

Dairyshed Effluent and Stream Crossing Surveys

2008/2009 Report



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Dairyshed Effluent Survey

Introduction

This report summarises the results of the 2008/2009 Marlborough Dairyshed Effluent Survey. The purposes of the Dairyshed Effluent Survey are:

- 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.

As part of the 2008/2009 dairyshed effluent survey Council staff inspected all of Marlborough's 59 dairy farms during the summer period to determine if their effluent systems and management complied with the rules in the relevant resource management plan (see Appendix A and B) or the resource consent.

Based on observations made on site, the dairy effluent system is given one of the following ratings:

- **Compliance** - Full compliance with rules or resource consents;
- **Compliance (Marginal)** - Complying with rules or resource consents, the system or its management should be improved to ensure continued compliance;
- **Non-compliance (Minor)** - A level of non-compliance with rules and/or resource consents, and some potential for environment degradation;
- **Non-compliance (Major)** - Non-compliance with rules and/or resource consents resulting in a greater potential for environmental degradation.



Although not a resource management requirement, sumps and ponds should be fenced for safety reasons



Blocking off one nozzle can increase the speed of the irrigator and minimise the discharge rate, reducing overloading

Results

The results from the 2008/09 Marlborough Dairyshed Effluent Survey are outlined below.

Compliance Rates

52 (88%) dairy effluent systems were in compliance at the time of the first visit. Of the complying effluent systems, 16 (27%) were rated as being compliance (marginal).

7 (12%) dairy effluent systems were in non-compliance at the time of the first visit. Of the non-complying systems 1 (2%) was considered to be in non-compliance (major).

Comparison with Previous Surveys

The table below shows the compliance rates during the previous nine surveys.

Year	Compliance	Non-Compliance
2008/09	88%	12%
2007/08	75%	25%
2006/07	79%	21%
2005/06	87.5%	12.5%
2004/05	78%	22%
2003/04	81%	19%
2002/03	76%	24%
2001/02	47%	53%
2000/01	75%	25%

Non-Compliance (Major)

The table below shows the rate of non-compliance (major) during the previous eight dairy seasons.

Year	Non-Compliance (Major)
2008/09	2%
2007/08	0%
2006/07	3%
2005/06	3%
2004/05	7%
2003/04	6%
2002/03	6%
2001/02	20%

Enforcement Action

Council would rather work with farmers to achieve a high standard of effluent management than take enforcement action. For more serious incidents and repeat offenders enforcement can be necessary to ensure compliance. Enforcement action can involve issuing an Abatement Notice (requiring that certain works be undertaken or seeking that certain activities cease), issuing an Infringement Notice (requiring the payment of a fine of up to \$1,000), obtaining an Enforcement Order (an order from the Court requiring someone to undertake certain works or cease certain actions) or undertaking prosecution action (a maximum penalty of \$200,000 or two years imprisonment).



The table below summarises enforcement action taken over the previous eight dairy seasons.

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Abatement Notices Issued	8	4	0	4	1	0	0	0
Infringement Notices Issued	0	0	0	2	0	0	0	0
Prosecution Action	0	0	1	0	0	0	0	1
Enforcement Orders	0	0	0	0	0	1	0	0

During November 2008 a dairy farmer was prosecuted for breaching an Enforcement Order with respect to dairy wastewater and for dumping cattle carcasses adjacent to a waterway. The farmer pleaded guilty and was fined approximately \$25 000. On a positive note, this farmer has since made improvements to the waste systems on the farm.



Effluent running off cattle yard. This effluent eventually reached a waterway



Well managed effluent irrigation

Back Up Systems

Research has shown that spreading effluent onto wet pastures can result in contaminants leaching through the soil profile and into the groundwater and/or running off over the soil surface and into waterways. Spreading effluent to land that is already sodden can cause pugging of soil and does not encourage good pasture growth.

The majority of Marlborough's farmers understand that it makes economic sense to store effluent and spread during dry conditions. Of the 59 farms visited, 53 had some form of back-up (e.g. pond). Of the six farms without back up, one has a very small herd size, one had a pond under construction, two were planning ponds and two did not indicate plans for pond construction.



