BEFORE THE HEARINGS PANEL

IN THE MATTER of h

of hearings on submissions concerning the Proposed One Plan notified by the Manawatu-Wanganui Regional Council

SECTION 42A REPORT OF MS ALISON FRANCES RUSSELL ON BEHALF OF HORIZONS REGIONAL COUNCIL

1. INTRODUCTION

My qualifications/experience

- 1. My name is Alison Frances Russell and I hold a Bachelor of Health Science with a major in Environmental Health from Massey University.
- 2. I have worked for Horizons Regional Council (Horizons) for four years in the Environmental Compliance Team/Environmental Protection Team. I currently hold the position of Environment Protection Manager, a position I have held for two years. Currently within the Environmental Protection Team there are three permanent staff who deal primarily with the rural industry sector, including dairy monitoring, with the six staff having some part-time involvement in this sector. My role incorporates the compilation and reporting of statistics to Horizons, Ministry for the Environment (MfE) and Fonterra. Therefore, I have an overview of the current and historical compliance within this industry.
- 3. I have been involved within the Proposed One Plan since 2006, in relation to ascertaining the workability of rules within the compliance framework and the addition or alteration of rules when certain circumstances developed. These additions and/or alterations also had to provide surety that the rules were able to be enforced when non-compliances were found on the ground.
- 4. My evidence provides an overview of the current situation regarding the discharge of dairy effluent within Horizons' Region and provides information regarding the Environmental Protection Team's "whole farm" approach to effluent and nutrient discharges. I also provide some historical statistics on the discharge of farm dairy effluent within Horizons' Region.
- 5. I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice notes. I agree that the overriding duty to the Environment Court expressed in paragraph 5.2.1 of that Code of Conduct will be treated as a duty to the Hearing Panel.

2. EXECUTIVE SUMMARY OF EVIDENCE

- 6. Horizons' Region has 935¹ current resource consents for the discharge of farm dairy effluent. This represents approximately one quarter of the total resource consents active in the Region. The dairy industry is a relatively large-scale activity for the Region and therefore has potential for large-scale adverse effects. While the number of farms within the Region has remained relatively stable, the average volume of effluent being discharged, as gauged by new resource consents granted, has increased from 11.5 cubic metres per day in 1992 to 53.8 cubic metres per day². This increase reflects the general increase in herd size and the intensification of farming practice.
- 7. Over the period 1 January 2003 to 27 April 2009 171 complaints were reported from the public regarding dairy effluent discharges. Ninety-five (56%) of these complaints related to effluent discharges entering watercourses³, with the other 76 (44%) relating to effluent odour and effluent discharges that did not enter watercourses.
- 8. Horizons' compliance statistics show that non-compliance with resource consent conditions remains an issue, despite the current philosophy of sustainable farming in the dairy industry. This was reflected in the non-compliance rate for 2008-2009 being the highest since the 2004-2005 dairy season. The latest statistics, for 2008-2009, show a 73% compliance rate with 17% of those deemed as significant non-compliance.
- 9. The majority of non-compliances were due to breaches of resource consent conditions that require the consent holder to ensure that there are no sump or pond overflows, there is no ponding of effluent on the soil surface, and there is no run-off of effluent to watercourses. In the majority of these instances there was inadequate storage available for effluent, which meant that the dairy farmer had little alternative but to irrigate on a daily or twice daily basis, irrespective of the weather conditions. Irrigation in unfavourable conditions can lead to the irrigated effluent either entering watercourses (either directly as surface run-off or indirectly via sub-surface drainage) or significant ponding on the lower areas of the soil surface.
- 10. Another contributor to significant non-compliance was inadequate irrigation facilities for the effluent volume to be discharged. Many dairy farm operations have become more intensified with increases in herd numbers and the addition of a feedpad(s). In many of

¹ Horizons Regional Council R2D2 database system, as of 16 April 2009

² Horizons Regional Council R2D2 database volume data, 1992-2009, as of 16 April 2009

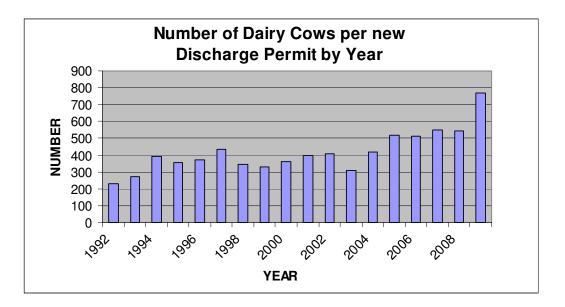
³ Horizons Regional Council Incidents database data, as of 16 April 2009

these cases, the farmers have not upgraded pumps and/or changed their irrigation equipment to accommodate the increase in effluent volume.

3. EVIDENCE

Background

- 11. There are currently 935 resource consents within Horizons' Region to discharge farm dairy effluent (FDE) from the 878 listed Fonterra suppliers⁴. Of these resource consents, 917 are for discharge to land and 18 are for to discharge to water⁵. A number of dairy farmers have additional resource consents for discharges to other land areas, or have added a feedpad into their farming system.
- 12. The number of Fonterra suppliers has not altered significantly over the last four years with 902 listed in 2004-2005, 886 in 2005-2006, 884 in 2006-2007, 868 in 2007-2008 and 878 in 2008-2009.
- 13. The average volume of farm dairy effluent (FDE) discharge on a daily basis per discharge permit granted has increased from 11.5 cubic metres per day in 1992 to 53.8 cubic metres per day in 2009. These figures are based on industry standard discharge volumes, and equate to an increase in the average herd size from 230 to 768.



⁴ Fonterra supply lists 2004-2005 to 2008-2009, as of 16 April 2009

 ⁵ R2D2 database data, as of 16 April 2009

14. Since the implementation of the Land and Water Regional Plan in 2003, the minimum land area required for effluent irrigation has increased from 12 hectares in 2003 to 31 hectares in 2009. The number of dairy cows in the Region is approximately 426,600 in 2009. Based on resource consent condition requirement, the minimum amount of land that is currently used for effluent irrigation is approximately 17,100 hectares (171,000,000 square metres).

