

Report to the Rural Services and Wairarapa Committee  
from Stephen Yeats, Resource Advisor

## **Agricultural Effluent Compliance Monitoring Annual Report**

### **1. Purpose**

To inform the Committee of the results of annual inspections of resource consents to discharge agricultural effluent.

### **2. Background**

2.1 Compliance inspections are undertaken on a number of resource consents for agricultural effluent discharges every year. The discharges are mainly from the 228 dairy farms in the Wairarapa. There are also a small number of pork farms, poultry farms, truckwashes and stock yards.

2.2 This year, all properties which hold a consent were inspected. In all 245 inspections were carried out. Details of the visit, and any sampling results, were entered into an Access database. A brief report was sent back to the consent holder, in accordance with the Council's Resource Management Charging Policy 1997.

### **3. The Development of the Annual Inspections**

3.1 In 1993 Council had a broad objective of inspecting all dairy farms in the Wairarapa each year, and sampling all groundwater and effluent ponds on every farm. Over the years that have followed, the inspections have been better targeted to make the resources spent on them more efficient, and to make the findings more meaningful.

3.2 Tests for groundwater nitrate levels are now limited to those aquifers which are at risk of contamination. This monitoring

now focuses on 57 targeted bores on the 12 most at-risk aquifers.

- 3.3 Tests of the quality of the effluent are now limited to where it is discharged to water. In the past, all the effluent in oxidation ponds was analysed, regardless of whether or not it was discharged to water.
- 3.4 Both upstream and downstream sites on receiving waters are sampled to give an idea of the impact of the discharge. In the past, only a downstream sample was taken.
- 3.5 The timing of the inspections has changed. In the past, all the inspections took place over mid to late summer. Now the inspections are timed so that the full environmental impact will be observed and measured. For example, farms on aquifers at risk of nitrate contamination are inspected in spring when groundwater nitrate levels are at their maximum. Similarly, discharges to water are inspected and sampled in late spring/early summer when the loading on oxidation ponds is likely to be at its maximum, and the ponds are likely to be discharging to water.
- 3.6 The range of parameters tested for on the receiving water has been added to, mainly in the 1998 year. This was designed to give staff a better understanding of the environmental impact of the discharges to water.
- 3.7 Those farms with a good compliance history that discharge to land are inspected every three years, instead of yearly as in the past.

#### **4. This Season's Inspections**

- 4.1 Every property which holds consent for agricultural effluent was inspected this season. The staff member who carried out the inspections this season was different from the staff member who inspected the properties in the past. Now the person who deals with the consent holders is the same all the way through from inspection, to reporting on those inspections and follow up work. Previously, inspections were contracted out to another department.
- 4.2 This season, the inspection was carried out at random, i.e without the consent holder knowing the exact day and time the inspector would show up. This gave a more accurate indication of how the effluent system is managed on a day-to-day basis. In previous year's inspections, consent holders were told when staff would be undertaking the inspection.

- 4.3 Staff have found both positive and negative aspects to random inspections. In many cases, problems were found which may not otherwise have been picked up. In other cases, when the property was inspected without the consent holder present, there was no opportunity to get information on the year-round running of the system, and staff had to rely solely on their observations on the day.

## **5. Results**

- 5.1 The results are summarised in the attached Table 1. Data is available going back to 1993. This was not included in the table because of the changes that have been made to the inspections. Any comparison of 1998 and 1999 data with previous years is not meaningful. Staff consider that the 1998/99 data are the most accurate reflection of the environmental impact of agricultural discharges.
- 5.2 There were a disappointing number of farms found to be not complying with resource consents this year. Approximately 30 farms were not operating satisfactorily. Staff have re-inspected 24 farms to ensure that consent holders had made requested changes. Further re-inspections may be undertaken at the start of the next season.
- 5.3 Two abatement notices were issued this season. In most cases, enforcement has been informal. Further abatement notices may result after re-inspection early next season.

## **6. Discussion**

### **6.1 Groundwater Nitrate Levels**

This season was the first time the bores had been targeted to pick up any nitrate contamination in at-risk areas. It was also the first season when groundwater was sampled in early spring, at a time when nitrate levels are expected to be at their highest. As a result, the average nitrate level was significantly higher than in previous years.

Three of the bores measured exceeded the NZ Drinking Water Standard for nitrate.

### **6.2 Receiving Water Quality**

There are a number of farms which hold consent to discharge treated effluent to water. Staff sample the effluent and the receiving water for a number of different parameters to measure the impact of those discharges.

Every year there is a measurable and significant deterioration in average water quality downstream of the discharge. All measured parameters show a deterioration in average water quality. Those parameters that exceeded applicable guidelines were commonly BOD, % Saturation and faecal coliforms. There was a large range in both quality of effluent and effect on receiving waters on individual farms.

There were 17 farms physically discharging to water at the time of inspection this year. The rest were either discharging to land, or effluent was held in storage or oxidation ponds.

There has been a continued move by farmers away from discharging treated effluent to water and changing to land based systems. Farmers appear to accept that recycling the effluent back onto their pastures is a better option both economically and environmentally.

## **7. Future Inspections**

Staff will now review the compliance history of all the properties holding consent. Those discharging to land with a good history of management of their effluent will next be inspected in the 2001/2002 season. Discharges to water will continue to be inspected at least annually.

It is considered that the current timetable of inspections is ideal for determining the likely environmental impact. Therefore the inspections on the vulnerable aquifer sites will be completed in early spring, the discharges to water in early summer, and the rest of the properties in summer.

## **8. Communications**

The report will be made available to the media through normal report distribution. Highlights will be included in the Consents newsletter.

## **9. Recommendation**

*That the report be received and its contents noted.*

Report prepared by:

Approved for submission by:

Stephen Yeats  
Resource Advisor

Steve Blakemore  
Manager, Planning & Resources