Pond managed so that there is capacity to store effluent during rain events

There was considerable variation in the standard of back up systems. To appropriately deal with effluent during wet weather some of the back up systems seen this season will need to be upgraded. Some of the ponds and sumps only provide limited storage, so will not be useful during prolonged rain and in wet seasons. However, discussions indicate that there are plans for upgrades at several farms.

During previous seasons it was noted that the large majority of ponds were very full and therefore would not have been able to store effluent should there have been heavy rain. This season a considerably improved standard of pond management was noted. Many farmers had reduced the level of effluent in their ponds during dry conditions, therefore allowing storage during rain.

Ponds should be sealed to prevent contaminants leaching through the soil profile and into groundwater. Bunding will reduce rainwater from the soil surface entering the pond. Although not a resource management issue, farmers are encouraged to fence ponds and sumps for safety reasons.

The volume of storage necessary is dependent on factors such as expected rainfall, soil types, topography, ground water levels, location of waterways and herd size. Council is yet to specify a minimum volume of storage required.



Regular pond maintenance is necessary to ensure ponds do not become overgrown with weeds

Stream Crossing Survey

Introduction

When dairy herds walk through waterways they drop effluent and disturb the bed of the stream. This contributes to a local decline in water quality. It is also unauthorised under the Resource Management Act 1991.

Stream Crossings surveys have been carried out in the Marlborough area to encourage dairy farmers to eliminate stream crossings. This survey involved a catchment by catchment approach including community consultation, identification of stream crossing sites and prioritisation of crossings based on herd size, frequency of use and waterway type and size. Dates were set by when high priority crossings were to be eliminated in each catchment. Elimination of low priority crossings is encouraged as time and resources allow.

Fonterra in conjunction with groups representing central and local government have produced the Clean Streams Accord. The overall goal of this accord is clean healthy water in dairying areas. The Accord sets five national targets to achieve this goal including fifty percent of regular crossing points have a bridge or have bridges or culverts by 2007 and ninety percent by 2012.

Resource consents, and sometimes building consents, were required to eliminate crossings. To ensure the consent process was efficient and cost effective, Council processed resource consents free of charge provided they were received by a certain date. For culverts in small catchments, an easy to use standard resource consent application form was produced to assist farmers in preparing their application and designing their culvert.

For the purposes of this report, the term “stream crossing” refers to any site where a dairy herd crosses through a waterway and does not include general stock access. The term “waterway” refers to any sized drain, ditch, swamp, creek or river, whether it is dry, flowing or ephemeral.



Culverts should generally be buried 150mm below bed of stream. Culverts that are installed too high tend to scour creating a waterfall effect. This prevents fish passage, is contrary to the resource consent and will result in further scouring. Depending on the situation culverts that are not set into the bed of the stream should be reinstalled or large rock placed on the downstream side of culvert

Results

Marlborough Stream Crossing Survey - Progress

In summary, the area by area surveys found a total of 229 stream crossings. Since the initial surveys 114 (50%) of the 229 stream crossings have been eliminated.

Of the 229 stream crossing identified, a total 93 were considered to be high priority. Since the initial survey 53 (57%) of the 93 high priority crossings have been eliminated.

The progress made in each area is set out below. There is also a summary table showing progress on page 10 of this report. A map of the stream crossings is included as Appendix D.

Rai River Catchment Stream Crossing Survey - Progress

The Rai River Stream Crossing Survey was carried out in 2003. At this time there were a total of 112 crossings, 43 of which were high priority crossings.

Due to the topography and number of large rivers in this catchment, there were generally a high number of crossings per farm and a number of these crossings were expensive to eliminate. In particular, there were a number of crossings over the Opouri River which is wide and the banks are subject to erosion.

All priority crossings were to be eliminated by August 2006, unless express permission was granted from the Council. Due to exceptional circumstances a 2-3 year extension was granted for seven of these crossings.

Since 2003, 46 (41%) of the 112 stream crossings have been eliminated. Of this, 34 (79%) of the 43 high priority stream crossings have been eliminated.

