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SCOTTISH EXECUTIVE

Scottish Executive Environment Group
**Implementing the Water Environment and
Water Services (Scotland) Act 2003:**

Diffuse Water Pollution from Rural Land Use

Consultation on proposed Regulations relating to
General Binding Rules

October 2006



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ISBN: 0-7559-6305-9

Scottish Executive
St Andrew's House
Edinburgh
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Produced for the Scottish Executive by Astron B48954 10/06

Published by the Scottish Executive, October, 2006

Further copies are available from
Blackwell's Bookshop
53 South Bridge
Edinburgh
EH1 1YS

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Diffuse Water Pollution – General Binding Rules

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PURPOSE

In December 2005 the Scottish Executive published a consultation on the control of Diffuse Water Pollution from Rural Land Use. This set out the Executive's proposals for a strategy of measures to help achieve good water quality in Scotland's water environment.

The proposed strategy was generally welcomed, including the proposal for a set of General Binding Rules. The consultation included an illustrative list of General Binding Rules. This has been extensively revised and is now being published to allow further final comment prior to the regulations being made under the Water Environment and Water Services (Scotland) Act 2003.

It is also proposed that it should be permissible for lightly contaminated farmyard run-off to be drained to a wetland constructed for the purpose of treatment, as an alternative to its collection in a slurry storage facility.

Comments on the proposals should reach us by 19 January 2007.

Early responses would be welcomed.

Responses received will be made available publicly unless respondents ask for their comments to remain confidential. Respondents are requested to complete the attached CONSULTEE INFORMATION FORM.

ARRANGEMENTS FOR RESPONSES

Please send your views and comments on the proposals in this paper to:

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EXECUTIVE SUMMARY

1. Diffuse pollution is a significant threat to water quality in Scotland, as it is in other countries. The Scottish Executive published a proposed strategy, “Diffuse Water Pollution from Rural Land Use”, in December 2005. The paper discussed the nature and scale of the problem, and proposed a combination of measures: the support of voluntary action based on good practice, regulations to protect the water environment, and the provision of appropriate incentives for farmers and other land managers.

2. Under the Water Framework Directive, all Member States are required to introduce measures for the control of diffuse pollution. The Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR) provides such a means of control. All activities that pose a potential risk to the water environment have to be authorised. The simplest means of doing this is by authorisation under general binding rules (GBRs).

3. The Executive, in collaboration with key stakeholders, has developed a set of GBRs designed to protect the water environment and to prevent actions which result in undue risks to the quality of water in Scotland. We now propose the introduction of these national GBRs, as part of the CAR regulatory framework. The proposals are intended to help bring about good water status across Scotland without imposing onerous costs or conditions on land managers. We also propose that that it should be permissible for lightly contaminated farmyard water to be drained to a wetland constructed for the purpose, as an alternative to collection of the run-off in a slurry store.

4. It is very likely that even with these national GBRs in place there will still be problems associated with certain pollutants in some catchments. For these areas it is planned that, in conjunction with River Basin Management Planning, the national rules will be supplemented by further localised controls to apply to a particular land use activity. There is a choice of ways in which such additional specific rules could be applied. At the same time, through Land Management Contracts, the Executive will be increasing the incentives available for action to enhance environmental protection.

5. Views are sought on:

- the proposed GBRs to prevent or mitigate diffuse pollution from land use activities;
- the form of possible future localised controls to apply to particular land use activities; and
- permitting lightly contaminated yard water to be drained to a constructed wetland.

1. INTRODUCTION

The Scottish Executive is aiming to achieve and maintain good quality in Scotland's water environment by the year 2015 in line with the requirements of the Water Framework Directive. This involves good chemical and ecological status in rivers, lochs and coastal waters and good chemical status in groundwater. The introduction of the Water Environment and Water Services (Scotland) Act 2003 and the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR) were key steps in carrying out this policy.

Diffuse pollution has emerged as a major threat to water quality in Scotland, as in other countries. Agriculture is the predominant land use in Scotland, and it has been identified as presenting a significant threat to achieving good water status. Forestry is also a major land use, and it may also place certain water bodies at risk. This consultation deals with land use.

The WEWS Act 2003 established a broad framework for the future management of our rivers, lochs, coasts and groundwater. It gives Ministers powers to make regulations to control activities that impact on the water environment.

2. THE STRATEGY CONSULTATION PAPER

The consultation paper, Diffuse Water Pollution from Rural Land Use (December 2005), explained that controlling diffuse pollution was a major challenge in setting out to meet the water quality targets under the Water Framework Directive. It discussed the issues relating to diffuse pollution from rural land use, presenting evidence on the nature and the scale of the problem. The consultation paper outlined the existing regulatory framework for controlling impacts resulting from rural land use, noted the scope for good practice to minimise pollution, and discussed the incentives for preventive action.

The paper proposed a system of General Binding Rules (GBRs) in line with the CAR to apply across Scotland. This was recommended as a basic programme of measures that would bring about improvements. Even so, the indications were that there would still be problems associated with certain pollutants in some catchments. For these areas it was envisaged that the national Rules would be supplemented by a set of targeted GBRs to apply to particular land use activities. Where such activities are conducted by land users other than agriculture or forestry, for example golf courses and other recreational activities, any package of measures would also apply to them.

