



**MARLBOROUGH
DISTRICT COUNCIL**

Dairyshed Effluent and Stream Crossing Survey 2011/2012

Summary Report

June 2012



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Executive Summary

Marlborough District Council (Council) has monitored dairy farms in Marlborough since 1994. The dairy sector in Marlborough is relatively small, consisting of 60 farms with a combined herd size of 17,300 cows. Council has been working alongside the dairy industry to improve environmental performance in Marlborough for some time.

The dairy effluent management systems on the 60 dairy farms in Marlborough were inspected by Council to check compliance with the plan rules or resource consents. Further, Council checked the sites where cows walk through waterways on each farm to monitor the progress that farmers have made towards installing bridges and culverts, to eliminate dairy herds from crossing waterways.

This report summarises the findings of the 2011/2012 Marlborough Dairyshed Effluent Survey. The purpose of the Dairyshed Effluent Survey is:

- To prevent contamination of groundwater and waterways and the degradation of soil by promoting good dairy effluent management
- To gain information on the level of dairyshed effluent compliance in Marlborough
- To ensure compliance with the rules regarding dairy effluent
- To provide farmers with information about dairy effluent systems and their management.

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1. Introduction

This report summarises the findings of the 2011/12 Dairyshed Effluent and Stream Crossing Survey season. Council inspects the dairy farms to check compliance with Plan Rules or resource consents. In the Marlborough Sounds Resource Management Plan area 41 dairy farms were checked against the Plan Rules and 19 farms in the Wairau/Awatere Resource Management Plan area were checked against their respective resource consent for dairy effluent discharge. When carrying out the dairyshed effluent inspections other areas are also checked that are not included in the resource consent/permitted activity rules which may have potential to result in effluent discharges to water, such as stock in waterways and track run-off.

Sites where dairy cows walk through waterways on the farms are checked and monitored to the progress that farmers have made towards installing bridges and culverts. The Stream Crossing Survey has shown good gains for the elimination of places where cows walk through creeks since the initial survey which began in 2002.

1.1. Dairy Effluent Management Nationally

Reporting rates of dairy effluent compliance have varied dramatically around New Zealand. In 2007, the majority of the regional councils undertook a review of dairy effluent compliance reporting. The review proposed a new set of criteria for categorising dairy effluent compliance for national reporting purposes. It is expected that all regional councils should now be using the new criteria for national reporting of dairy effluent statistics.

In order to assist councils with the new reporting compliance criteria, dairy files are audited to provide independent feedback to each council on its dairy effluent compliance assessment. The intention of the changes to dairy effluent monitoring is to have national consistency on how compliance grades are assigned to dairy farm effluent systems across regional councils in New Zealand.

The three categories that may be assigned are:

1. Compliance (C)
2. Non-compliance (NC)
3. Significant non-compliance (SNC)

The criteria for assessing a category 1 (C) classification is that an inspector did not observe any non-compliance at the time of the inspection. This makes allowance for conditions that were not audited at the time of inspection.

The criteria for assigning a category 3 (SNC) classification are described as follows:

- Unauthorised discharges that have entered water (ground or surface water).
- Unauthorised discharges that may enter water (ground or surface water).
- Breach of abatement notice.
- Objectionable effects of odour.
- System shortcomings.

- Multiple non-compliances on site with cumulative effects.

The criteria for assessing a category 2 (NC) classification is all issues that did not fit either category 1 or category 3.

1.2. Dairy Effluent Management in Marlborough

For Marlborough to be nationally consistent this meant that there were some changes to the way Marlborough carried out the dairy effluent survey since the introduction of the National Reporting Compliance Criteria in 2007.

In the 2011/12 dairy effluent survey Council staff inspected all of Marlborough’s 60 dairy farms during the summer period. Forty one dairy farms in the Marlborough Sounds Resource Management Plan area were checked against the Plan Rules and 19 farms in the Wairau/Awatere Resource Management Plan area were checked against their respective resource consents for dairy effluent discharge. Below is a table which shows how the Plan Rules were assessed. The method of assessment is in blue italics. Resource consents were assessed in the same manner; however, every condition of the resource consent was assessed. Each resource consent has different conditions.