There are still nine high priority stream crossings yet to be eliminated. The nine crossings are on five farms. The situation at each farm is set out below:

- *Rai Farm 1*
This farm has three high priority crossings and one low priority crossing. This farmer has not eliminated any crossings since the commencement of survey, nor has resource consent been obtained to eliminate crossings. This farmer has not indicated any plans for eliminating crossings. Some of these crossings are over a wide section of the Opouri River and would be very expensive to address.
- *Rai Farm 2*
This farm has one high priority crossing and one low priority crossing. Two crossings have already been eliminated. This farmer has obtained resource consent to eliminate the remaining crossings.
- *Rai Farm 3*
This farm has one crossing through a culvert under the State Highway and six low priority crossings. Council has just received an application for resource consent to eliminate the crossing under the State Highway. Resource consent has already been obtained to eliminate the low priority crossings. Since the survey in 2003, three other crossings have already been eliminated on this farm.
- *Rai Farm 4*
This farm has two priority crossings. Since the survey commenced this farmer has eliminated one low priority crossings, and just prior to the survey in 2003 erected a substantial bridge eliminating what would have been a high priority crossing. There are also 11 low priority crossings on this farm. As the Opouri River travels through this farm, a number of the crossings will be expensive to eliminate. The farmer has done considerable works in terms of obtaining resource consents and designing bridges to eliminate crossings.

- *Rai Farm 5*
This farm has one high priority crossing over a river. This farmer has obtained a resource consent to erect a bridge, but has not commenced construction.
- *Rai Farm 6*
This farm has one priority crossing, and four low priority crossings. Resource consent has been obtained to eliminate the priority crossing which is a substantial bridge. This farmer had already eliminated a crossing by erecting a substantial bridge prior to the survey in 2003

In summary, five of the six farmers with priority crossings have made some progress, this progress needs to be continuous. One farmer has made no progress and has not indicated any plans for eliminating crossings.

All farmers that have high priority crossings on their properties that are yet to be eliminated will be put to the Environment Committee of Council to consider an appropriate course of action.

Pelorus River Catchment Stream Crossing Survey – Progress

The Pelorus River Stream Crossing Survey was carried out in 2004. At this time there were a total of 37 crossings, 12 of which were high priority crossings.

All priority crossings were to be eliminated by August 2007.

Since 2004, 22 (59%) of 37 stream crossings have been eliminated. Of this, 10 (83%) of the 12 high priority stream crossings have been eliminated.

There are still two high priority stream crossings yet to be eliminated. The two crossings are on two farms. The situation at each farm is set out below:

- *Pelorus Farm 1*
This farm has one high priority crossing and two low priority crossings. Council was of the understanding that a resource consent application would be lodged prior to Christmas 2008 and the crossing eliminated during the 2008/09 summer. Council is not aware of any progress being made. A bridge was constructed at this farm prior to the stream crossing survey in 2004.
- *Pelorus Farm 2*
This farm has one high priority and one low priority stream crossing. Three other crossings have already been eliminated. Council was of the understanding that a resource consent application would be lodged prior to Christmas 2008 and the crossing eliminated during the 2008/09 summer. Council is not aware of any progress being made.

In summary, there has been progress made in the past at both of these farms, however unless the applications are received within the very near future the situation at these farms will be put to the Environment Committee of Council who will determine an appropriate course of action.

Tuamarina River Catchment Stream Crossing Survey – Progress

The Tuamarina River Stream Crossing Survey was carried out in 2005. At this time there were a total of 44 crossings, 15 of which were high priority crossings.

All priority crossings are to be eliminated by August 2007.

Since 2005, 12 (27%) of 44 stream crossings have been eliminated. Of this, 5 (33%) of the 15 high priority stream crossings have been eliminated.