Overall, the strategy was well received with 38 responses to the consultation from various interested parties. These included organisations directly involved with cultivation of the land, environment/biodiversity organisations, recreational activity organisations, and private individuals. There was support for the introduction of "light touch" General Binding Rules (GBRs) based on well-established voluntary advice, such as the Prevention of Environmental Pollution from Agricultural Activity (PEPFAA) Code. There was also support for the development of guidance, extension of advisory services, Land Management Contract measures and the promotion of voluntary action.

A summary and copy of all responses can be found at www.scotland.gov.uk/Publications/2005/12/12152505/25059.

The Executive now proposes a set of national GBRs to reduce diffuse water pollution resulting from agriculture and other rural land use activities. This consultation also sets out a framework for further controls, which would be related to instances where national GBRs prove insufficient, for discussion in 2007. At the same time, through Land Management Contracts, the Executive will be making available incentives to promote good practice aimed at environmental goals. The Executive also proposes to facilitate the use of constructed farm wetlands for the treatment of lightly contaminated farmyard water.

3. THE CONCEPT OF GENERAL BINDING RULES

The Water Framework Directive (WFD) sets out a comprehensive programme for the achievement of good ecological quality within Europe's water environment by 2015. Measures to achieve compliance with the WFD must be in place by 2009 and they must be operational by 2012. River Basin Management Plans are required by 2009.

The introduction of the Water Environment and Water Services (Scotland) Act 2003 (the WEWS Act) and the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR) were key steps in transposing the Water Framework Directive (WFD) into Scots law.

In line with the WFD, the WEWS Act requires controls over both point and diffuse sources of pollution to be introduced. They are needed in order to secure good status for the rivers, lochs, groundwater and other water bodies in Scotland.

The CAR were made under section 20 of the WEWS Act and contribute to meeting the requirement for controls over certain activities, including those "activities liable to cause pollution of the water environment". All such activities are defined as controlled activities, and under CAR are permitted only if authorised. Under this new regime they may be authorised in one of three ways:

General binding rules (GBRs),
Registration, or
Licensing.

The CAR provide for the control of the risks associated with the activities of abstraction, impoundment and building and engineering works in the vicinity of water. They also provide a means, through GBRs, for the control of point source pollution, including surface water discharges from buildings. Additional measures are required to address the impacts of pollution from diffuse sources. The GBRs proposed in this paper would be an integral part of the CAR regime.

General binding rules are a low impact means of regulating and are intended for activities which individually represent a small risk to the water environment. As diffuse pollution consists normally of small amounts of pollutant at any one point, but which may cumulatively be important, we propose national GBRs which we consider are straightforward and which provide basic protection of the water environment across Scotland.

Under GBRs authorisation is given without any registration or any fee being payable to the responsible authority (SEPA). Implementation and compliance costs should be minimal.

This keeps the burden on operators to a minimum, but if the rules are well designed adherence to them should bring significant benefits for the water environment.

4. DEVELOPMENT OF THE PROPOSED GENERAL BINDING RULES

4.1 The need for rules in relation to land use

Rural land use includes many activities which are in the category of “controlled activities”, that is that they pose a potential threat to water quality and must be subject to authorisation.

Substantial quantities of nutrients such as nitrate and phosphate are lost from Scottish soils each year, and substantial quantities of soil are washed into watercourses. These can and do cause undesirable changes in the quality of water in the environment and can have significant ecological impacts. The risks have been recognised for many years, and action has been taken, mostly on a voluntary basis through good practices promoted by education and guidance, to minimise the adverse impacts. However, the persistence of the impacts on water quality indicates that further improvements are needed in environmental management.

In the Characterisation Report in 2005 SEPA estimated that diffuse pollution was resulting in 25% of the rivers in Scotland being at risk of not achieving good ecological status by 2015. Agriculture and forestry were associated with more than half of the rivers that were judged to be at risk from diffuse pollution: the 'Characterisation and impacts analyses required by article 5 of the Water Framework Directive' Report (http://www.sepa.org.uk/pdf/publications/wfd/Article_5_Scotland_River_Basin.pdf).

SEPA has undertaken further assessment of the risks to water quality from diffuse pollution (amongst other pressures) since publication in 2005 of the Characterisation Report. The further work will be published in 2007 as the Significant Water Management Issues Report, and it will inform the development of the draft river basin management plans. Diffuse pollution from agriculture is emerging as the most significant pressure affecting Scotland's rivers and groundwaters and as a significant issue in lochs and coastal waters.

The Strategy in December 2005 proposed that there should be a set of GBRs for rural land use, and listed as examples 15 suggested rules, categorised by the following four activities:

- Nutrient and manure management
- Land management
- Pesticides, Sheep Dip and Veterinary Medicines Handling and Use; and
- Surface Water Run-off.

Since the consultation, the Executive has extensively modified the list of measures.

4.2 The formulation of proposed rules for rural land use

Following the strategy consultation, the Executive has been in discussion with stakeholders, including SEPA, Forestry Commission Scotland (FCS), NFU Scotland and Scottish Environment-LINK. Developing a set of General Binding Rules (GBRs) to be based on existing guidance and best practice measures has been the focus of these discussions.

The measures proposed are largely taken from the PEPFAA Code, the Sheep Dipping code of practice, the Four Point Plan and Good Agricultural and Environmental Condition (GAEC). The Forests and Water (F&W) Guidelines (4th edition, 2003) are the main reference for the forestry measures.

