

Presented to Policy & Resource Planning 24/7/08

Decision:

1. *The report be noted.*
2. *A working group of Crs Robertson, Woodhead, Butcher, Shepherd and Brown be formed to report back to a Council workshop with objectives and preferred options for addressing issues around non point source discharges to water.*
3. *The issue of non-point source discharges in rural areas be discussed with Federated Farmers and considered as part of the review of the Regional Policy Statement.*

## REPORT

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Prepared For: Policy and Resource Planning Committee

Prepared By: Dale Meredith, Manager Policy

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**Subject: Non-Point Source Discharges in Rural Areas and the Regional Plan: Water**

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### 1. Précis

This report sets out a proposal for addressing issues around non-point source discharges to water, particularly in rural areas where intensive farming activities are undertaken.

### 2. Background

The June 2008 meeting of the Environmental Science Committee requested the Policy Committee consider potential rules for dairying best management practice implementation and ongoing industry consultation. The request arose from the immediate concern about the level of non-compliance from farmers on tile and mole drains with environmental best practice, and the low compliance with the Fonterra-agreed Environmental Monitoring Systems. It follows from the 2007 State of the Environment Report on Water Quality and the associated report, Surface Water Quality and Future Waterway Protection [2007/261].

The Otago Regional Council's Compliance team undertakes an annual inspection of various farming operations, to ensure compliance with permitted or consented activity standards. In recent months, a number of non-complying farm operators have been prosecuted through the Environment Court. However, one prosecution has not succeeded in a situation where the discharge was not directly to water. The team has also identified effluent on farm lanes, which invariably ponds in places, as being an issue.

The Council also receives complaints of stock being in water. These complaints are investigated, but to date enforcement action has been limited as the stock have been moved by the time inspection is made and it is difficult to collect evidence which will support successful prosecution.

### **3. Provisions for non-point source discharges in rural areas**

The Regional Policy Statement, and objectives and policies for the Regional Plan: Water focus on maintaining and improving the quality of water. They do not provide for water quality to be degraded.

No rules specifically cover discharges to water from livestock waste products when they are not confined to areas where waste may be concentrated, such as feed pads, stand-off pads or sacrifice paddocks. Rather, reference is made to Section 15(1)(a) and (b) of the Resource Management Act 1991 [RMA]:

## **15 Discharge of contaminants into environment**

(1) No person may discharge any—

- (a) Contaminant or water into water; or
- (b) Contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water;

...

*unless the discharge is expressly allowed by a rule in a regional plan and in any relevant proposed regional plan, a resource consent, or regulations.*

The rules that specifically relate to livestock are discussed below:

### **12.8 Discharge of agricultural waste and fertiliser**

The rules under 12.8 set activity standards for discharges from animal waste collection systems, feed pads, stand-off pads and sacrifice paddocks. The permitted activity standards require that any discharge:

- Is prevented from contaminating any water body, drain or water race;
- Does not occur on saturated soils;
- Is set back more than 50 metres from any surface water body; mean high water spring; or bore used to supply domestic water or stock drinking water;
- Does not discharge directly to water in any drain, water race or groundwater;
- Does not pond;
- Does not run off to any other person's property;
- Does not cause flooding of another person's property; erosion, land instability, sedimentation or property damage.

Discharge of contaminants from animal waste collection systems onto specific Groundwater Protection Zones is a restricted discretionary activity. This rule is being applied, and a number of effluent spray systems are consented.

Otherwise, the discharge of any agricultural waste or fertiliser to water, or onto or into land in circumstances where it may enter water is a discretionary activity [Rule 12.8.3.1]. In practice, this rule has not been used where farming activities are not meeting the permitted activity standards.

### **13.5 Alteration of the bed of a lake or river**

Livestock are permitted to disturb the bed of any lake or river under Rule 13.5.1.8, provided they:

- Do not cause or induce conspicuous slumping, pugging or erosion;
- Do not cause or induce any conspicuous change in the colour or visual clarity of the lake or river;
- Do not adversely effect any Type A or B values in any Schedule 9 wetland;
- Do not significantly disturb indigenous vegetation or the habitat of indigenous fauna, trout or salmon in, on or under the bed of any lake or river.

In practical terms, livestock may pass through a river or lake, but should not linger long enough to leave visible signs of damage; otherwise, the activity is discretionary [Rule

13.5.3.1]. Specific reference is made to Section 15(1)(a) and (b) by a note at the end of Rule 13.5.1.8. Any discharge to water or to land in circumstances where contaminants may enter water is therefore not authorised as a permitted activity. As with Rule 12.8.3.1 for discharges above, this discretionary rule has not been invoked where farmers are not meeting permitted activity standards, and farmers are not being required to gain resource consent.