Table 1

36.1.7.3 Dairy Effluent Disposal
a) The discharge shall not be within 20 metres of a surface water body or over any unconfined aquifer; <i>Visual observation on site and Council mapping system.</i>
b) There shall be no run-off of contaminants into surface water resulting from the discharge of the contaminant onto or into land; <i>Visual observation on site.</i>
c) The total nitrogen loading on the area to be used for discharging shall not exceed 200 kg N/ha/yr; <i>3 hectares of disposal area is required for every 100 cows this is checked with the farmer and by Council mapping. Minimum receiving land area per 100 cows for effluent applied fresh from the farm dairy (Dairying for the Environment 2006).</i>
d) When discharging effluent a buffer zone of a minimum 10 metres in width is to be maintained between the area of discharge and any property boundary; <i>Visual observation on site.</i>
e) The wash water collection, containment and application system shall not be within 20 metres of the boundary of any neighbouring property without that person’s prior written consent, a copy of which shall be forwarded to the Marlborough District Council; <i>Visual observation and check of Council records.</i>
f) The wash water collection and containment system shall not be within 20 metres of any surface water body; <i>Visual observation and Council mapping system.</i>
g) The wash water collection, containment and application system shall not be within 20 metres of any area identified by Tangata Whenua as being of special value, or any filed archaeological site; <i>The farmer was asked if there were any tangata whenua or archaeological sites on the farm.</i>

<p>h) There shall be no spray drift beyond the boundary of the land to which the effluent is discharged; <i>Visual observation on site.</i></p>
<p>i) No objectionable odours shall be able to be detected at or beyond the legal boundary of the land to which the effluent is discharged; <i>Odour check at the boundary on site.</i></p>
<p>j) There shall be contingency measures in place to ensure that there is no contravention of the above conditions in the event of system failure or adverse climatic conditions; <i>Visual observation on site and Council mapping system.</i></p>
<p>k) The system will be monitored by the Marlborough District Council to ensure there is compliance with the above conditions. <i>All dairy farms in Marlborough are inspected.</i></p>
<p>l) The discharge, after reasonable mixing shall not breach the water quality standard set for the waterbody in Appendix H. <i>There are no direct discharges to water.</i></p>

Note: that compliance is only what was noted on the site inspection, Council can only say that the farm complied or did not comply at the time and date that the inspection was undertaken. Council staff are also relying on information the farmer provides.

1.3. Environmental Effects

Dairy effluent provides an economic benefit to dairy farmers as it contains nitrogen (N), phosphorus (P) and potassium (K). Dairy effluent also contains high levels of organic matter and faecal bacteria. When dairy effluent is properly applied any detrimental effects from faecal bacteria are limited by absorption into the soil and the nutrients are taken up by plants. Proper application of dairy effluent to paddocks promotes improved pasture production and minimises environmental risks.

The permitted activity plan rules and the consent conditions for individual dairy effluent discharges are designed to ensure that environmental effects are less than minor, as required by the Resource Management Act 1991. Non-compliance with dairy effluent plan rules and consent conditions can cause significant adverse environmental effects and must be dealt with appropriately.

For instance, when dairy effluent is over-applied and allowed to cause ponding in paddocks, soil moisture levels are elevated and a moist nutrient rich environment is created which may allow faecal bacteria to grow. Pasture production and ability to utilise effluent is reduced and soil saturation may result in dairy effluent moving below the root zone where it can potentially reach and contaminate groundwater.

Appendix A outlines a Compliance Officer's approach on each farm visit.

1.4. Stream Crossings

The places where cows walk through waterways on dairy farms were also checked on the farm visits. The findings of the original stream crossing survey and the progress that the farmers have made to install culverts or bridges is included in the discussion of this report.

2. Discussion

The site inspections found some recurring themes in the survey. The dairy effluent issues that were noted from the survey were:

- that the wastewater collection, containment and application system on some farms were too close to waterways;
- lack of back up storage of effluent for adverse weather conditions; and
- the storage of solid wastes directly to land.

2.1. Washdown Collection, Containment and Application Systems

The Marlborough Sounds Resource Management Plan provides that these systems cannot be within 20 metres of a surface water body or the boundary of a neighbouring property.