Resource consents

- 15. A number of older FDE discharge permits are still current and operating. Many of these only have a few consent conditions⁶, see for example resource consent MWC912640, attached as Annex D. Resource consent 100000, attached as Annex E, is an example of a resource consent granted at a later date, which has conditions that detail and limit the:
 - Legal area for effluent discharge.
 - Discharge volume.
 - Ponding and surface run-off
 - 20 metre buffer zone to boundaries, watercourses or roads.
 - Odour production⁷.
- 16. Recent resource consents for FDE discharges include restrictions on:
 - Nature of the discharge.
 - Cow numbers.
 - Legal area for effluent discharge.
 - Contamination of groundwater.
 - Effluent ponding.
 - Run-off to watercourses (including surface and sub-surface drains).
 - Overflows from storage facilities.
 - No leachate from silage storage that enters watercourses or internal drains.
 - Total nitrogen loading limits.
 - Minimum land area required for effluent disposal from dairyshed and feedpad effluent.
 - Liquid and solid effluent spreading thickness limits.
 - Odour production.
 - Buffer zones to residences, marae, schools, public buildings and public recreation areas.

⁶ Copy of resource consent MWC912640

⁷ Copy of resource consent 100000

- Buffer zones to bore, surface water bodies (including drains) public roads and the Coastal Marine Area.
- Storage requirements for FDE.
- A nutrient budget.⁸

This type of resource consent captures other nutrient sources on farm as detailed above, such as silage leachate and feedpad effluent. See for example resource consent 104888, attached as Annex F.

17. A number of dairy farms in the Region do not have any effluent storage facilities and there is no alternative but to irrigate on a daily basis, regardless of the weather conditions. These farms have older resource consents with few discharge permit conditions, and compliance with these conditions is relatively straightforward. Discharges of effluent not covered by consent conditions but that are in breach of current Regional Plans are dealt with by the use of abatement notices and infringement notices, in accordance with the Resource Management Act 1991.

Current compliance programme and statistics

- 18. The current dairy monitoring programme was aimed at providing dairy farmers with information prior to the majority of inspections being undertaken. Every dairy farmer in the Region was sent a mailout that included: a copy of their resource consent, a flowchart of the inspection process and costs, and a covering letter outlining current programme and a grace period. The grace period was for consent holders to contact Horizons and detail their current dairy farm concerns in relation to compliance, without fear of penalty.
- 19. In addition to the mailout, media articles were published that outlined this action and the dairy grace period. Information published on Horizons' website⁹ included Best Practice Guidelines¹⁰ and contact details for Horizons and a small number of farm consultants.
- 20. The grace period ran from 16 June-25 July 2008 and over that period compliance staff logged 234 calls from dairy farmers. A number of farmers took advantage of the grace period to vary their consents or apply for new consents.
- 21. Horizons adopted a tougher stance towards farmers who fail to comply with discharge permit conditions, focusing particularly on the potential environmental consequences.

⁸ Copy of resource consent 104888

⁹ Grace period information listed on Horizons website <u>www.horizons.govt.nz</u>

¹⁰ Best Practice Guidelines for dairy effluent in the Manawatu-Wanganui Region, author Dave Houlebrooke

The main focus was ensuring that consent holders were complying with all discharge permit conditions, and additional enforcement measures were used to ensure compliance. In essence the "bar had been raised" to ensure that discharge permit conditions were being met.

- 22. As at 30 April 2009 the compliance rate for FDE discharges was 73%¹¹. Of those discharge permits that were deemed non-compliant (27%), are broken down into two categories: non-compliance and significant non-compliance. Non-compliances are those of a technical breach, for example the failure to provide monitoring results by the due date or failure to notify an increase in herd size. Significant non-compliances are those that are having an adverse effect on the environment or the potential to have an adverse effect on the environment. Examples include unauthorised effluent discharges that have entered water (i.e. pond or sump overflow to a watercourse) or the unauthorised discharge of effluent that may enter water (i.e. effluent ponding). The classification of significant non-compliances was determined in collaboration with all other Regional Councils and Fonterra in May 2007.¹²
- 23. The 2008-2009 year had the lowest compliance rate in comparison to previous years. This low rate may have been the result of Horizons "raising the bar" as discussed in Paragraph 21.

Dairy stats	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009 (not completed)
No. of farms (Fonterra)	902	875	884	864	878
No. of inspections	632	754	378	174	425
Complied	518	611	354	135	310
Non-complied	114	143	24	n/a	42
Significantly non-complied	n/a	n/a	n/a	39	73
Complied (%)	82.0	81.0	93.7	77.6	73
Non-complied (%)	18.0	19.0	6.3	n/a	10
Significantly non-complied (%)	n/a	n/a	n/a	22.4	17
Abatement Notices Issued	unknown	unknown	1	35	96
Infringement Notices issued	unknown	unknown	unknown	21	69
Prosecutions completed	0	0	0	1	1
Prosecutions to be completed	0	0	0	0	3

¹¹ Environment Committee 15 April 2009 – Regulatory Agenda Item

¹² Compliance & Enforcement Special Interest Group meeting held at EBOP - May 2007

- 24. The main significant non-compliances detected by staff were:
 - i. Pond or sump overflow to land where effluent has entered water.
 - ii. Pond or sump overflow where effluent may enter water.
 - iii. Significant ponding (greater than 25 millimetres depth on soil surface and/or effluent conspicuously visible five hours after application).

Reporting

- 25. The Compliance Team has been routinely reporting dairy compliance statistics for many years. The results of the current monitoring season have been reported to Horizons Councillors, the public via Environment Committee agenda items, the media through press releases, and to Fonterra.
- 26. During the 2008-09 season I provided Fonterra with information detailing individual farms that had been graded "significantly non-complying". At the time of preparing this report I had not received any formal feedback from Fonterra regarding methods implemented on these farms to improve effluent management and improve their compliance grading.

4. CONCLUSION

- 27. Horizons Region has 935 current resource consents for the discharge of farm dairy effluent, which represents approximately one quarter of the total resource consents active in the Region. The dairy industry has a relatively stable number of farms within the Region, although the average volume of effluent being discharged per farm on a daily basis has increased¹³. This increase reflects the increase in herd size and the intensification of farming practice.
- 28. The majority of non-compliances were due to breaches of discharge permit conditions that require the consent holder to ensure that there are no sump or pond overflows, there is no ponding of effluent on the soil surface, and there is run-off of effluent to watercourses.
- 29. In the majority of these instances, there was inadequate storage available for effluent, and this meant that the dairy farmers had little alternative but to irrigate on a daily or twice daily basis, irrespective of weather conditions. Irrigation in unfavourable conditions can lead to the irrigated effluent either entering watercourses directly as surface run-off

¹³ Horizons Regional Council R2D2 database, as of 16 April 2009

or indirectly via sub-surface drainage, or significant ponding in the lower areas of the soil surface.

Alison Russell August 2009

ANNEX A

Photographic examples from 2007-2008 inspections



This effluent irrigation method, using a naked end pipe, resulted in effluent ponding.



Officer in ponding that resulted from naked end pipe in previous photo.