#### 4. Issue identification

While the Regional Plan: Water has clear provisions for point source discharges, the provisions in 12.8 and 13.5 and reference to Section 15 of the RMA have not been used to manage adverse effects on water quality which may arise from non-point source discharges from farming activities, notably:

- Farm leachate, especially the accelerated movement of leachate through wet soils;
- Rainfall runoff, especially from farm lanes, when farmland has been over-grazed or where and when animal waste products are applied onto land to dispose; and
- Contaminants entering tile and mole drains and draining to rivers.

#### 5. Option Analysis

There are four options apparent for addressing these issues through the Regional Plan: Water, the first of which may be addressed in the short term. The following sections provide a brief description of each option, and a preliminary analysis of the costs and benefits of each. The options discussed are:

##### 5.1 Direct Discharge to Water

Amend a number of rules which permit direct discharges that are not direct to water in drains, water races and groundwater, to cover situations where such discharge may enter water, by either:

- Deleting ‘*water in*’ from the rules, to read:  
*‘There is no direct discharge of contaminant to any drain, or water race, or to groundwater;’* or
- Aligning rule wording with the RMA provisions to read:  
*‘There is no direct discharge of contaminant to water in any drain, or water race, or to groundwater; or onto or into land in circumstances that may result in that discharge entering water;’*

Although this is a small wording change, it affects a number of permitted activities and would have widespread effect by including control over all discharges of contaminants to land.

Benefits	Costs/Risks
<ul style="list-style-type: none"> <li>▪ Simple plan change.</li> <li>▪ Better aligns the rules with policies on discharges.</li> <li>▪ Reduces the risk of discharges entering water.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Plan change required.</li> <li>▪ Water quality may continue to deteriorate.</li> <li>▪ Does not address non-visible and cumulative effects on water quality.</li> </ul>

It would take at least six months before such a change could be made operative.

## 5.2 Water Quality Objectives

The Regional Plan: Water identifies a number of water bodies under 7.6 [Policies for the enhancement of water quality] where water quality is to be enhanced. Neither the policies nor rules identify the water quality standard to be achieved. For all other water bodies, Objective 7.5.1 aims to maintain water quality. This option is an important strategic response which would involve:

- A region-wide review of surface and ground water quality;
- Identification of water quality standards to meet the objective;
- Extensive consultation to ensure that acceptable standards are set for water bodies.

A two-year study of surface water quality and land use in South Otago is commencing soon which would lead the way for this more strategic response. The object of this study is to assess the health of the Pomahaka River and its tributaries, and will help communities understand water quality and the effects of land use on water quality. It may also help in identifying acceptable water quality standards for managing various water bodies.

Benefits	Costs/Risks
<ul style="list-style-type: none"> <li>▪ Long term maintenance and enhancement of water quality.</li> <li>▪ Addresses all water discharge issues [from both point and non-point source discharges].</li> <li>▪ Process would apply to all surface water bodies.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Medium to long term option.</li> <li>▪ Water quality may continue to deteriorate in the short to medium term.</li> <li>▪ Affects the whole region.</li> </ul>

While this is the best long term option for addressing water quality, it will take time to work with communities to identify acceptable standards for water quality, and to align the responses of all parties to achieve the desired standards. Interim measures will be needed to reduce the short to medium term risks of water degradation.

## 5.3 Fencing Waterways

A rule similar to that develop by Environment Southland could be added to Chapter 14, requiring:

- Fencing of perennial surface water bodies at a set distance back [e.g. 3 metres from the water body];
- Either permanent fencing, or temporary fencing while the stock is in the paddock;
- Riparian planting within the fenced off area with plants that will intercept nutrients leaching or surface runoff.

The ‘Environmental Considerations for Clean Streams’ [April 2005] recommends a riparian margin width relative to the steepness and length of slope adjoining the water body. For example, on flat and gently rolling land, a margin of 3 metres may be appropriate. However, for steeper slopes, a margin width of 10 to 15 metres per 100 metres of slope may be more appropriate.