There are still 10 high priority stream crossings yet to be eliminated. The 10 crossings are on three farms. The situation at each farm is set out below:

- *Tuamarina Farm 1*
This farm has eight high priority crossings and seven low priority crossings. This farmers and his contractor have met with Council and discussed the design of the structures to eliminate crossings and a resource consent application is expected in the near future.
- *Tuamarina Farm 2*
This farm has one high priority and one low priority crossing. A bridge has been built to eliminate the high priority crossing, but side rails and fences are yet to be constructed to direct the cows over this bridge. It is understood these works will be carried out in the near future, and at this time the high priority crossing will be eliminated.
- *Tuamarina Farm 3*
This farm has one high priority and six low priority crossings. Resource consent has been obtained to eliminate these crossings. It is understood that works will progress in the near future.

In summary, progress is being made towards addressing these crossings and discussions with farmers indicate that all high priority crossings will be eliminated in the near future. This matter should be reassessed early next dairy season and any remaining high priority stream crossing be put before the Environment Committee for follow up.

Linkwater Stream Crossing Survey – Progress

The Linkwater Stream Crossing Survey was carried out in 2007. At this time there were a total of 17 crossings, 12 of which were high priority crossings. Since this survey only 3 crossings have been eliminated.

All priority crossings are to be eliminated by August 2009.

Due to the nature of these crossings, at least four farms will need to undertake substantial works to eliminate crossings.

Council is aware that one farmer has lodged an application to erect a bridge, one farmer is currently working with engineers to finalise a bridge design before lodging a resource consent application, one farm that has erected two culverts without resource consent and one other farmer has eliminated a priority crossing. Other than this, very little progress has been made.

All dairy farmers in the Linkwater area need to assess their crossings and lodge an application for resource consent as a matter of urgency. High priority crossings must be eliminated by August 2009.

Considerable works are going to need to be undertaken in the next six months by Linkwater farmers to ensure resource consents applications are obtained and stream crossings eliminated.

Council has also received numerous complaints with regards to the impacts of one individual priority crossing on water quality. Council is not aware of any action having been taken to address this crossing. The farmer has been advised this crossing cannot be used for cows as of August 2009, unless it has been upgraded.

Havelock Stream Crossing Survey – Progress

The Havelock Stream Crossing Survey was carried out in 2007. At this time there were a total of 14 crossings, nine of which were high priority crossings.

All priority crossings are to be eliminated by August 2009.

Generally these crossings will be able to be eliminated using culverts as opposed to more expensive bridges.

The sale of part of a dairy property and a decrease in herd size has eliminated one priority crossings and reduced the status of the priority of another crossing. Prior to the survey in 2007 another farmer eliminated several crossings. Other than that Council is not aware of progress being made.

All dairy farmers in the Havelock area need to assess their crossings and lodge applications for resource consent as a matter of urgency. High priority crossings are to be eliminated by August 2009.

Considerable works are going to need to be undertaken in the next six months by Havelock farmers to ensure resource consent applications are obtained and stream crossings eliminated.

Council has received a complaint with regards to the impacts of the cows crossing a river on downstream water quality. This crossing is a high priority crossing over a river. Council is not aware of any action having been taken to address this crossing. The farmer has been advised that this river cannot be used for cows as of August 2009, unless it is bridged.

Wider Marlborough Stream Crossing Survey - Progress

The Wider Marlborough Stream Crossing Survey was carried out in 2007. At this time there were a total of five crossings, two of which were high priority crossings. Due to the topography and rainfall in this area, there were very few stream crossings.

All priority crossings are to be eliminated by August 2009.

All five crossings are located on one farm. Although a resource consent application is yet to be received, Council is aware that the farmer is considering options and a resource consent application is expected in the near future.

Results Summary

Survey Information			Number of Stream Crossings (SC) at First Stream Crossings Survey				Number of Stream Crossings (SC) at 2008/09 Dairy Season			
Area	Date of First SC Survey	Date by when Priority SC to be eliminated (unless specific permission obtained)	Number of Farms Surveyed	High Priority SC	Low Priority SC	Total SC	High Priority SC	Low Priority SC	Total SC	Number of farms still with SCs
Rai Valley	2003	August 2006	27	43	69	112	9	27	36	9
Pelorus	2004	August 2007	12	12	25	37	2	13	15	7
Tuamarina	2005	August 2007	9	15	29	44	10	22	32	8
Linkwater	2007	August 2009	7	12	5	17	10	4	15	6
Havelock	2007	August 2009	7	9	5	14	7	6	13	6
Wider Marlborough	2007	August 2009	9	2	3	5	2	3	5	1
Total			71	93	136	229	40	75	115	37

