/574/EEC<sup>[9]</sup>

**SCHEDULE 3**

## Regulation 7(1)

**PROVISIONS TO BE INCLUDED IN ACTION PROGRAMMES**

1. The provisions of an action programme shall include rules relating to-

(1) periods when the land application of certain types of fertiliser is prohibited;

(2) the capacity of storage vessels for livestock manure; this capacity must exceed that required for storage throughout the longest period during which land application in the nitrate vulnerable zone is prohibited, except where it can be demonstrated to the Secretary of State or such other authority as may be designated for the purpose in the regulations establishing the programme that any quantity of manure in excess of the actual storage capacity will be disposed of in a manner which will not cause harm to the environment;

(3) limitation of the land application of fertilisers, consistent with good agricultural practice and taking into account the characteristics of the nitrate vulnerable zone concerned, in particular-

- (a) soil conditions, soil type and slope;
- (b) climatic conditions, rainfall and irrigation;
- (c) land use and agricultural practices, including crop rotation systems;

and to be based on a balance between-

- (i) the foreseeable nitrogen requirements of the crops, and
- (ii) the nitrogen supply to the crops from the soil and from fertilisation

corresponding to-

- the amount of nitrogen present in the soil at the moment when the crop starts to use it to a significant degree (outstanding amounts at the end of winter),
- the supply of nitrogen through the net mineralisation of the reserves of organic nitrogen in the soil,
- additions of nitrogen compounds from livestock manure,

- additions of nitrogen compounds from chemical and other fertilisers.

2. These provisions shall ensure that, for each farm or livestock unit, the amount of livestock manure applied to the land each year, including by the animals themselves, shall not exceed a specified amount per hectare. The specified amount per hectare shall be the amount of manure containing 170 kg N. However-

- (a) for the first four year action programme an amount of manure containing up to 210 kg N may be allowed;
- (b) during and after the first four year action programme, different amounts from those referred to above may be fixed. These amounts must be fixed so as not to prejudice the achievement of the Objectives and must be justified on the basis of objective criteria, for example-
  - long growing seasons,
  - crops with high nitrogen uptake,
  - high net precipitation in the nitrate vulnerable zone,
  - soils with exceptionally high denitrification capacity.

3. The amounts referred to in paragraph 2 above may be calculated on the basis of animal numbers.

**(map omitted)**

## **EXPLANATORY NOTE**

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

These Regulations transpose for Scotland the requirements of Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources. The objective of the Directive is to ensure that measures are taken to reduce and prevent nitrate pollution from agricultural sources. It provides a framework for action to reduce nitrate levels in the catchments of rivers and groundwater sources affected by such pollution, and to reduce eutrophication of freshwater bodies, estuaries, and coastal waters. In particular, Regulation 3 places a duty on the Secretary of State to designate nitrate vulnerable zones, to review them at least every 4 years and to revise or add zones as necessary. Regulation 4 places a duty on the Scottish Environment Protection Agency to monitor over the period of a year, ending not later than 19 December 1997, the nitrate concentration of surface water and ground water, and to repeat that exercise at least every 4 years. It also obliges the Scottish Environment Protection Agency to review, again not later than 19 December 1997 the level of enrichment by nitrogen compounds ("eutrophication") of rivers, lochs, estuaries and coastal waters: this also has to be repeated every 4 years. Regulation 6 places a duty on the Secretary of State to establish action programmes in designated nitrate vulnerable zones with the aim of reducing water pollution



caused by nitrates from agricultural sources. Regulation 7 provides for the content of action programmes.

Copies of the Code of Good Practice referred to in Regulation 5 may be obtained free of charge from SOAEFD, Pentland House, 47 Robb's Loan, Edinburgh EH14 1TY.