As the GBRs are activity-based, each rule or any part of the rule will apply to any sector which undertakes that activity. These sectors will include golf courses, local authorities and ground maintenance contractors. The proposed set of Rules cover all activities associated with rural and recreational land use, not just farming and forestry.

The national GBRs are intended to minimise the risk from activities which pose a threat to the water environment across Scotland. They will represent a minimum standard which all operators will be expected to adhere to, and as such they will provide a common reference point. As they are primarily based on widely accepted standards of good practice, most land managers should already know how to implement them. Compliance should not involve onerous record-keeping or substantial changes to normal practices.

It is envisaged that they will be introduced in advance of the development of River Basin Management Plans as they represent measures that are applicable across Scotland. The Plans may identify the need for local risk-related measures.

4.3 Criteria for developing the GBRs

Keys to the development of a set of national GBRs are the principles that they are proportionate to risk and that they should be applicable across Scotland.

In the drafting of the list we have had regard to:

Efficacy: that following the rule will benefit the water environment and help prevent any further deterioration. The rule has to be applicable across Scotland;

Acceptability: the proposed rules are based on widely agreed standards which follow and build on those of GAEC and on the PEPFAA Code, both of which have already been discussed with interested parties; the measures should be feasible without requiring substantial additional costs; and

Proportionality: the proposed rules are related to the environmental risks, are not unduly onerous, and take account of a variety of public policy objectives.

The Executive in the Forward Strategy for Scottish Agriculture and other statements has made clear its aim of promoting a sustainable farming industry in a healthy environment. Measures to protect the environment will often represent a balance with maintaining farm

incomes over such matters as the land-take of a buffer zone. Certain measures to protect water courses may be needed in intensively farmed lowland areas but not be needed in lightly stocked uplands.

In developing the proposed GBRs we have also had regard to other environmental objectives, such as those for soils, wastes, air quality and climate change. Measures to enhance water quality often have positive effects on biodiversity. The GBRs will dovetail with existing regulations aimed at environmental protection.

There is also a balance to be struck between national rules and further controls. The more demanding the national GBRs are the greater the environmental protection. The system is simple; administrative costs are kept to a minimum, and the same rules apply to everyone, but this is at the risk of having rules which are in some places tighter than are needed to give adequate water protection. Where further controls will be required they will be more specifically risk-related, which will mean being more expensive.

A particular example arises with the distances specified in several of the proposed GBRs. In general with diffuse pollution, the risk is greatest closest to the source(s) and diminishes gradually. Thus an increase in the size of protection zones will undoubtedly reduce the risk, but at a cost in the amount of land-take. However, we consider that specific rules with specified distances need to be made, for fairness and clarity; and the distances specified should be appropriate to the risk from the activity. But such rules cannot be the whole answer; there will continue to be a need for good practice, based on the guidance agreed with farming and environmental interests, and the judgement of farmers and other land managers in particular circumstances.

Often taking care of the environmental risks is in line with good business practice; it is in everyone's interest to minimise the losses of nutrients from farm land. In many cases land managers will already be following the good practice formalised in the proposed rules and therefore will not incur material costs in complying with the GBRs. Where a farmer has to change practices, any additional costs should be matched by environmental benefit.

4.4 Where national GBRs prove insufficient

4.4.1 Possible future developments of the regulatory regime

The GBRs proposed in this consultation are intended to be applicable across Scotland. They should therefore represent a basic level of standards of good practice. However, it is expected that in some places they will not be sufficient to bring about the water quality improvements required to achieve good water status.

SEPA has the responsibility to identify the continuing problems, both in terms of pollutants and of the activities giving rise to their discharge. Where in future there is evidence that the national GBRs are not sufficient to prevent diffuse pollution occurring, or are not stringent enough to meet the objectives of the River Basin Management Plan, SEPA will be expected to propose further action related to, and proportionate to, the risks involved.

This opens up the option of different controls being applied to activities in particular areas, in practice likely to be river catchments. This is in line with the risk-based approach of the Water Framework Directive.

There are essentially three methods by which risk-based selective controls could be introduced:

- Catchment/geographical Targeted General Binding Rules
- Registration with set conditions or
- Licensing

4.4.2 Targeted GBRs

Under the first of these options the area to which the new rules were to apply will have to be designated. Since the risk will often be to rivers, it is likely that some of these areas would be the land draining into those rivers. The designations would have to be set out in legislation. There is already an example of rules which have a geographical application in relation to an identified risk; this is the Action Programme for nitrates, which applies in the 4 nitrate vulnerable zones (NVZs) in Scotland.

In the NVZ Action Programme, which is currently under review, there are restrictions on when slurry and certain other fertilisers may be spread on land. This in turn requires farmers to have a slurry storage capacity that will be more than sufficient for the closed period. This is additional to, and often more demanding than, the general provisions in the PEPFAA Code to avoid spreading slurry in conditions where it is at a high risk of being lost to the water environment. In future, any targeted GBRs would, like the proposed national GBRs, be an integral part of the CAR.

4.4.3 Registration

The second alternative would be to use the provision in the CAR for registration. Registration may be needed for small scale activities which individually pose a small environmental risk but cumulatively can result in environmental harm.

Registration to control diffuse pollution is envisaged where the risk from a particular pollutant or activity to the water environment is high. Registration would involve the signing up to a set of conditions, similar to but more prescriptive than the national GBRs.