Twelve out of 41 Marlborough Sounds farms have their wash water collection, containment and application systems too close to a surface water body.

One farmer has installed a new effluent storage pond. This farm is now compliant.

One farmer is in the process of having a new effluent pond installed. This farm will be compliant next dairy season.

Two farmers have sought Farm Management Plans which will identify non-compliance issues. The Farm Management Plan aims to reduce the risk of effluent and other pollution from getting into waterways. This is a positive approach by the farmers working towards future compliance.

Two farmers sought resource consent to permit the location of wash water collection, containment and application systems within 20 metres of any water body. Both resource consents were granted and the farms are now compliant.

Please Note: Council does not guarantee that resource consent is granted for all wash water collection, containment and application systems within 20 metres of a water body. During the resource consent process adverse effects are looked at carefully. Those resource consents that have been granted only have a live period till December 2016. Farmers are given this time to plan for the future and explore options to have wash water collection, containment and application systems upgraded and moved away from any water body.

2.2. Ponds and Storage

Effluent application can be problematic when soils are seasonally wet due to a regular period of excessive rainfall, or after rainfall in sites where there is mole or tile drainage (Dairying for the Environment, 2006). In order to avoid discharge of contaminants to groundwater or surface water the Marlborough Sounds Resource Management Plan rules require contingency measures to be in place in the event of system failure or adverse climatic conditions. Under the Wairau/Awatere Resource Management Plan all new consents will require the installation of storage ponds. 11 out of 60 farms had no contingency measures in place. The plan rules in both regions do not outline how much storage is required. Dairying for the Environment (2006) recommends 340m³ per 100 cows for Marlborough. Ponds need to be sealed to ensure that there is no leakage. Ponds need to be managed so that there is a free board. Free board in the pond will allow for storage of effluent in unforeseen circumstances.

One farmer has installed a new effluent storage pond. This farm is now compliant.

One farmer is in the process of having a new effluent pond installed. This farm will be compliant next dairy season.

Two farmers are investigating the possibility of re-channelling the waterways that are within 20 metres of their effluent ponds. Resource consent needs to be obtained to undertake this work.

Two farmers sought resource consent to permit the location of wash water collection, containment and application systems within 20 metres of any water body. Both resource consents were granted. Both farms are now compliant.

Please Note: Council does not guarantee that resource consent is granted for all wash water collection, containment and application systems within 20 metres of a water body. During the resource consent process adverse effects are looked at carefully. Those resource consents that are granted only have a live period till December 2016. Farmers are given this time to plan for the future and explore options to have wash water collection, containment and application systems upgraded and moved away from any water body.

Observations during the Dairyshed Effluent and Stream Crossing Survey 2011/2012 are that there have been improvements implemented on farms. Farmers that were non-compliant by storing solids waste directly to land last dairy season have installed better practice and laid concrete pads.

Four new ponds have been installed in the Marlborough Sounds area. Three of these are passive effluent separation systems using gravity and natural forces to separate effluent solids from effluent liquids. These passive separation systems are composed of a sludge bed and a weeping wall. Solids can be stored during periods where soil conditions are not suitable for land application or spread to land but within the plan rules. Effluent liquid can be pumped to low application k-line systems which enables the farmer to apply effluent to larger disposal areas on the farm. These separation systems are becoming more popular in Marlborough; two of the farmers that have installed these systems are on the Federated Farmers committee and are energised to promote these systems and their benefits throughout the district.

Council and the dairy industry are working together to help dairy farmers to achieve environmental standards that reduce risk of farm pollutants adversely affecting waterways and coastal areas in Marlborough. By implementing Marlborough's Action Plan, plan rules, best practices, Farm Management Plans and having a working group to more actively engage with industry and farmer representatives, it is likely that environmental performance standards will increase enabling farmers to reach compliance.

2.3. Dairying and Clean Streams Accord - Regional Action Plan

The Dairying and the Clean Streams Accord is an agreement between Fonterra Co-operative Group, regional councils (including Marlborough District Council), the Ministry of Agriculture and Forestry and the Ministry for the Environment. To improve the environmental performance of dairying, the Accord establishes a goal of achieving "clean healthy water in dairying areas". The Regional Action Plan sets National and Local Targets

Appendix B Shows the stream crossing sites in Marlborough from the first survey until the 2011/2012 dairy season.