Undersized sump showing clear evidence of overflow. This was the only storage available for the dairy shed effluent on this farm.



Older long ditch system still authorised by consent and used for effluent treatment.



Effluent in farm drain.



Samples taken by officer in relation to the photograph above – the 3 samples on the left from upstream and those on the right are from effluent being discharged.

ANNEX B

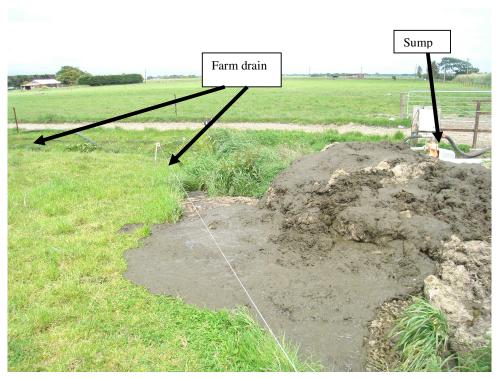
Photographic examples 2008-2009 inspections



Ponding from travelling irrigator onto soils saturated after rain.



Further photo of ponding from travelling irrigator.



Solids removal from sump with no solids separator and inadequate storage facility.



Photograph showing proximity of solids to the farm drain. Solids separator is adequate, however there is poor management of the effluent solids.



Significant ponding from a naked end pipe causing the type of effluent management that resulted in a prosecution under section 151(b) of the Resource Management Act 1991



Further photos of ponding as detailed above. Solids indicated that the discharge had been occurring for some time.



Discharge from tile drain due to effluent been discharged onto land at too higher rate.



Effluent irrigation showing a heavier application area on the outer aspect.



Significant overflow from storage facility into farm drain.

ANNEX C

Staff have also focused on unauthorised discharges not covered by resource consent discharge permits. Some photographic examples are given below.



Discharge from raceway to a farm drain that discharged to a tributary of the Manawatu River.



Poorly located and inadequately managed underpass. Subsequently, effluent discharged from underpass into a tributary of the Manawatu River.



Significant ponding on race that discharged to a farm drain.



Poorly managed silage stack and leachate that discharged to a tributary of the Manawatu River.

ANNEX D

CS 02 02 5/8/TRI- 5/8/KFC

Resource Management Act 1991

Decision on an Application

for Resource Consent

Applicant: Killeymoon Farm P O Box 65 Bulls	Ltd transferred 31.5.05 Tristone Ltd C/- D M Charlton Killeymoon Farm 787 State Highway 1 R D 1 BULLS	Transferred 30/5/2008 Killymoon Farming Co Ltd 1826 Kimbolton Road R D 7 FEILDING 4777	
Application No: Location: Catchment No: Description:		eatford Road (SH 1), Bulls 7040 t 1 DP 29589, Lot I DP 4827, Pt Lot 1 DP 11827 Rangitikei District, Blocks	
Valuation No:	VII, X, XI Rangitoto SD 13500-091		

This application is for a new consent for an activity restricted by Section 15 of tile Act.

The Submission:

Mr M L Connelly, an adjoining landowner, was concerned that effluent could run off towards his property and the Bulls school. A condition attached to this permit meets his concern.

The Decision:

A Hearing Commissioner, Cr L M Speirs, of the Manawatu-Wanganui Regional Council has considered this notified application on 14 July 1992. The Commissioner, pursuant to delegated authority under Section 34 of the Act, grants Discharge Permit 912640 pursuant to Section 105 of the Act, to Killeymoon Farm Ltd to discharge up to 25m3 per day of pond treated dairyshed effluent onto the land at Map Reference S23:136-134 on the property at Greatford Road, Bulls, for a term expiring on 31 July 2012 subject to the following conditions.

- 1. Charges, set in accordance with section 36(2) of [lie Resource Management Act 1991, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of resource consents and for the carrying out of its functions under section 35 (duty to gather information, monitor and keep records) of the Act.
- 2. There shall be no effluent runoff onto adjoining properties or into flowing surface water.

- 3. Effluent shall be applied to the land in accordance with good farming practice.
- 4. No effluent shall be discharged onto land, which drains towards the property of M L Connelly or the Bulls School.

Reasons for this Decision:

The application complies with all relevant regulations under the Act.

The application is not contrary to the provisions of any of the instruments in the Transitional Regional Plan or the provisions of any National Water Conservation Order or draft National Water Conservation Order.

Effluent runoff onto adjoining properties or into surface water is unlikely.

The irrigable area can assimilate the discharge with minimal actual or potential effects on soil fertility or structure.

The degree of effluent treatment provided by the applicant is sufficient for this discharge onto the land.

Appeals:

The applicant, consent holder or person who made a submission on an application, have the right to appeal against the whole or any part of this decision.

To appeal you must lodge a Notice of Appeal in the prescribed form with the Registrar of the Planning Tribunal and with this Council within 15 working days of the notice of the decision being received by you, or the person who filed the application on your behalf.

The address of the Planning Tribunal is:

P 0 Box 5027 WELLINGTON

The appeal must be in the form prescribed by the Resource Management Act Regulations 1991 Form 7. Copy attached.

As an appellant you must ensure that a copy of your notice of appeal is given to every person involved with the decision, such as the applicant, consent holder and submitters, within 5 working days of the notice being lodged with the Planning Tribunal.

The lodging of the appeal with the Planning Tribunal must be accompanied by a fee of \$55 (inclusive of GST).

R A BARREIT GENERAL MANAGER

ANNEX E

1/6/WLC CMT:RMS

11 March 1998

Resource Management Act 1991

Decision on an Application

for Resource Consent

Applicant: Whiripo Land Co Ltd Foxton Road R D 12 LEVIN	
Application No:	100000 for a Discharge Permit (land)
Location:	State Highway 1, Foxton-Levin
Catchment No:	325000
Legal Description:	Part Manawatu-Kukutauaki 7 D1 No. 2 Blk III Moutere SD Blk IX Mt Robinson SD
Valuation No:	14790/053/00
Map Reference:	S24:020-705
Regional Policy Statement:	Policy 11.3
Regional Plan:	Proposed Manawatu Catchment Water Quality Regional Plan
Regional Rule:	MCWQRP12

This non-notified application is for a Discretionary Activity restricted by Section 15 of the Act and the Proposed Manawatu Catchment Water Quality Regional Plan.

The Application

The Applicant has applied for a discharge permit to discharge up to twenty cubic metres (20m³) of dairyshed effluent to land each day during the milking season, situated on the western side of State Highway 1 between Levin and Foxton.

The Applicant initially applied for a discharge to land and a discharge to water. The application for a discharge to water was later withdrawn as it was not required.