An advantage of the registration option is that it would enable site-specific controls to be implemented within the areas where they are required. Where SEPA decides that certain enterprises or activities in a catchment are giving rise to diffuse pollution, it is only those identified that need to be registered. SEPA would thus also have the flexibility to return catchments to 'national' GBR status. In contrast, targeted GBRs (without registration) would have to apply to all enterprises involved in a specified activity in the catchment.

There would be a registration application fee for the operators of such activities. At present there is not an annual charge for registration, but it is likely that there would be an annual subsistence charge to reflect SEPA's costs of monitoring and inspection of the activity.

4.4.4 Licensing

The simple licensing of individual rural land use operations is a possible third option. Licences allow for site-specific conditions to be set to protect the water environment. Licences will be specific to that individual operation and the particular operator.

Application fees also apply to licences and an annual subsistence charge will apply.

Licences on a simple or on a complex basis already apply to other sectors of the economy under the CAR.

The Executive and SEPA are planning to develop, in collaboration with other interested parties, proposals for further control measures in 2007-08. The aim is that any such additional rules will be closely related to the activities and the places which give rise to identified risks.

4.5. GBRs by activity

The proposed GBRs relate to some 7 activities, primarily in agriculture and forestry, which are identified as potential risks to water quality:

1. The storage or application of fertiliser
2. The keeping of livestock
3. The cultivation of land
4. The discharge of surface water
5. The construction of waterbound roads
6. The handling and use of pesticides
7. The operation of sheep dipping facilities

It is proposed that the rules should apply, as GBRs normally do, to any operator carrying out these activities, eg the handling and use of pesticides. However, an operator applying only small amounts, such as up to one litre of pesticide per year, on a non-commercial basis, could be subject to less stringent rules.

The costs and benefits will be set out in a Regulatory Impact Assessment.

Q1. Do you consider a set of national GBRs with the option of further controls in certain areas is the best approach?

Q2. Which of the proposed types of further control measures do you consider would be the most appropriate or effective in achieving an improvement in water quality?

5. THE PROPOSED GENERAL BINDING RULES

5.1 Fertilisers

Fertilisers, whether from animal manure and other organic sources or from mineral sources, are essential to achieving high yields and thus to a productive farming industry. However, when the nutrients are lost to the land, they are liable to cause undesirable changes in the chemical composition of and the ecological health of watercourses. Nitrates (N) and Phosphates (P) are particularly important in this context.

In certain parts of Scotland, where nitrate concentrations in groundwater have reached or are approaching 50mg/l, Nitrate Vulnerable Zones (NVZs) have been designated and an Action Programme introduced. The Scottish Action Programme has been reviewed and new rules are due to be proposed.

In freshwater in Scotland phosphates are normally the limiting factor and thus more critical for eutrophication than nitrates. In rivers in Scotland there is generally enough flow to prevent a build-up of nutrients having serious adverse consequences, but in lochs there are many instances of algal blooms and other undesirable changes occurring as a result of nutrients from agricultural sources. Achieving good water status across Scotland by 2015 requires action to prevent and reduce the run-off of nutrients, and as phosphates tend to accumulate (and be released over several years) action should start as soon as practicable.

It is recognised that some loss of nutrients is inevitable and that conventional farming may involve some phosphate surplus. Research has shown that P is being added to soil in excess of the needs of crops on a range of farms representative of land use in Scotland (http://www.sepa.org.uk/publications/technical/imp_env_man/index.htm). But it is recognised that much can be done to reduce such surpluses and achieve better control of nutrients. In general, it is in farmers' interests that the nutrients are taken up by crops or animals for agricultural benefit.

The proposed GBRs therefore propose restrictions on the storage and application of fertilisers, especially manures and slurry, close to water bodies or in circumstances that are likely to lead to leaching to groundwater. Groundwater often feeds rivers, and therefore leaching of nutrients may result in eutrophication downstream.

Animal manures and slurry are also a source of faecal contamination, and are thus a risk to water supplies. Measures are proposed to protect wells, springs and boreholes, especially where these are used for drinking water; these measures will help to achieve compliance with the Drinking Water Directive.

Animal manures and slurry are a significant factor in Scotland's difficulty in achieving compliance with the standards of bathing waters. In 2006, for the first time, all of Scotland's designated bathing waters met the mandatory standards. A new Bathing Waters Directive was adopted in 2006, and achieving the new standards will require further improvement in the control of diffuse pollution.

5.2 Livestock

Livestock, especially cattle, can cause damage to the water environment, either by the deposition of manure, or by trampling the ground, in or close to water courses resulting in soil erosion. In the December 2005 consultation it was proposed to prohibit livestock from having direct access to water courses on improved ground. (It was recognised that on hill ground it would not be desirable or practicable to fence off water courses and provide alternative drinking water.)

There is evidence that the access of livestock at fairly high stocking densities can result in the downgrading of water quality. In the Brighthouse Bay study (<http://www.scotland.gov.uk/Topics/Environment/Water/15561/15068>), looking at measures to protect bathing waters from faecal contamination, the field measures concentrated on excluding livestock from watercourses. This involved fencing and the installation of gravity-fed field troughs. The study found that there was a reduction in high flow Faecal Indicator Organism (FIO) concentration in sub-catchments where an additional 30% of the stream bank length was protected. Similar improvements in water quality have been found as a result of excluding or controlling stock in the Mains Burn catchment (West Lothian) and in the Tarland (Aberdeenshire). However, in discussions the Executive accepted that it was not practicable to exclude stock from water courses in all lowland areas; the proposed rules are thus limited to avoiding the erosion or poaching of land close to water and to the protection of sources of water supply.