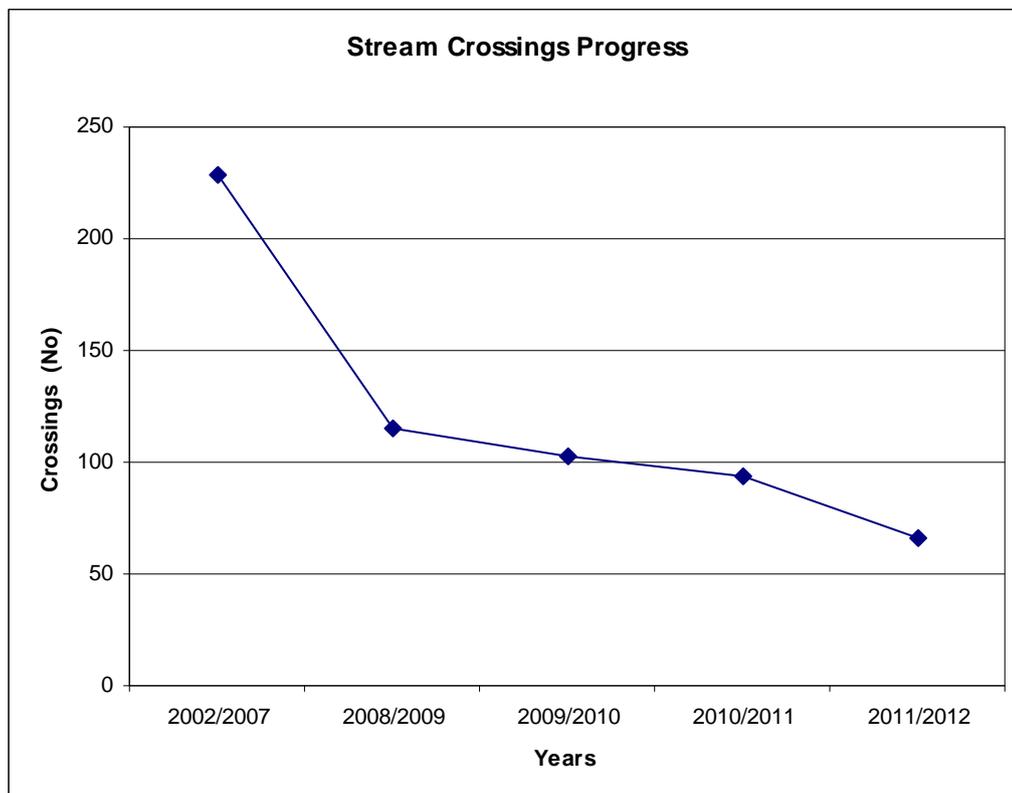
	2009/10 Percentage	2010/2011 Percentage	2011/2012 Percentage
Full Compliance	57%	47.5%	70%
Non-Compliance	38%	29.5%	27%
Significant Non-Compliance	5%	23%	3%