Benefits	Costs/Risks
<ul style="list-style-type: none"> <li>▪ Improved bank stability.</li> <li>▪ Visually attractive.</li> <li>▪ Opportunity for riparian planting and greater biodiversity.</li> <li>▪ Reduced rate of water degradation.</li> <li>▪ Many farms will be improved.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Water quality may continue to deteriorate.</li> <li>▪ Loss of productive farmland.</li> <li>▪ Cost of fencing.</li> <li>▪ May not be suitable for all situations.</li> <li>▪ Tile and mole drainage issues are not addressed.</li> <li>▪ Farm lane and water crossing issues are not addressed.</li> <li>▪ Does not address effects of leachate and high rainfall runoff events.</li> </ul>

Riparian fencing will only address part of the non-point source discharge issue, and it is likely that water quality will continue to deteriorate if this action is taken in isolation. Notwithstanding, it remains part of the mix of best practice techniques.

#### 5.4 Land Use Controls

Introduce land use controls which manage the farm activity, rather than the environmental effects of farm activity.

Land use rules may cover a range of matters, such as, but not limited to:

- Requiring waterways to be fenced [referred to in 5.3 above];
- Requiring identification of any tile drains;
- Limiting stocking rates near water;
- Controlling where particular farm activities may occur [e.g. setbacks from rivers];
- Requiring a reduction in the quantity of wastewater entering any effluent pond [e.g. collection of rainwater, recycling from multi-pond system];
- Requiring farm runoff to be treated before it enters surface or groundwater systems;
- Requiring treated effluent to be stored when ground conditions are too wet for application;
- Controlling how particular farm activities may be undertaken [e.g. use of irrigation systems under different soil moisture conditions, emptying effluent ponds at the start of the season and as required to maintain storage capacity, regular maintenance of sumps and stone traps];
- Limiting soil compaction;
- Requiring implementation of balanced nutrient budgets and control of fertiliser.

Should Council be interested in using land use controls, it must also consider how best to implement these controls. Three implementation options are available, and are assessed below:

1. Regional rules, implemented by the Otago Regional Council [ORC]; or
2. Regional rules, with implementation delegated to territorial authorities [TAs]; or
3. District rules, implemented by the territorial authorities.

<b>Option</b>	<b>Benefits</b>	<b>Costs/Risks</b>
<b>1. Regional rule [ORC implements]</b>	<ul style="list-style-type: none"> <li>▪ Provides for integrated water management.</li> <li>▪ Water quality objectives achieved.</li> <li>▪ Regional rules apply to all land uses and discharges, with no existing use rights.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Duplication of resource consent requirements for ORC and TA.</li> <li>▪ Potentially reduced areas available for grazing.</li> <li>▪ Change of regulatory function for ORC.</li> </ul>
<b>2. Regional rule [TAs implement]</b>	<ul style="list-style-type: none"> <li>▪ Provides for integrated land and water management.</li> <li>▪ Regional rules apply to all land uses and discharges, with no existing use rights.</li> <li>▪ Water quality objectives achieved.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Co-ordination of responses between consent granting and compliance processes [compliance with water quality standards remains an ORC function].</li> </ul>
<b>3. District rule [TAs implement]</b>	<ul style="list-style-type: none"> <li>▪ Provides for integrated land management</li> <li>▪ Single consenting process and control over land use activities.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Existing use rights apply [section 10 RMA] effectively limiting rule application.</li> <li>▪ New rules apply to newly farmed areas only.</li> <li>▪ Water quality outcomes may not be achieved by land use controls alone.</li> </ul>

While the second option provides for the co-ordinated use of regional and district council expertise, differences around rule implementation and compliance/enforcement mean that in practice, the first option, regional rules implemented by the regional council, is the preferred option.

## **6. Conclusion**

No single policy response will effectively address the complex issue of non-point source discharges in rural area. Regulatory responses must be considered to minimise water degradation in the short to medium term because of the pressure for land use intensification, particularly in the South and West Otago areas.

Accordingly, a staged policy approach is proposed, involving:

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|-------------------------------|--|
| Stage 1<br>[immediate action] | Workshop to consider options<br>Apply discretionary activity rules [refer to section 3].                           |
| Stage 2<br>[commence 2008/09] | Commence plan change programme for preferred options   |
| Stage 3<br>[commence 2008/09] | Review Regional Policy Statement and how regional and district rules are to give it effect [refer to section 5.4]. |

## **7. Recommendations**

It is recommended that:

4. The report is noted.
5. The report is referred to a Council workshop for exploration of a mix of initiatives to address the issues.
6. The issue of non-point source discharges in rural areas is discussed with Federated Farmers and considered as part of the review of the Regional Policy Statement.

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