There are differing views on whether it is better to move ring feeders periodically or leave a selected area to be “sacrificed”. The proposed set of GBRs does not impose a solution either way, but it is proposed that livestock feeders, which naturally tend to have poached ground round them, should be positioned at a distance from surface waters.

In some cases improvements can be made by allowing cattle to have access to drinking from the water course in a specified area but not to stand in the burn or river.

We expect that the adoption of good practice, together with adherence to the proposed GBRs on livestock, will result in improvements to water quality in watercourses draining livestock fields. However, where SEPA find catchments with water courses that are not of sufficient quality, they will be expected to propose the registration of the activities in those catchments giving rise to the risk and to propose targeted rules. Such targeted measures will involve some administration costs, registration fees, and the restriction necessary to protect the water environment.

5.3 Land cultivation

Land cultivation activities can be a risk to the water environment through soil erosion and the loss of nutrients and pesticides to watercourses. Adoption of good practice measures will minimise the risks. The rules restrict tilling close to water courses and to sources of drinking water. They are based on the provisions (voluntary) of the PEPFAA Code and on the cross-compliance conditions of GAEC.

In forestry there are similarly rules set out in the Forests and Water Guidelines, aimed primarily at protecting soils and at minimising the run-off into water courses. Avoiding planting close to water courses may also reduce the acidification of waters.

5.4 Discharges of surface water

The CAR contains a GBR on surface water run-off from premises which include farm steadings and buildings, urban or rural (GBR 10). The proposed rule applying to drainage from land is designed to provide a similar protection to watercourses from rural land use activities.

There are further provisions which would give statutory effect to some of the guidance in the Forests and Water guidelines on surface water run-off.

5.5 Construction and maintenance of waterbound roads

The construction of roads, in particular forestry roads, is an obvious risk of soil erosion and resulting sedimentation of water courses. A rule based on the F&W Guidelines is proposed, applicable to any waterbound (unmetalled) road, track or path.

5.6 Pesticides

The potential risks of pesticides, which include herbicides, to plant life, invertebrates and aquatic life generally are well known. The proposed rules embody good practice. It is envisaged that an operator following a Local Environment Risk Assessment for Pesticides (LERAP assessment) would be complying with the proposed rule. A rule is proposed to prevent the back siphoning which can occur if a device is filled from a watercourse.

5.7 Sheep dipping

The proposed rules on sheep dipping follow those in the Sheep Dipping Code of Practice. This is not in itself mandatory, but may be a condition of the authorisation granted by SEPA under the Groundwater Regulations and now under CAR for the disposal of spent sheep dip.

The first rule proposes that the dipped sheep should be left for their fleeces to dry before they are allowed access to any water course.

The second provides that any mobile or new sheep dipping facility shall be placed at a substantial distance (50 metres) from any watercourse or source of water.

Q3. Do you consider these are the main activities which contribute to diffuse pollution from rural land use?

Q4. Will the measures contained within the GBRs contribute to the mitigation of diffuse pollution?

6. CONSTRUCTED FARM WETLANDS

The storage of slurry on farms is governed by the Silage, Slurry and Agricultural Fuel Oil Regulations 2003, and they require farmyard run-off to be collected in slurry storage. There is considerable evidence that constructed farm wetlands are an effective means of treating lightly contaminated farmyard water, and the Executive is inviting views on whether the requirement in the SSAFO Regulations should be amended to allow farmyard run-off to be collected in constructed farm wetlands (CFWs).

SEPA is preparing advice on the design specifications for CFWs. The wetlands would be required to perform a treatment function to ensure that the water discharging from them to the water environment is of good quality. Allowing lightly contaminated water to be treated in this way would have environmental advantages. It would reduce the volume of liquid that has to be collected in slurry storage, thus either reducing the need for greater capacity or enabling the farmer to make better use of existing capacity. In reducing the amount of water that has to be spread, it would potentially be reducing the costs and the risks involved in the storage and spreading of slurry.

Q5. Do you consider that it should be permissible for lightly contaminated water from farm steadings to be collected in constructed farm wetlands which would provide a measure of treatment?

7. TIMETABLE

The current proposed timetable for implementation of diffuse pollution measures is as follows:

Consultation on diffuse pollution controls	2006
Proposed introduction of national GBRs	2007
Publicity/Education/Information campaigns on GBRs	Throughout 2007-08
Significant Water Management Issues Report	2007
Land Management Contracts operational	2007
Development of further controls	2007-08

It is envisaged that SEERAD staff will play a major role in advising the agriculture sector of the changes required under any new regulation. As further measures are developed and River Basin Management Plans are formulated, there will be a need to keep land managers informed of any proposals which will affect them.

SEPA is the lead authority for the implementation of the WFD and will lead and coordinate the river basin planning process in Scotland. SEPA has for many years monitored water quality in Scotland's water environment and investigated evidence of water pollution. It is envisaged that SEPA through its further characterisation work will identify the river catchments at risk of failing to meet the water quality standards of the WFD. Rural land use activities in those areas would thus be candidates for further controls.

The arrangement of the proposed GBRs will be as currently defined within the principal regulations applying (CAR).