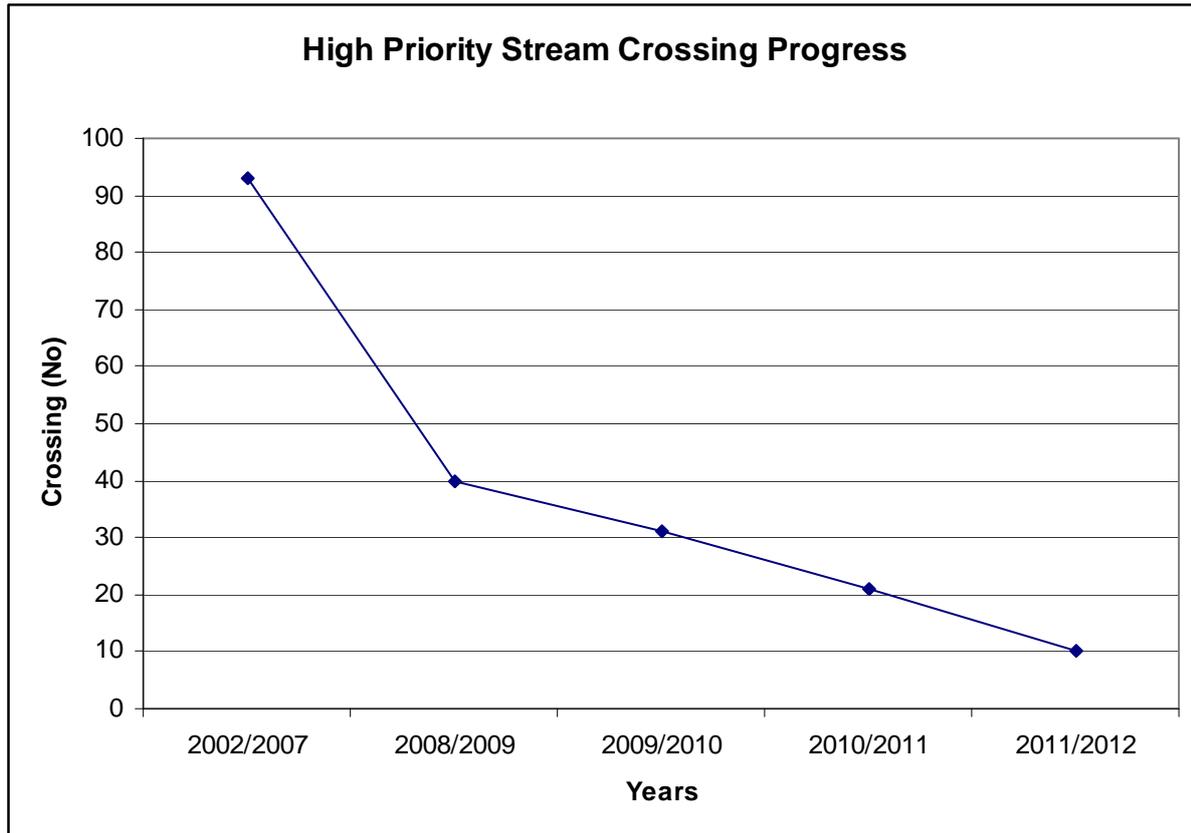
2.3.1. Stream Crossings 2011/2012

The purpose of the stream crossing survey was to improve water quality in Marlborough’s waterways.

The Stream Crossing Survey has shown good gains for the elimination of places where cows walk through creeks since the initial survey. The total number of stream crossings has significantly reduced in the Marlborough Region since 2002 from 229 to 66 in 2012.

Council determined timeframes for all the high priority stream crossings to be eliminated. It was expected that that all the high priority stream crossings would have been eliminated by the end of the 2012 dairy effluent season. Council will need to consider what action to take (such as issuing abatement notices) now that the timeframes for the elimination of high priority stream crossings has elapsed. Ten high priority stream crossing remain.





Please Note: A Rai Valley farm has recently been sold. The new owner has plans to install one bridge and change race ways this winter to eliminate three of the high priority stream crossings. A Koromiko farmer is installing two culverts to eliminate his two high priority stream crossings this winter. When stream crossings are completed a follow up visit will be carried out and Council's records updated.

Council is still processing free of charge resource consent applications for the installation of culverts or bridges until December 2013.

3. Conclusion

In 2011/12 Council undertook site inspections to the 60 dairy farms in Marlborough. The purpose of the inspections is to check compliance with the permitted activity standards of the Marlborough Sounds Resource Management Plan or the dairy effluent discharge resource consents. The dairy effluent issues that were noted from the survey were:

- that the wastewater collection, containment and application system on some farms were too close to waterways;
- the lack of back up for adverse weather conditions; and
- the storage of solid wastes directly to land.

Council has a water quality monitoring programme in place. This has provided information on the state and trends in water quality across the district and has confirmed that intensive livestock farming (predominantly dairy), is having an impact in a number of Marlborough's waterways.

Many industry initiatives have been underway to further improve the environmental sustainability of livestock farming. There are a range of initiatives within the dairy industry promoted by DairyNZ and Fonterra including the five Clean Streams Accord targets set in 2003, guidelines and a code of practice for dairy effluent management and the new "Every Farm Every Year" programme initiated in 2010. In late 2011 Fonterra announced that as of 2013 all of its suppliers must have stock excluded from waterways (as defined in the Accord), as a new condition of supply.