The Applicant is proposing to enlarge his herd to 400 cows and upgrade the dairyshed and disposal system.

It is proposed to collect the dairyshed effluent into an enlarged concrete sump and spray this to land initially via a pot spray which is to be later upgraded to a traveling irrigator.

The Applicant is also proposing to retain and enlarge a holding pond to act as a storage facility during wet weather or a breakdown of the pumping system.

Approximately 15 hectares of flat to undulating pasture is available for effluent irrigation.

The Applicant has obtained the written approval of neighbouring property owners, the Poroutawhau School and Mid Central Health.

Environmental Effects

Potential adverse effects relate to ponding, surface runoff and odour.

Council's Environmental Officer considers that the adverse effects arising from the activity are not likely to be significant.

He reports that the land is flat to undulating, free draining sand plains. The area proposed for disposal has no natural watercourses or drains and is landlocked. Some steep sand ridges will be used for disposal until the traveling irrigator is installed.

Council's Environmental Officer reports that at the time of his inspection, in early March 1998, the proposed system was not in place. However he considers that the area is suitable for disposal provided that, until the travelling irrigator is installed, the pot sprayer is relocated either daily, or at least three times a week. This is to ensure ponding or surface runoff does not occur.

Council's Environmental Officer considers that due to the high water table, the proposed new system using a travelling irrigator is the best practicable option. If the system is managed properly ponding, surface runoff and odour need not occur and the discharge is unlikely to significantly adversely affect surface or groundwater quality.

Council's Environmental Officer has recommended conditions be imposed on the consent to mitigate those effects that have the potential to be significant.

Planning Assessment

Policy 11.3 of the Proposed Regional Policy Statement is to promote discharges of contaminants to land rather than water wherever practicable in areas where groundwater and surface water will not be adversely affected.

A discharge permit for this activity is required by Rule 12 of the Proposed Manawatu Catchment Water Quality Regional Plan. Rule 12 provides for discharges to land as discretionary activities.

Costs

Section 36 of the Act provides for the recovery of extra costs from an Applicant when an application deposit is inadequate to meet the actual and reasonable costs in processing the application. In this case the Applicant paid a deposit of \$225.00 (including GST) for a non-notified application. This is less than the non-notified deposit for an application for a small discharge of \$281.25 (\$250.00 plus \$31.25 GST).

The costs incurred by the Manawatu-Wanganui Regional Council were:

\$151.25
\$ 67.50
\$ 34.00
\$ 12.00
<u>\$264.75</u>

TOTAL COSTS OWING	<u>\$ 72.85</u>
Less Deposit Paid	\$225.00
Total (including GST)	<u>\$297.85</u>
GST	\$ 33.10

The Decision

- A. The Team Leader Consents of the Manawatu-Wanganui Regional Council has considered this non-notified application. On 11 March 1998 the Team Leader, pursuant to delegated authority under Section 34 of the Resource Management Act, grants Discharge Permit 100000 pursuant to Section 105 of the Act, to Whiripo Land Co Ltd to discharge dairyshed effluent to land situated on the western side of State Highway 1 between Levin and Foxton, for a term expiring on 11 March 2023 subject to the following conditions:
- 1. Charges, set in accordance with Section 36(1)c of the Resource Management Act 1991, and Section 690 A of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Note: Section 36(1)c of the Act provides that Council may from time to time fix charges payable by holders of resource consents. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan.]

- 2. The maximum daily discharge of dairyshed effluent to land on the property legally described as Part Manawatu-Kukutauaki 7 D1 No. 2 Blk III Moutere SD Blk IX Mt Robinson SD (at approximate map reference S24:020-705) as depicted on Plan C100000 attached to and forming part of this resource consent, shall not exceed twenty cubic metres (20m³).
- 3. The Consent Holder shall ensure that the rate, frequency and method of the discharge to land does not result in any ponding of effluent on the soil surface or the runoff of effluent to water.
- 4. No effluent, after disposal onto land, shall be permitted to approach closer than 20 metres to:
 - a. any watercourse whether flowing continuously or intermittently;
 - b. any dwelling, property boundary or public road; and
 - c. any open drain.
- 5. The effluent irrigation shall not result in objectionable odour beyond the property boundary.
- 6. The discharge shall cease or the volume of the discharge be reduced when necessary to meet Conditions 3, 4 and 5.

B. Costs

The Team Leader Consents resolved that the Applicant shall pay actual and reasonable costs of for processing of this application, that exceeds the deposit paid, of \$72.85 (Including GST).

Reasons for this Decision

In making his decision on this application pursuant to Section 105 (1)(b) of the Resource Management Act, the Team Leader Consents had regard to matters as required by Section 104 of the Act. In particular the Team Leader considered the actual and potential adverse environmental effects associated with granting this discharge permit.

The Team Leader is satisfied that granting a permit for this activity will not be inconsistent with the sustainable management provisions provided for in Part II of the Act. To avoid the potential for adverse impact on water quality the Team Leader has imposed conditions relating to disposal volume and frequency.

A twenty five year term has been imposed in recognition of Policy P34.1 of the Proposed Regional Policy Statement.

The Team Leader accepts that the written approval from all potentially adversely affected persons has been obtained.

The Team Leader is satisfied that provided the conditions of this permit are met, granting consent for this activity will not be inconsistent with the Proposed Regional Policy Statement for the Manawatu-Wanganui Region, the Transitional Regional Plan or the Proposed Manawatu Catchment Water Quality Regional Plan.

M J McCartney TEAM LEADER CONSENTS

11 March 1998



CONSENT HOLDER Mrs VJ Cocker 323 Waitohi Road RD 6 Palmerston North 4476

DECISION DATE	FILE REFERENCE
4 May 2009	2/2/COC
CONSENT NUMBER	CONSENT TYPE
104888	Discharge permit
ADDRESS FOR ACTIVITY	MAP REFERENCE
Waitohi Road, Rongotea	S24: 169-998
LEGAL DESCRIPTION Section 18, Douglas District, Blks III, IV, VIII Te Kawa SD	DAIRY NUMBER 45015
CONSENT PLANNER Lisa Hooker	

1. **APPLICATION**

The applicant, Mrs VJ Cocker, has applied to discharge farm dairy effluent, including dairyshed effluent, feed pad effluent, pit wash cooling water, spilt milk, and yard rain water produced from milking 250 cows twice per day. Effluent is discharged into and onto land twice per day from a large sump via travelling irrigator.

The applicant has indicated that there is a feedpad on the property with solids stockpiled in a concrete holding area before being spread to land. The applicant also has a feed storage area for two year old straw silage, and raceways.