It is proposed that the national GBRs should be brought into effect from 1 April 2007. They would be part of the CAR regime, which came into effect on 1 April 2006. Thus GBR 10 of CAR regulates surface run-off, but only from buildings, roads, yards and other built developments; the GBRs now proposed would extend the control of surface run-off to include that from rural land. It is envisaged that the proposed provisions on constructed farm wetlands would be introduced at the same time, provided that SEPA is satisfied that the design criteria for CFWs will ensure satisfactory control of the polluting materials in farmyard run-off.

The roles of all parties involved in the measures to control diffuse pollution will be developed in line with the rest of the strategy. Decisions on the extent and nature of the various roles will have resource implications and these will need to be assessed carefully.

8. CONCLUSIONS

Diffuse pollution is notoriously difficult to tackle. Control at the point where pollution becomes apparent is often impracticable, and there is a consensus that a combination of measures works best at a catchment scale. Water quality improvements depend on the good practice of a considerable number of farmers and other land managers. For this reason the emphasis in tackling diffuse pollution has been the promotion of good practice, such as that set out in the PEPFAA Code, agreed by the various interested parties, including representatives of the farming industry.

The Scottish Executive considers that a set of GBRs on the lines set out in Annex A will be an important step towards achieving good quality in Scotland's water environment. The proposed rules are in many cases good practice set out as guidance in the PEPFAA Code. Those land managers who already work to such standards will find the changes, if any, to their existing methods will be minimal.

The General Binding Rules are designed to set reasonable standards, which are transparent and fair, and are applicable to all land managers in Scotland.

We invite comments on the measures in the Table attached and on the other issues discussed in this paper.

**Water Division
October 2006**

Annex A - National General Binding Rules for Rural Land Use

Activity		comments
<p>1. The storage of and application¹ of fertiliser to land other than:</p> <p>a)The storing of slurry and silage in accordance with the requirements of the Silage, Slurry and Agricultural Fuel Oil (Scotland) Regulations 2003 or</p> <p>b)The application of sludge to land in accordance with the Sludge (Use in Agriculture) Regulations 1989 as amended or</p> <p>c)The application of waste to land in accordance with a waste management licence or a registered exemption under the Waste Management Licensing Regulations 1994 as amended</p>	<p>1. No fertiliser² shall be stored on land that:</p> <p>(i) is within 10 metres of any river, burn, ditch³, pond, loch, wetland, or coastal waters;</p> <p>(ii) is within 50 metres of any well, spring or borehole;</p> <p>(iii) is waterlogged; or</p> <p>(iv) has an average soil depth of less than 30 cm and overlies gravel or fissured rock⁴.</p> <p>2. No fertiliser shall be applied to land that:</p> <p>(i) is within 10 metres of any river, burn, ditch³, pond, loch, wetland, or coastal waters, unless that fertiliser is an inorganic fertiliser in which case it shall not be applied to land that is within 5 metres of any river, burn, ditch, pond, loch, wetland, or coastal waters;</p> <p>(ii) is within 50 metres of any well, spring or borehole used for public or private water supply unless that fertiliser is an inorganic fertiliser in which case it shall not be applied to land that is within 10 metres of any well, spring or borehole;</p> <p>(iii) is steeply sloping with a gradient in excess of 15°^{4,5}, unless that fertiliser is an inorganic fertiliser;</p> <p>(iv) is waterlogged, frozen⁶, or covered with snow; or</p> <p>(v) is at risk of flooding or of experiencing heavy rainfall within a short time (up to 72 hours) of the activity being undertaken.</p>	<p>PEPFAA Code (2005)</p> <p>PEPFAA Code 4:3 Don't adapted</p> <p>PEPFAA Code 4:15 Do adapted</p> <p>new</p> <p>new</p> <p>PEPFAA Code 4:6 Don't with amendment</p> <p>4 Point Plan (4PP)/ PEPFAA Code 4:6 Don't with amendments</p>