Good gains for the elimination of places where cows walk through creeks have been made since the initial survey in 2002. Farmers have demonstrated how they have changed aspects of their farming operation in order to meet industry expectations. Landcare recently organised an event to celebrate the excellent work carried out by dairy farmers in the top of the South Island. In terms of 'action on the ground' and Council's continued support and strong relationship with Marlborough farmers, significant gains have been made to address declining poor water quality.

The New Zealand Landcare Trust ran a three year Sustainable Farming Fund project in the Rai catchment aimed at building and implementing a farmer leadership model to address water quality issues. The project funded the development of ten individual Farm Plans.

In March 2012 Council allowed funding for a three year strategy designed to expand Council's current role in working with the dairy industry in Marlborough by way of extending the farm plan programme firstly adopted by The New Zealand Landcare Trust.

As well as continuing the previous programme the strategy includes forming a working group to more actively engage with the industry and farmer representatives on a non regulatory basis. The environmental farm plan programme (10 new plans annually for three years which will be 50% funded) will enable farmers to plan and prioritise work they need to undertake. Council sees this as a positive step towards assisting dairy farmers to comply with regulations and encourage best practice.

Appendix A

A Compliance approach on each farm visit:

Pre inspection letters were sent to all farmers in August to give the farmers the opportunity to make an appointment. A programme of two days a week in the field was designed, leaving three days to prepare files, complete file notes; letters annotate photographs from the previous inspections.

- Equipment consists of camera and GPS, Council vehicle with the water sampling kit, paper work with site inspection form for general notes, report card form (listing permitted activities or resource consent conditions), post inspection letter and stream crossing forms in case any remaining sites where cows walk through waterways have been eliminated.
- Read the dairy farm file before arrival. Check if the farm complied in the previous season. Check if any outstanding issues or stream crossings.
- During the site visit stone traps, sumps and effluent ponds are inspected. All solid and liquid waste from the washwater collection and containment systems must be contained within the system or are being irrigated in accordance with the plan rules or resource consent. Walk over the most recently irrigated part of the disposal field.
- GPS coordinates of cowsheds (at the vat), sumps, stone traps and ponds are taken. Sumps, stone traps, ponds and irrigators (travelling or K-line) and the surrounding disposal area are photographed.
- Immediately following inspection the inspection sheet, report card, post inspection letter and stream crossing updates are completed.
- All farmers receive a post inspection letter and their report card indicating the compliance rating of their farm.

Please note: In terms of the national standards the compliance rating is only from the washwater collection and containment system. If there is a discharge from other sources (i.e. Cow crossing on roads) then these must be assessed and controlled but in terms of recording compliance for dairy effluent audit they do not affect the rating of the farm.

Detected Non-Compliance during Inspection

If any non-compliance is detected, plenty of photographs are taken and a file note is dictated. GPS coordinates of the site of non-compliance are taken and any other features such as waterways, boundaries etc (dependent on the breach).

Locate the farmer and show them the issue. If the non-compliance issue can be fixed ask the farmer to fix it straight away, for example, if there was overloading of effluent to the disposal field the farmer needs to move the irrigator.

If the farmer requires a few days to resolve the non-compliance issue, a follow up inspection needs to be scheduled.

If the non-compliance was serious (SNC) and could warrant enforcement action, all the information/evidence required needs to be gathered. The farmer or sharemilker needs to be interviewed. Any **serious** non-compliance needs to be discussed with the Team Manager or Manager of the Regulatory Department and a decision needs to be made on a course of action.

Enforcement action taken if required.



Compliant



Non Compliant

Appendix B

The table below shows the stream crossing sites in Marlborough from the first survey till the 2011/2012 dairy season. On the initial survey Council categorised the crossings into high and low priorities. The crossings sites were prioritised by frequency of use, number of cows, size and type of waterway and whether the waterway was permanent or ephemeral.