The applicant has indicated that effluent is currently discharged to approximately 8 hectares of land, but that this discharge area is able to be increased by extending the irrigation system.

The applicant has sought the maximum term available for this resource consent.

This application was lodged to replace resource consent 6673 which is due to expire on 4 June 2016.

Further information was requested pursuant to Section 92 of the Resource Management Act 1991 on 17 April 2009 and was received on 23 April 2009.

2. THE SITE

The property owned by VJ Cocker is located on Waitohi Road, Rongotea. The soil type for the property has been described as Tokomaru Silt Loam. This soil has a clay loam subsoil with very slow internal drainage and so has mole drains to bypass flow.

The applicant has noted that the discharge area is close to streams, drains or other surface water. The property is located in the Coastal Rangitikei Water Management Zone, and Coastal Rangitikei subzone (Rang_4a).

The catchment boundary line passes through this property, so both the Manawatu Catchment Water Quality Regional Plan and the Land and Water Regional Plan are relevant in the assessment of this application.

3. PLANNING ASSESSMENT

3.1 Manawatu Catchment Water Quality Regional Plan (1998)

A resource consent is required for the Applicant's discharge to land by virtue of MCWQ Rule 13. MCWQ Rule 13 provides for discharges of agricultural effluent to land as a Controlled Activity subject to meeting performance standards.

3.2 Land and Water Regional Plan (2003)

A resource consent (Discharge Permit) is required for the applicant's discharge to land by virtue of the Land and Water Regional Plan DL Rule 4. DL Rule 4 provides for discharges of agricultural effluent to land as a Controlled Activity subject to meeting performance standards.

3.3 Proposed One Plan (2007)

A resource consent is required for the applicant's discharge to land as per POP Rule 13-27. POP Rule 13-6 provides for discharges of agricultural effluent to land as a Controlled Activity subject to meeting performance standards, including:

(d) Stormwater from ancillary roof areas or hardstand areas which does not contain farm animal effluent, shall not discharge to the effluent storage facility.

Because at the time of granting there was no stormwater diversion installed from the dairyshed yard or feedpad, the application does not comply with Condition (d) of POP Rule 13-6, this consent has been processed as a Discretionary Activity under POP Rule 13-27.

3.4 Overall Assessment Based on Regional Plans

The proposal is assessed as a Controlled Activity under the Manawatu Catchment Water Quality Regional Plan and the Land and Water Regional Plan and a Discretionary under the Proposed One Plan.

When assessing an activity with differing statuses, the most restrictive status will apply. As such the proposal will be assessed as a Discretionary Activity.

4. NOTIFICATION

With regard to notification, Section 93(1) indicates that a consent authority must notify an application for resource consent unless:

- a. the application is for a Controlled Activity; or
- b. the Consent Authority is satisfied that the adverse effects of the activity on the environment will be minor.

In this case it is not considered necessary to publicly notify this application or serve notice of this application on any person because:

- The effects on groundwater and surface water quality have been assessed as minor.
- Any potentially adverse environmental affects can be avoided, remedied or mitigated through the imposition of appropriate conditions.
- The potential adverse effects are localised.

I therefore recommend that the application be processed on a non-notified basis.

5. SECTION 104

Section 104(1) of the Resource Management Act 1991 outlines the matters that the consent authority must have regard to when considering applications for resource consents, subject to Part 2 of the Resource Management Act.

I have assessed this application with respect to the relevant statutory planning matters under Section 104. Note that only the relevant sections, or parts of sections, of statutory documents as applicable to this application have been assessed in this report.

5.1 Environmental Effects

The proposal has the potential to cause adverse environmental effects, primarily on groundwater and surface water quality.

Given the soil classification of Tokomaru Silt Loam, with a clay loam subsoil and very slow internal drainage, and because the property has mole drains, it is recommended that a condition be attached to restrict effluent application rates so as to minimise the risk of effluent leaching to groundwater. Based on a "clay" soil type, it is recommended that the maximum effluent application rate be set at 18 mm at any one time and no more than 10 mm per hour, and a minimum application interval of 20 days between applications. Compliance with this condition should minimise the chance of effluent leaching in to groundwater.

The applicant indicated in their application that the irrigation area is close to surface water. At the site visit on 23 April 2009, the applicant confirmed that the only surface water on this property is the drains shown on the map submitted with the consent application. It is recommended that a condition be attached to this consent requiring a buffer area of at least 20 metres between the effluent disposal field and all drains on the property,

The applicant has a nutrient budget. This budget is done in May each year.

The applicant does not have any effluent storage ponds, but discharges from the effluent sump via travelling irrigator after each milking. This sump is concrete sealed.

The applicant has a feedpad with a floor area of 512m2. This feedpad is concrete sealed. The feedpad is scraped as required (approximately every 3 to 4 days) with solids stockpiled in a concrete bunker. The feedpad is physically separated from the dairyshed yard, and effluent from the feedpad is not discharged to land with the dairyshed yard effluent.

The applicant indicated in their application that the feedpad is used by 160 cows for 8 hours per day for a period of five months per year. This was further clarified on the site visit (23 April 2009). This feedpad is used by the cows during the winter months (from late June) for up to 8 hours per day. As cows calve they leave the pad. The number of cows using the pad therefore declines over this five month period so that by the time October comes there are only a few cows left on the pad. The estimated daily effluent volume has been based on the peak usage of the feedpad at the start of winter. This will therefore mean an overestimation of effluent volumes later in the season, and is therefore a conservative estimate.

At the time of the site visit on 23 April 2009, the applicant was not clear about how they will dispose of these feedpad solids. However, it is assumed that these solids will eventually be spread to land. For this reason it is recommended that a condition be attached to this consent requiring solids to be spread to land at a at no more than 5 mm thickness at any one time on an area not utilised for wastewater disposal in the previous three months, as a way of minimising the risk of nutrients leaching to groundwater.

The maximum Nitrogen loading limit for properties located in the Manawatu Catchment is 200kgN/ha per year, and 150kgN/ha per year for properties located in the Rangitikei Catchment. Based on a herd size of 250 cows, the daily effluent volume from the dairyshed has been calculated as 18.0m3/day and the effluent volume from the feedpad, when it is in peak use, has been calculated as 9.5m3/day. This gives a total combined peak effluent volume of 27.4m3/day. Based on a maximum Nitrogen loading limit of 150kgN/ha/yr (most conservative limit) and estimated effluent volumes, the minimum discharge area required for ensuring Nitrogen loading limits are not exceeded has been calculated as 22.5ha. This is more than the 8 hectares the applicant currently discharges to. However, the applicant has indicated that the discharge area is able to be extended if required.