	<p>3. No slurry shall be:</p> <p>(i) injected to a depth greater than 10 cm into land with gravel backfilled drains; or</p> <p>(ii) injected or spread on land that has been moled, subsoiled or drained in the previous 12 months.</p> <p>(iii) Injected or spread on land that has an average soil depth of less than 30 cm and overlies gravel or fissured rock⁴.</p> <p>4. All reasonable steps shall be taken to ensure that fertilisers are not applied to land in quantities which exceed the nutrient needs of the crop, or crops, to be grown during the growing season.</p> <p>5. Any equipment used to apply fertiliser shall be subject to a suitable system of maintenance and maintained in an efficient state, in efficient working order and in good repair</p> <p>6. All reasonable steps shall be taken to prevent the entry of clean surface water run-off into slurry and silage effluent stores.</p> <p>2. Keeping of livestock</p> <p>1. Livestock shall be kept in such a way that they do not:</p> <p>(i) Cause erosion or poaching of any land that is within 5 metres of a river, burn, ditch, pond, loch or wetland; or</p> <p>(ii) Enter any land that is within 5 metres of a well, spring⁷ or borehole.</p>	<p>new (compare PEPFAA para 2.18)</p> <p>PEPFAA Code 4:10 Don't</p> <p>new</p> <p>PEPFAA Code 6A:6, 10, 11 and 12 Do adapted, 6B:5, 9, 10 and 11 Do adapted, and 5:18 Do</p> <p>new</p> <p>PEPFAA Code 4:9 Do</p> <p>1. (i) GAEC measure 4 (+5m rule)</p> <p>(ii) new to support private water supply regulations</p>
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	<p>2. Livestock feeders shall be positioned at least 20 metres from any river, burn, ditch, pond, loch, wetland, or coastal waters.</p> <p>3. Veterinary medicines shall be handled and applied in such a way that they do not pollute the water environment.</p> <p>1. No agricultural land shall be tilled for cropping that is:</p> <ul style="list-style-type: none"> (i) Within 2 metres of any ditch, river, burn, pond, loch or wetland; (ii) Within 5 metres of any well, spring, or borehole; or (iii) Waterlogged. [Cultivation should be delayed until the soil has drained to field capacity.] <p>2. All reasonable steps shall be taken to ensure that soil erosion resulting from land cultivation is minimised, including;</p> <ul style="list-style-type: none"> (i) ensuring that all cropped land has crop, grass or stubble cover or a roughly cultivated surface over the following winter (ii) maintaining soil structure and surface drainage (iii) creating fine seed beds as close to sowing as is reasonably practicable (iv) preventing soil capping⁸ (v) using suitable break crops in arable rotations. <p>3. In forestry ground preparation the operator shall limit cultivation to the minimum extent and depth required for satisfactory tree establishment and shall restrict mowing to slopes less than 4.5°.</p>	<p>2. PEPFAA 3:18 Do - amended</p> <p>3. Adapted from PEPFAA 2:5 Do</p> <ul style="list-style-type: none"> (i) new (PEPFAA 3:16 Do amended) (ii) new-private water supply (iii) GAEC measure 9 - amended <p>PEPFAA section 3, GAEC</p> <p>F&W Guidelines page 28</p>
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<p>4. Discharge of surface water, via either a drainage system or overland flow, to the water environment as a result of land management excluding roads, yards and other built up areas.</p>	<p>4. In forestry ground preparation the operator shall leave uncultivated buffer areas (excluding excavator mounding for the establishment of riparian woodlands) as follows:</p> <ul style="list-style-type: none"> i) at least 20 metres on either side for watercourses of channel width in excess of 2 metres, and by the shores of lochs and reservoirs. ii) at least 10 metres on either side for watercourses of channel width 1-2 metres and for smaller channels where fish spawn. iii) at least 5 metres on either side for watercourses of channel width less than one metre, except where steep ground is dissected by numerous small streams and the creation of buffer areas alongside the smallest of streams is not possible or desirable in terms of landscape quality. <p>5. During forestry operations the operator shall not let machinery work in or ford watercourses, except where purpose-built fords already exist; watercourses shall be crossed only at appropriately designed and constructed crossing points.</p> <p>6. All reasonable steps shall be taken to ensure that any new forestry planting or restocking does not result in the acidification of surface water.</p> <p>7. The operator shall ensure that forest harvesting does not pollute surface waters and/or groundwater.</p> <p>1. Reasonable efforts shall be made to ensure that the discharge shall not result in pollution of the water environment.</p>	<p>F&W Guidelines pages 26 and 28</p> <p>adapted from GBR 10 - CAR</p>
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	<p>2. New drainage for forestry shall be designed and implemented to control run-off and erosion on the following principles:</p> <ul style="list-style-type: none"> i) Stop plough furrows and ditch ends short of buffer areas. ii) Do not end drains in natural channels, ephemeral streams or old ditches running directly into a watercourse. iii) Align ditches and drains so that the gradient does not exceed 2°. iv) Leave a 3-5 metre wide ditch-side uncultivated zone at the ends of plough furrows on slopes over 5°. <p>3. No discharge from agricultural or forestry drainage shall result in the destabilisation of the banks or bed of the receiving surface water.</p> <p>4. Natural watercourses shall not be diverted into cultivation channels or drains.</p> <p>5. Maintenance of ditches shall not be undertaken during periods in which fish are likely to be spawning in the ditch or in water courses directly connected to the ditch, nor in the period between such spawning and the emergence of the juvenile fish.</p>	<p>F&W Guidelines pages 28-30</p> <p>F&W Guidelines page 29</p> <p>GBR 10, F&W Guidelines page 31 compare PEPFAA paragraph 2.10</p> <p>F&W Guidelines page 30</p> <p>GBR 6(f), F&W Guidelines page 31</p> <p>F&W Guidelines page 31</p>
<p>5. Construction and maintenance of waterbound⁹ roads, tracks and paths</p>	<p>1. The operator shall ensure that the construction and maintenance of new roads, tracks and paths does not pollute watercourses, lochs or wetlands as follows:</p> <ul style="list-style-type: none"> i) Do not use acidic, metal or sulphide-rich spoil from mine workings for road construction ii) Do not use quarry dust as a surface dressing. iii) Do not divert natural watercourses into roadside drains. iv) Roadside drains must not discharge directly into watercourses, but rather through a buffer area of adequate width to retain sediment. 	