Stream Crossings in Marlborough

Stream Crossings (SC) at First Stream Crossings Survey 2002 to 2007				
	Number of Farms with SC	Number of High Priority SC	Number of Low Priority SC	Total Crossings
Rai Valley	27	43	69	112
Pelorus	12	12	25	37
Tuamarina	9	15	29	44
Linkwater	7	12	5	17
Havelock	7	9	5	14
Wider Marlborough	9	2	3	5
Total	71	93	136	229
Stream Crossings (SC) at 2008/09 Dairy Season				
	Farms with SC	High Priority SC	Low Priority SC	Total
Rai Valley	9	9	27	36
Pelorus	7	2	13	15
Tuamarina	8	10	22	32
Linkwater	6	10	4	15
Havelock	6	7	6	13
Wider Marlborough	1	2	3	5
Total	37	40	75	115
Stream Crossings (SC) at 2009/10 Dairy Season				
	Farms with SC	High Priority SC	Low Priority SC	Total
Rai Valley	9	9	30*	39
Pelorus	5	0	9	9
Tuamarina	8	9	22	31
Linkwater	5	6	2	8
Havelock	6	6	6	12
Wider Marlborough	1	1	3	4
Total	34	31	72	103

Stream Crossings (SC) at 2010/11 Dairy Season				
	Farms with SC	High Priority SC	Low Priority SC	Total
Rai Valley	9	6	28	34
Pelorus	3	0	6	6
Tuamarina	8	3	22	25
Linkwater	3	3	1	4
Havelock	6	6	7	13
Wider Marlborough	3	3	9	12
Total	32	21	73	94

Stream Crossings (SC) at 2011/12 Dairy Season				
	Farms with SC	High Priority SC	Low Priority SC	Total
Rai Valley	5	4	18	22
Pelorus	3	0	6	6
Tuamarina	8	3	19	22
Linkwater	2	1	2	3
Havelock	3	0	5	5
Wider Marlborough	2	2	6	8
Total	25	10	56	66



Background Information

Dairying and Clean Streams Accord

Dairying is a significant land use in New Zealand. However, there have been increasing concerns regarding the effects of this intensive land use on the quality of water within our streams, rivers, lakes and wetlands.

The Dairying and Clean Streams Accord is an agreement between Fonterra Co-operative Group, regional councils, unitary authorities (such as the Marlborough District Council), the Ministry of Agriculture and Forestry and the Ministry for the Environment to improve the environmental performance of dairying. It establishes a goal of achieving "clean healthy water in dairying areas".

Five priorities for action are identified in the Accord to reduce the impact of dairying on streams, rivers, lakes and wetlands: cattle access to water bodies, dairy herd stream crossings, dairy shed effluent discharges, nutrient management and wetlands. Each of these priorities has a national performance target, as follows:

- Dairy cattle are excluded from 50% of streams, rivers and lakes by 2007, 90% by 2012
- 50% of regular crossing points have bridges or culverts by 2007, 90% by 2012
- 100% of farm dairy effluent discharges comply with resource consents and regional plans immediately
- 100% of dairy farms have in place systems to manage nutrient inputs and outputs by 2007
- 50% of regionally significant wetlands to be fenced to prevent stock access by 2007, 90% by 2012

The Marlborough Regional Action Plan adapts these national targets to local conditions. See inside for Marlborough targets.

Regional Action Plan

The Dairying and Clean Streams Accord represents an industry taking responsibility for improving its environmental management. This initiative therefore presents an opportunity for the Marlborough District Council to assist efforts to improve the sustainability of dairying in Marlborough while exercising its statutory responsibilities under the Resource Management Act 1991.

Regional Action Plans have been developed by Fonterra and each of the regional councils and unitary authorities to assist the implementation of the Accord.

The purpose of the Marlborough Regional Action Plan is to detail local commitments toward achieving the Accord's goal, while taking into account local circumstances. The Regional Action Plan records commitments made by Fonterra and the Marlborough District Council to reduce the adverse effects of dairying activities on water and habitat quality in Marlborough. These commitments focus on the priorities for action already established by the Accord. Some of the local targets differ to the national targets, reflecting the relative adverse effects of dairying operations in the local context.

The Regional Action Plan also sets out the respective roles of the Council and Fonterra in achieving the local targets.