Regional Action Plan and Clean Streams Accord

Fonterra, in conjunction with groups representing central and local government, has produced the Dairying and Clean Streams Accord. This Accord sets national targets to deal with water quality issues as a result of dairying. Council, in partnership with Fonterra, produced a Regional Action Plan which details a local commitment towards achieving the goals of the Accord. A copy of the Marlborough Regional Action Plan is attached as Appendix C. The Regional Action Plan includes the following targets:

- *That the rate of non-compliance (minor) should not exceed 15% in one season.*
This target was met during the 2008/09 dairy season.
- *That there shall be no incidents of non-compliance (major).*
This target was not met during the 2008/09 season.
- *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.*
This target was not met by 2007, however 79% of category 1 and 2 crossings have now been eliminated.
- *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.*
In the Pelorus Catchment this target was not met by 2007, however 83% of category 1 and 2 crossings have been now been eliminated.
In the Tuamarina Catchment to date only 33% of category 1 and 2 crossings have been eliminated.
- *Except for those stream crossings in the above catchments, 50% of all other crossing points have bridges or culverts by 2007, 90% by 2012.*
This target was not met by 2007, however 114 (50%) of the total 229 crossings have now been eliminated.

Silage Pits and Offal Pits

Some farmers have silage pits and offal pits that are located too close to waterways.

The leachate from silage is very strong and even small volumes of leachate can reduce oxygen levels in waterways, harming aquatic life. Silage pits and any leachate should be kept at least 50 metres from a waterway.

Offal pits should also be kept at least 50 metres from a waterway. The base of the pit should be at least 1 metre above ground water to minimise the leaching of contaminants. The pit should also be covered.

Please think about the location of silage and offal pits with respect to waterways and use common sense to prevent pollution.

To view a copy of the rules pertaining to offal pits or silage pits please contact Council on 520 7400.



Run off of silage leachate to waterway.

Obtaining Information

Fonterra has produced a website that provides information for farmers about dairying in an environmentally sustainable manner. This website has been set up to be easy to use as well as interesting. The address for the website is www.envirodirect.co.nz.

Another website that may be of interest to farmers is the Marlborough District Council website (www.marlborough.govt.nz). This website has information about Marlborough's environment such as rainfall data, riverflow levels etc.

In conjunction with the Marlborough District Council, DEXCEL has produced booklets on managing effluent and waterways. Copies of these booklets have been provided to farmers in the past. Additional copies of these booklets can be obtained from the Marlborough District Council, on 520 7400.

Posters that outlined, "Tips for Operating an Environmentally Sustainable Dairy Effluent System" have previously been put up in cow sheds as a reminder to staff and farm owners. Additional copies of these posters can be obtained from the Marlborough District Council on 520 7400.



Fenced waterway, minimises contamination from stock access

MAKE EFFLUENT MANAGEMENT A PRIORITY ON YOUR FARM

Tips For Operating An Environmentally Sustainable Dairy Effluent System

- Move stationary irrigators before each milking
- Check travelling irrigators daily
- Move travelling irrigator's anchor before the run is finished
- Set travelling irrigators on fastest speed
- Spread the effluent from 100 cows evenly over at least 3-4 hectares each year
- Maintain a 20 metre buffer between the effluent disposal area and any waterway
- Avoid spreading effluent during heavy rain
- Check effluent pond to ensure:
 - No leaks/overflows
 - Adequate storage
 - Free from excessive weeds or crusting
- Have a back-up system to be used in the event of mechanical failure or heavy rain eg pond, second pump etc
- Have system, including pumps, fully serviced pre-season
- Check sumps/stone traps and remove solids regularly
- Train staff in effluent management
- Divert stormwater from cow shed roof away from dairy effluent system

Penalties:

If the effluent system does not comply with the rules, workers, managers, sharemilkers and owners may all be liable. If you employ staff you must take all reasonable steps to ensure they manage effluent appropriately, or you may also be liable.