<p>6. The handling and use of pesticides</p>	<p>1. The preparation of pesticides for application and the cleaning or maintenance of pesticide sprayers shall be undertaken in conditions such that any spillages or washings will be prevented from:</p> <ul style="list-style-type: none"> i) directly entering the water environment; ii) indirectly entering the water environment unless via a treatment system designed to prevent pollution by pesticides. <p>2. No pesticides shall be applied within 10 metres of any river, burn, ditch, pond or wetland, or within 20 metres of freshwater lochs or within 50 metres of any well, spring or borehole unless an appropriate risk assessment has shown that the use of a lesser distance would not result in pollution of the water environment. However, up to a limit to be specified, pesticides may be applied to land, provided that the application is on land which is not being cultivated on a commercial basis.</p> <p>3. Spraying equipment shall be subject to a suitable system of maintenance and maintained in an efficient state, in efficient working order and in good repair.</p> <p>4. Sprayers shall not be filled with water taken from the water environment unless:</p> <ul style="list-style-type: none"> (i) a device preventing back siphoning is fitted to the system; or (ii) the water is first placed in an intermediate container. <p>5. Pesticide-treated trees shall not be soaked in any river, burn, ditch, pond, loch or wetland.</p>	<p>PEPFAA 9:10 Do</p> <p>Extension of PEPFAA 9:1 Don't</p> <p>PEPFAA Code 9:8 Don't</p> <p>PEPFAA Code 9:3 Don't</p> <p>F&W Guidelines page 37</p>
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<p>7. Operating sheep dipping facilities</p>	<p>1. After any sheep has been dipped it shall not be allowed access to any river, burn, ditch, freshwater loch or wetland until its fleece is dry or at least 24 hours has passed.</p> <p>2. No part of any sheep dipping facility, either as mobile dipper or constructed after 1st April 2007, shall be located within 50m of any river, burn, ditch, pond, freshwater loch or wetland or within 50m of any well, spring or borehole.</p> <p>3. The sheep dipping facilities shall be maintained such that they do not leak and do not have any outlets.</p> <p>4. The sheep dipping facilities shall not be filled with water taken from the water environment unless:</p> <ul style="list-style-type: none"> (i) a device preventing back siphoning is fitted to the system; or (ii) the water is first placed in an intermediate container. <p>5. Sheep dip baths shall be emptied within 24 hours following completion of dipping, and the waste sheep dip disposed of in accordance with a licence under the Water Environment (Controlled Activities) (Scotland) Regulations 2005.</p>	<p>Extension of PEPFAA Code 8:13 Do - amended</p> <p>PEPFAA Code 8:7 Don't amended</p> <p>PEPFAA Code 8:8 Don't</p> <p>Sheep Dipping Code of Practice</p> <p>PEPFAA Code 8:10 Don't - amended</p>
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DEFINITIONS

- 1 Application is defined as spreading, spraying, incorporating or injecting onto or into land
- 2 Fertiliser is defined as any substance containing plant nutrients which is utilised on land to enhance plant growth; it may include inorganic fertilisers and animal manures and slurries. Materials covered by Waste Management Licensing or Sludge Use in Agriculture legislation is not governed by these GBRs. Forestry brash is not regarded as a fertiliser in this context.
- 3 Ditch is defined as an open channel which collects and conveys drainage water to the wider surface water environment. The drainage water may be from surface or subsurface drainage.
- 4 does not apply to forestry
- 5 does not apply to inorganic fertiliser
- 6 It is not prohibited to spread farmyard manure on frozen ground.
- 7 that is being used to supply drinking water
- 8 Soil capping is the formation of a crust on the soil surface which impedes infiltration
- 9 A waterbound road is a road constructed of unbound material (i.e. road material without the use of bituminous or cementitious materials), laid with sufficient moisture content to allow full compaction.

Pesticides include herbicides, insecticides, fungicides, molluscicides and rodenticides.

For the purpose of these GBRs, artificially created systems for the treatment of pollutants shall not be regarded as part of the surface water environment (referred to here as rivers, burns, ditches, ponds, freshwater lochs, wetlands or coastal waters) [ref the WEWS Act, section 3(10)(f)].

QUESTIONS

Q1. Do you consider a set of national GBRs with the option of further controls in certain areas is the best approach?

Q2. Which of the proposed types of further control measures do you consider would be the most appropriate or effective in achieving an improvement in water quality?

Q3. Do you consider these are the main activities which contribute to diffuse pollution from rural land use?

Q4. Will the measures contained within the GBRs contribute to the mitigation of diffuse pollution?

Q5. Do you consider that it should be permissible for lightly contaminated water from farm steadings to be collected in constructed farm wetlands which would provide a measure of treatment?

CONSULTEE INFORMATION FORM

Please complete the details below and attach it with your response. This will help ensure we handle your response appropriately:

Name:

Postal Address:

Consultation title: Diffuse Water Pollution – General Binding Rules

1. Are you responding as: (please tick one box)

(a) an Individual (go to 2a/b)

(b) **on behalf of** a group or organisation (go to 2c)?

2a. INDIVIDUALS:

Do you agree to your response being made available to the public (in SE library and/or on SE website)?

Yes (go to 2b below)

No, not at all .

2b. Where confidentiality is not requested, we will make your response available to the public on the following basis (please **tick one** of the following boxes)

Yes, make my response, name and address all available

Yes, make my response available, but not my name or address

Yes, make my response and name available, but not my address .

2c ON BEHALF OF GROUPS OR ORGANISATIONS:

Your name and address as a person responding **will be** made available to the public (in the SE library and/or on SE website). Are you content for your response to be made available also?

Yes

No .

SHARING RESPONSES/FUTURE ENGAGEMENT

3. We will share your response internally with other SE policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for the Scottish Executive?

to contact you again in the future in relation to this consultation response?

Yes

No .

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Astron B48954 10/06

ISBN 0-7559-6305-9



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