The Marlborough Regional Action Plan has been developed with input and support from local Federated Farmer representatives.

To get further information about the Regional Action Plan, or to receive a free copy, please contact either Shelley Lines at the Council on (03) 520 7400 or Fonterra Shareholder Services Contact Centre on 0800 65 65 68

Dairying and Clean Streams Accord



Regional Action Plan for Marlborough

2008



Stock access to waterbodies

- ☀ Dairy cattle are excluded from 50% of streams, rivers and lakes by 2007, 90% by 2012

The Council will continue to encourage dairy farmers to prevent stock access to water bodies. This will include working with individual farmers to protect particular rivers and streams from the adverse effects of stock access and general advocacy with groups representing dairy farmer interests.

In most cases, fencing will be the only practical method of excluding stock.

Dairy herd stream crossings

- ☀ 90% of category 1 and 2 dairy herd stream crossings in the Rai River catchment are eliminated by the commencement of milking season (August) in 2006.
- ☀ 90% of category 1 and 2 dairy herd stream crossings in the Pelorus River and Tuamarina River catchments are eliminated by the commencement of milking season (August) in 2007.*
- ☀ Except for those stream crossings in the above catchments, 50% of all other crossing points have bridges or culverts by 2007, 90% by 2012.

The Council will continue with the implementation of the existing management strategy for the Rai River catchment.

The adverse effects of dairy herd stream crossings in other areas will be progressively investigated from 2004. The management strategies that are subsequently developed will depend upon the results of monitoring and consultation with the dairy farming community. The investigations will focus on the following areas:

- Canvastown
- Linkwater
- Koromiko/Tuamarina

Management of dairy shed effluent

- ☀ There is no "major" non-compliance with relevant resource consents or permitted activity rules.
- ☀ The rate of "minor" non-compliance with relevant resource consents or permitted activity rules shall not exceed 15% in any one milking season and any instance of "minor" non-compliance shall be rectified to the satisfaction of the Council within 2 weeks.
- ☀ All dairy farmers that require a discharge permit to discharge dairy shed effluent onto land are operating with the necessary consents.

The Council will continue to annually inspect dairy shed effluent discharges and assess the discharge as either in compliance, in "minor" non-compliance or in "major" non-compliance.¹

Currently 26 out of 30 farmers who require resource consents for their effluent discharges have the necessary consents.

Nutrient Management

- ☀ 100% of dairy farms to have in place systems to manage nutrient inputs and outputs by 2007

Fonterra will promote nutrient budgeting systems for all dairy farms, in consultation with the dairy farming community and fertiliser industry.

¹ Major non-compliance is categorised as non-compliance likely to result in significant adverse effects on the surrounding environment and includes unlawful discharges of effluent to water or the excessive application of effluent to land. Minor non-compliance, on the other hand, represents non-compliance that is not likely to result in significant adverse effects on the surrounding environment.

Wetlands

- ☀ 50% of regionally significant wetlands to be fenced to prevent stock access by 2007, 90% by 2012

The Council is currently identifying significant natural areas throughout Marlborough. Where significant wetlands are identified on or adjacent to dairy farms, the Council will work with the dairy farmer to protect the wetland from the adverse effects of stock access.

Monitoring and reporting on targets

Fonterra will monitor progress toward achieving these targets. However, the Council has a statutory responsibility to monitor the state of Marlborough's environment, compliance with the permitted activity standards of the Marlborough Sounds Resource Management Plan and Proposed Wairau/Awatere Resource Management Plan, and conditions of resource consents. Where this monitoring information is relevant to ascertain progress toward achieving the targets, the Council will provide this information to Fonterra. Examples include the Council's strategy for eliminating stream crossings in the Rai River catchment and the annual inspections of dairy shed effluent discharges. This will avoid any duplication in monitoring effort.

There is also a need to evaluate the effectiveness of the Regional Action Plan in achieving the overall objective of the Accord (i.e., "clean healthy water in dairying areas") and to ensure that it reflects community expectations. Monitoring of the targets may identify that the targets or implementation actions need to be modified or replaced. For this reason, representatives of the Council and Fonterra will meet on at least an annual basis to evaluate and review the content of the Regional Action Plan.