At the site visit on 23 April 2009, the applicant indicated that she does not dispose of effluent from the feedpad to land with the dairyshed effluent, but stockpiles it. Separating these two components, the minimum discharge area required for the disposal of dairyshed effluent via travelling irrigator has been calculated as 9.1 hectares. The minimum land area needed for receiving feedpad effluent has been calculated as 13.4 hectares. The applicant is therefore required to increase the area of land receiving effluent via travelling irrigator by at least 1.1 hectares to ensure compliance with conditions relating to maximum Nitrogen loading limits.

The applicant has a feed storage area with a floor area of 640m2. The applicant considers that there is no leachate from this straw, baleage, and 2 year old silage. As a way of mitigating any potential adverse effects from this feed storage area it is recommended that a condition be attached to this consent, should it be granted, that restricts leachate from entering any watercourse or internal drain, and advising the applicant of the best way to manage silage.

The applicant does not have any road crossings, underpasses or bridges/culverts on her property. Effluent from raceways on the farm is disposed on to paddocks.

The applicant has indicated in their application that approximately 21 cubic metres of groundwater is abstracted per day for washdown and stock water. Water from the dairyshed roof is also collected and used for dairyshed washdown and stock water. This groundwater take is within Horizons Regional Council's Permitted Activity Standard of 50 cubic metres (50 m3) of groundwater per day, so no water permit is required at this time.

Overall Conclusion

Based on my assessment of the environmental effects, I am of the opinion that the actual and potential adverse environmental effects of the proposed discharge are no more than minor.

5.2 Objectives and Policies

5.2.1. Regional Policy Statement

Objective 11 of the Regional Policy Statement is "to maintain or enhance surface water". It is implemented by Policy 11.3 which promotes discharges to land rather than water.

5.2.2 Proposed One Plan (2007)

POP Objective 6-2 is to maintain and / or enhance surface and ground water quality. POP Policy 6-6 is to maintain groundwater quality. POP Policy 6-9 is to manage point source discharges to land. POP Policy 6-10 discusses options for discharges to surface water and land. A preference for discharges to land is detailed.

5.2.3 Manawatu Catchment Water Quality Regional Plan (1998)

The Objective of the MCWQ is to enhance surface water quality in the Manawatu Catchment by 2009 to a level which meets the needs of people/communities while safeguarding surface water life supporting capacity.

Policy 3(b) states that where appropriate, promoting discharges to land where groundwater will not be adversely affected from runoff and runoff to surface water can be minimised or avoided.

5.2.4 Land and Water Regional Plan (2003)

Objectives 1 to 3 of the Land and Water Regional Plan seek to maintain / improve surface and groundwater quality, reducing microbial and nutrient contamination, and for surface water reduce sediment load. Objective 4 seeks to avoid long term soil quality degradation.

Policy 1 stipulates the use of regional rules to help achieve the above Objectives, regulating those activities that have the potential to cause more than minor effects.

5.2.5 Overall Conclusion

After considering all of the relevant objectives and policies of these Regional Plans, I consider that the proposed activity is consistent with all the relevant objectives and policies.

1. SECTION 105

Having considered alternatives to this discharge and in particular alternative receiving environments, I am satisfied that the proposed discharge method is the most appropriate method of effluent disposal for this property.

7. CONSENT DURATION

Policy 2-2 (b) of the Proposed One Plan states that consent expiry dates shall be set to a closest common catchment expiry date to the sought date identified by the applicant, and complying with Policy 34.1 of the Regional Policy Statement with a maximum term for dairyshed discharges of 25 years.

For this consent, a term of 18 years is recommended to coincide with the common catchment expiry date for the area of 1 July 2027.

8. **RECOMMENDATION**

I recommend that the resource consent application by Mrs VJ Cocker for a Discretionary Activity for the discharge of farm dairy effluent, including dairyshed effluent, feed pad effluent, pit wash cooling water, spilt milk, and yard rain water, at Waitohi Road, Rongotea, be considered on a non-notified basis under Sections 93 and 94 including assessment in accordance with Sections 94A and 94B of the Resource Management Act 1991, and that resource consent be granted for a term expiring on 1 July 2027 pursuant to Sections 104, 104B and 108 of the Resource Management Act 1991 for the following reasons:

- The activity will have minor actual or potential adverse effects on the environment;
- The activity is not contrary to any relevant objectives or policies;
- The activity is consistent with the purpose and principles of the Resource Management Act 1991.

and subject to the following conditions:

- 1. The location, design, implementation and operation of the discharge shall be in general accordance with the consent application and its associated plans and documents first lodged with Manawatu-Wanganui Regional Council Regional Council on the 18 March 2009, and further information received on:
 - a. 23 April 2009

Where there may be contradiction or inconsistencies between the application and further information provided by the applicant, the most recent information applies. In addition, where there may be inconsistencies between information provided by the applicant and conditions of the resource consent, the conditions of the resource consent apply.

Advice Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to Section 127 of the Resource Management Act 1991.

- 2. This resource consent will not commence until the existing resource consent (6673) has expired or been surrendered to Manawatu-Wanganui Regional Council.
- 3. The activities authorised by this resource consent shall be restricted to:
 - i. The discharge of dairyshed effluent, pit wash, cooling water, spilt milk and yard rainwater, hereafter referred to as farm dairy effluent from 250 milking cows into and onto land as required
 - ii. The discharge of feedpad effluent, silage pit leachate, and raceway effluent

on such land being legally described as Section 18, Douglas District, Blks III, IV, VIII Te Kawa SD at approximate map reference S24: 169-998.

- 4. The consent holder shall ensure that the rate, frequency and method of the discharge of farm dairy effluent into and onto land does not result in any contamination of groundwater, excessive ponding of effluent on the soil surface, or in any continuous or intermittent runoff of effluent to watercourses (including surface and subsurface drains).
- 5. The consent holder shall ensure that there is no overflow from the effluent storage facility, stone traps or sumps to land and/or any watercourse or internal drain that flows intermittently or continuously.

6. The consent holder shall ensure that no leachate from silage storage enters any watercourse or internal drain that flows intermittently or continuously.