Penalties include:

- A \$750 infringement notice
- A fine of up to \$200,000 or up to two years in prison

For more information:

- Visit www.envirodirect.co.nz
- Talk to Council or an effluent specialist
- Read the rules in the Resource Management Plan or your Resource consent
- A full copy of the rules can be obtained from Marlborough District Council (03) 578 5249

MARLBOROUGH DISTRICT COUNCIL

Appendix A

Rule 36.1.7.3 permitted activities (rural zones) – Marlborough Sounds Resource Management Plan

36.1.7.3 Dairyshed Effluent Disposal

The discharge of contaminants (but excluding hazardous substances) from dairysheds, or dairy washdown facilities onto or into land in circumstances which may result in that contaminant entering groundwater shall be a Permitted activity provided that:

- (a) The discharge shall not be within 20 metres of a surface water body or over any unconfined aquifer;
- (b) There shall be no run-off of contaminants into surface water resulting from the discharge of the contaminant onto or into land;
- (c) The total nitrogen loading on the area to be used for discharging shall not exceed 200 kg N/ha/yr;
- (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;
- (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;
- (f) The wash water collection and containment system shall not be within 20 metres of any surface water body;
- (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;
- (h) There shall be no spray drift beyond the boundary of the land to which the effluent is discharged;
- (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;
- (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;
- (k) The system will be monitored by the Marlborough District Council to ensure there is compliance with the above conditions.
- (l) The discharge, after reasonable mixing shall not breach the water quality standard set for the waterbody in Appendix H.

Appendix B

Rule 30.2.5 controlled activities (rural zones) - Wairau/Awatere Resource Management Plan

30.2.5 Discharge of Liquid Wastes and Animal Effluent

Subject to rule 30.1.8.9 the discharge of any liquid waste or animal effluent onto or into land is a controlled activity subject to the following standards and terms:

30.2.5.1.1 The characteristics of the waste or effluent shall be such that:

- (a) BOD₅ - 10,000 g/m³
- (b) Faecal coliforms - 1 x 10⁶ /100 mL (median of at least 6 samples taken at monthly intervals)
- (c) Free available chlorine < 2 g/m³.
- (d) Other contaminants shall not exceed the toxicant limits for irrigation water quality which are set out in Appendix P. These limits are derived from the Australian Guidelines for Fresh and Marine Waters (Australian and New Zealand Environment and Conservation Council [ANZECC] 1992)
- (e) No objectionable odours can be detected at or beyond the legal boundary of the area on which the liquid waste is discharged

For the purposes of assessing whether an odour is objectionable or offensive, the opinion shall be sought from an officer of the Council who is responsible for monitoring air quality.

30.2.5.1.2 The discharge is not within 20m of any surface water body.

30.2.5.1.3 The discharge shall not be within any class NS catchments defined in Appendix J.

30.2.5.1.4 The total nitrogen loading on the area of land to be used for the discharge shall not exceed 200 kgN/ha/yr.

30.2.5.1.5 There is a buffer zone of 10m width between any point of discharge and the legal boundary of the area of land on which the treated animal waste is discharged.

30.2.5.2 Matters over which the Marlborough District Council Reserves its Control are:

- (a) the location of the area over which the waste is discharged,
- (b) the volume of discharge and application rate,
- (c) the actual and potential effect the discharge may have on surface water bodies,
- (d) duration of the consent,
- (e) monitoring requirements.



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.

Dairying and Clean Streams Accord



Regional Action Plan for Marlborough

2008



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 Pere Hawes at the Council on (03) 578 5249 or Fonterra Shareholder Services Contact Centre on 0800 65 65 68



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.









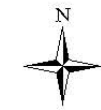
Appendix D

Appendix D

STREAM CROSSING SURVEY

Legend

-  Dairy farms
- Stream crossing priority**
 -  High
 -  Low
- Stream crossing status**
 -  Eliminated
 -  Operations ceased or not used
 -  District boundary



1:200,000

Map prepared March 2009