Advice note: The consent holder needs to ensure that all silage storage is located / managed in such a way that:

- Prevents any runoff of leachate into waterways;
- runoff from the surrounding catchment does not pass through the silage storage area; and
- any stacks larger than 500 m² (50 m x 10 m or equivalent measurements) are housed on a sealing layer with a permeability of less than 1 x 10⁻⁹ m/s.
- 7. The consent holder shall ensure the total Nitrogen loading from all sources in the area receiving dairy effluent shall not exceed 150 kg/N/ha/year and shall not exceed 50 kg/N/ha in any 24 hour period.
- 8. Based on Condition 7, the minimum amount of land required to receive dairyshed effluent via travelling irrigator is 9.1 hectares (9.1 ha). Solids from the feedpad are required to be spread on an additional 13.4 hectares (13.4 ha) of land.
- 9. The consent holder shall not use the same land for the disposal of both sources of effluent.
- 10. The consent holder shall ensure that the depth of irrigation applied from travelling irrigator does exceed 18 millimetres at any one time or 10 millimetres per hour and there must be a minimum of 20 days between the same areas being irrigated.
- 11. As a result of the activities authorised by this resource consent there shall be no discharge of odour or spray drift to the extent that it causes an objectionable effect at or beyond the property boundary of the site.

Note: An odour will only be considered objectionable, after a Manawatu-Wanganui Regional Council officer has considered the Frequency, Intensity Duration, Offensive and Location of the odour (i.e. the FIDOL Factors).

- 12. No farm dairy effluent after disposal onto or into land, shall be permitted to encroach closer than:
 - a. 20 metres from residences, marae, schools, public buildings, and public recreation areas; and
 - b. 20 metres from bores, surface waterbodies (including drains) whether flowing continuously or intermittently, public roads, and the coastal marine area.

Advice Note: This distance is measured from the where the effluent, sludge and washdown water is discharged onto land and not the position of the irrigator. The discharge shall cease or the volume of the discharge must be reduced when necessary to meet any of the conditions above.

- 13. Any facilities that are used for the storage of farm dairy effluent, feed pad scrapings, stone trap/sump sludge must be stored on a surface with a permeability of the sealing layer not exceeding 1x10-9 m/s.
- 14. Any solid effluent (from the sump, feed pad or other scrapings) shall be spread to land at no more than 5 mm thickness at any one time on an area not utilised for dairyshed effluent disposal, or utilised for wastewater disposal in the previous three months.
- 15. The consent holder shall ensure their nutrient budget shall be reviewed and updated on an annual basis. It will take into account all sources of nitrogen on the property. The

nutrient budget shall be designed to minimise nitrogen leaching rates, and shall be used to plan and carry out the animal effluent application rate. The review shall be completed by 30 June of each year during the lifetime of the resource consent.

- 16. The consent holder shall produce the nutrient budget referred to in Condition 14 to the Manawatu-Wanganui Regional Council upon request.
- 17. The consent holder shall notify the Manawatu-Wanganui Regional Council's Environmental Compliance Manager if there is a managerial, electrical or plumbing fault that causes non-compliance with any of the conditions of this resource consent.
- 18. The Manawatu-Wanganui Regional Council may, under Section 128 of the Resource Management Act 1991, initiate a review of the conditions of this resource consent in 2017. The review shall be for the purpose of reviewing the effectiveness of these conditions in avoiding or mitigating any adverse effects on the environment, which may arise as a result of the exercise of this resource consent. The purpose of the review shall allow for:
 - a. deletion or amendments to any conditions of this resource consent; or
 - b. addition of new conditions as necessary, including but not limited to the requirement to test the permeability of the effluent storage ponds; or
 - c. if necessary and appropriate, the adoption of the best practicable options to avoid, remedy or mitigate any adverse effects on the environment.

Advice Note: The applicant will require a resource consent if they breach the Permitted Activity Standards of 50 cubic metres (50 m³) per day for groundwater or 15 cubic metres (15 m³) per day for surface water.

Lisa Hooker CONSULTANT CONSENTS PLANNER

9. DECISION

For the reasons reported above, the Policy and Consents Manager of the Manawatu-Wanganui Regional Council (pursuant to delegated authority), grants resource consent by Mrs VJ Cocker under Section 104, 104B and 108 of the Resource Management Act 1991 to discharge farm dairy effluent, including dairyshed effluent, feed pad effluent, pit wash cooling water, spilt milk, and yard rain water at Waitohi Road, Rongotea for a term of 18 years expiring on 1 July 2027.

Mand

Richard Munneke POLICY AND CONSENTS MANAGER

4 May 2009

ANNEX G

13 June 2008

«holder_name1»
«address_line1»
«address_line2»
«address_line3»
«address_line4»
«address_line5»

File ref: «file_number» AFR:JHC

Dear Sir or Madam

DOES YOUR DAIRYSHED EFFLUENT SYSTEM COMPLY WITH YOUR RESOURCE CONSENT «permit_number»

We are writing to you in advance of this coming dairy season to advise that while our traditional inspection programme is continuing, we are undertaking the programme in a different way in this coming year. It is worth briefing your sharemilker, contractors or staff that we are starting our annual programme. In essence, we are doing our very best to ensure that people who have a consent with us can and do comply. Should you be comfortable that there are no issues with your consent, or compliance with that consent, please read no further other than to note that we will more than likely be visiting to ensure compliance with your consent in the coming months.

In the event that you are having problems or issues meeting your consent conditions or that issues are emerging, we are very keen to work through those at the earliest opportunity. Common non-compliances that we detect include:

- Unauthorised discharge of effluent to water either directly or indirectly after land disposal;
- Exceedence of consented discharge volume, due to either an increase in herd size and/or the addition of a constructed feedpad (effluent and washdown water from 15 cows equals approximately one cubic metre);
- Effluent from underpasses flowing over land and entering water;
- Undersized storage facilities leading to overflows that pond on the ground and/or enter water; and
- Unauthorised watertakes for dairyshed washdown and stock drinking water.

So that we can assist you in your responsibility to comply, we are offering a grace period from 16 June to 25 July 2008. This period is to allow any dairy operation (excluding those currently in a compliance cycle) to approach us, so we can work together to identify and address any issues. Options include a variation to a consent, agreement around when works will be done, advice from recommended consultants (list available on website), or even preparation of a new consent.

The grace period is for your benefit, and we encourage you to take advantage of it. The decision by a consent holder not to take advantage of the grace period will be relevant if we have to consider enforcement action If you wish to register during the grace period please call 0508 800 800 and press 1 on the interactive voice recording and ask for the Dairy Hotline.

We have attached a diagram which sets out the path we will be following in terms of our compliance monitoring programme. The useful thing for consent holders is that our approach is very clear, and the repercussions of non-compliance are also clear.

Naturally, there are costs for this work. It is worth noting that beyond the annual charge to be levied in February each year, complying inspections will receive no further costs. Our Councillors have determined that non-compliant consents will cover the full costs of any exercise we undertake alongside fines and other penalties. These are now significant.

Attached to this letter is the process we will be following in our compliance programme in this coming dairy season. Of equal importance we have attached a copy of your resource consent as you need to be familiar with its conditions and your obligations. We are very happy to provide advice or a laminated copy of those conditions for a prominent site in your physical operation if that assists.

Horizons Regional Council's Dairy Effluent Best Practice Guidelines are available online at <u>www.horizons.govt.nz</u> and you may find these very useful.

Finally, prior warning of any issues you might be facing and direct discussions with our team are by far and away the most useful way for us to assist you to comply. The grace period is a great opportunity for those who have been concerned and who have wondered about the way forward.

Alison Russell, our Compliance Manager, and her team are keen to hear from you on freephone 0508 800 800.

Kind regards

Greg Carlyon GROUP MANAGER REGIONAL PLANNING AND REGULATORY

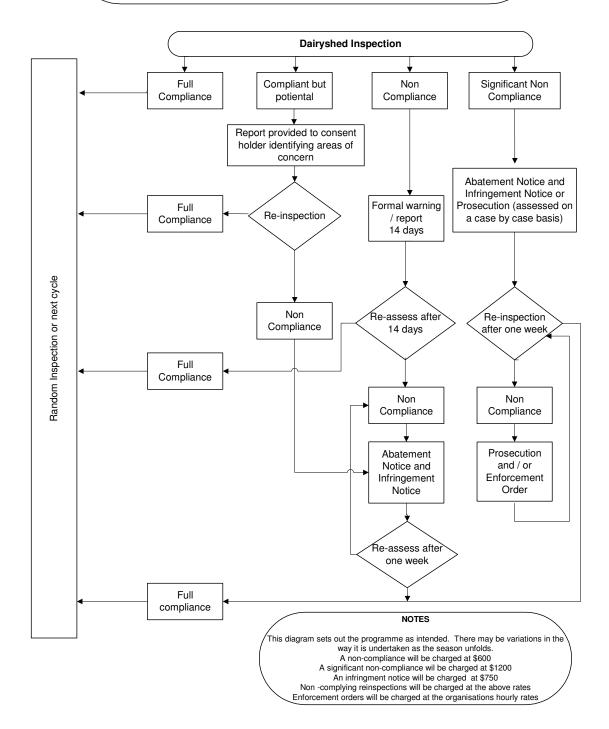
Encls

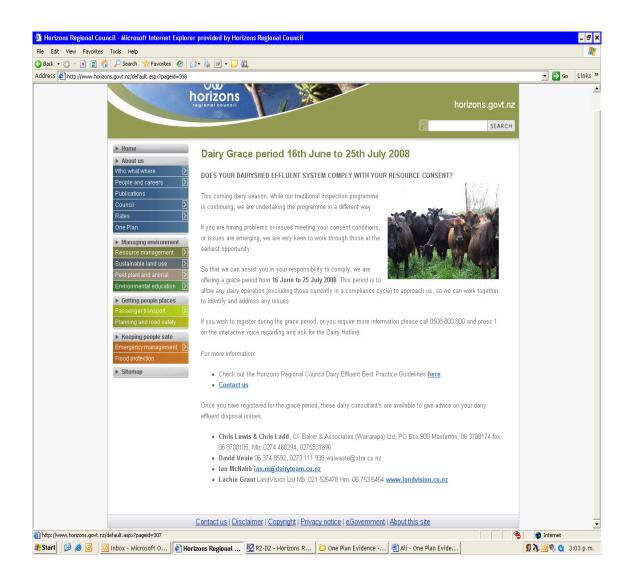
Copy of diagram for compliance monitoring programme Copy of Resource Consent

ANNEX H

2008-09 Dairy Programme

Letters to dairy farmers June 2008 (including copy of consent) Discussions with Fonterra and Federated Farmers June 2008 Grace period for dairy farmers opening 16 June 2008 Grace period for dairy farmers closing 25 July 2008 Ongoing work, advice and support to dairy farmers in lead up to inspection programme





Dairy consents reminder gets Horizons' phones ringing Fri 27 Jun 08

Horizons Regional Council says its phones have been running hot since it told dairy farmers they needed to get their effluent disposal and stock water consents in order before the start of the new season.

Farmers heading into the new dairy season without adequate effluent disposal systems in place face heavy penalties and fines, says the council's regulatory manager Greg Carlyon.

The region's 900 dairy operations have been sent letters urging them to



contact the council if they have expanded herd sizes without modifying their effluent disposal and stock water consents. They were told the council plans to start a concentrated campaign of inspections in August.

Compliance Manager Alison Russell said about 100 farmers – more than 10 percent of the total – had contacted council staff within two weeks of receiving the letters telling them about the period of grace to get their consents in order. Staff would work with them to ascertain whether any changes to on-farm systems were needed before varying the consents.

She said smaller farms tended to have more consent issues than large-scale dairy operations. Mr Carlyon said checks of some farms in May showed a significant number had increased production without increasing effluent disposal capacity. "They're just not complying with their consents, and they're putting water quality at risk in our rivers and streams.

"We're giving them a period of grace to put things right. We hope they'll get some good advice on what they need to do to comply with their consents and if they don't take action, we'll be holding people to account."

Mr Carlyon said councillors had given clear direction for staff to apply new levels of charges for non-compliance that were set as part of the Annual Plan adopted in June.

"There is an annual inspection fee of around \$250 but the cost of non-compliance has risen significantly," he said. "If you're non-complying because you haven't sent in paperwork, you'll be charged \$600. And if it's a situation where it's affecting the environment or there's a physical outcome, there's an inspection charge of \$1200."

Mr Carlyon said farmers would continue to face hefty costs till they could show staff they had adequate systems to comply with their consents. "It's no good them saying they're too busy, or don't understand what is required. Every farmer has a responsibility to ensure they, their staff, and any contractors know and comply with the conditions of their consents."

A case brought by Horizons in the Feilding District Court recently left a former pig farmer about

\$18,000 out of pocket after he pleaded guilty to charges involving environmentally damaging discharge of effluent.

"The courts are sending farmers very strong messages about the need to respect the environment," said Mr Carlyon.

Many dairy farmers had increased herd sizes during the past 12 months in response to record payouts, but had failed to modify their consents to reflect what they're doing.

"Because they don't have enough land to spread the effluent at safe levels, it has the potential to get into drains and rivers," said Mr Carlyon. "We're giving them a period of grace to apply to modify their consents and ensure they have management practices in place to ensure effluent doesn't get into waterways."

Sealed effluent holding ponds could be used, particularly when wet winter conditions increased the risk of effluent run-off.

"We make no apology for insisting that they invest time and money in solving these problems. The community is running out of patience with people who don't take their responsibilities seriously," said Mr Carlyon.