



**MARLBOROUGH
DISTRICT COUNCIL**

Dairyshed Effluent and Stream Crossing Survey 2013/2014

September 2014



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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 61 farms with a combined herd size of approximately 17,300 cows. Please note that at the time of this dairy survey only 58 dairy farms are actively operating as dairy farms, this is due to two dairy farms changing the activity to grazing pastures only and one dairy farm was sold and the dairy activity ceased. Council has been working alongside the dairy industry to improve environmental performance in Marlborough for some time.

The dairy effluent management systems on 58 dairy farms in Marlborough were inspected by Council to check compliance with the plan rules or resource consents. Council also inspected the sites where cows walk through waterways on each farm to monitor the progress that farmers have made towards installing bridges and culverts, to exclude dairy herds from waterways.

This report summarises the findings of the 2013/2014 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 best practice dairy effluent management
- To gain information on the level of dairyshed effluent compliance in Marlborough
- To ensure compliance with plan rules or resource consent conditions 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 2013/2014 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 17 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 any relating components to the dairying activity are also checked that are not included in the resource consent/permitted activity rules which may have potential to result in environmental effects including any effluent discharges to water.

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

1.1. Dairy Effluent Management Nationally

In the past 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 was to have national consistency on how compliance grades are assigned to dairy farm effluent systems across regional councils in New Zealand.

These changes have achieved national consistency with all regional councils, and it has been proposed that the national annual audit now be moved out to an audit every two years. The Marlborough District Council will continue to annually inspect all dairy farms using the dairy effluent compliance assessment criteria set out below.

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; and
- 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 2013/2014

The 2013/2014 dairy effluent survey adopted an already active in-house initiative where compliance status has been indicated using a monitoring traffic light system where **green** indicates compliance; **amber** indicates non-compliance where corrective or remedial action(s) is required and a time frame for completion has been set, and **red** indicates significant non-compliance.

If a farmer received a non-compliance rating, works to mitigate the non-compliance was to be undertaken and 'Action Required' tasks were given as opposed to previously Council proposing 'Recommendations'. For those farmers that received 'Action Required' tasks, time frames were given and Council carried out follow up inspections.

This year's strategy was to firstly inspect farms with little or no storage, farms that had older systems with short comings and needed upgrading and farms that were rated non-compliant in the previous season.

Appendix A shows an example of a Compliance Report that a farmer received.

1.3. Dairy Effluent Management

In the 2013/2014 dairy effluent survey Council staff inspected all of Marlborough's 58 dairy farms. Forty one dairy farms in the Marlborough Sounds Resource Management Plan area were checked against the Plan Rules and 17 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. It is important to note that the individual resource consent all have different conditions.

Table 1 – permitted activity plan rules

36.1.7.3 Dairy Effluent Disposal
<p>a) The discharge shall not be within 20 metres of a surface water body or over any unconfined aquifer; <i>Visual observation on site of the receiving environment. The effluent disposal areas are checked against Council mapping reflecting the disposal areas.</i></p>
<p>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 of the receiving environment of the dairying activity, including effluent disposal areas, dairy shed platforms and raceways.</i></p>
<p>c) The total nitrogen loading on the area to be used for discharging shall not exceed 200 kg N/ha/yr; <i>Visual observation on site of the receiving area, recent application of effluent to land, pre or post.</i></p> <p><i>Over the last two dairy effluent surveys farmers have been encouraged to increase their disposal areas from 3 to 5 hectares for every 100 cows. (Resulting from the NIWA report 'Rai Catchment Management Plan' February 2011.)The effluent disposal areas are checked with the farmer and Council mapping is updated to reflect the receiving environment.</i></p>

<p>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 of the effluent receiving area.</i></p>
<p>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 checking the location of the systems on Council's records.</i></p>
<p>f) The wash water collection and containment system shall not be within 20 metres of any surface water body; <i>Visual observation and checking the location of the systems on Council's mapping system.</i></p>
<p>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>
<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 of the effluent receiving area.</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 checked at the effluent receiving area at the boundary.</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 checking for effluent storage systems and systems in place for mechanical failure.</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>

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

1.4. Washdown Collection, Containment and Application Systems

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

Marlborough does have some farms which have their wash water collection, containment and application systems too close to a surface water body. In those cases farmers have been asked to source options for system upgrades which may result in the relocation of their effluent collection, containment and application systems or alternatively farmers have been asked to put their operations through the resource consent process to allow the systems to remain in the interim. Six farmers with systems too close to waterways and required to seek resource consent have not sought resource consent to allow their wash water collection, containment and application systems in these locations and therefore these farms have been rated as non-compliant.

Those resource consents that have been granted have been done so for a limited time until November 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.

During the resource consent process adverse effects are looked at carefully.

1.5. Effluent Ponds and Storage

With each individual farmer the importance of effluent storage was discussed and that ponds must be properly sized and managed to enable deferral of effluent irrigation to already saturated soils in wet weather. It was a common occurrence on a number of farms during the 2013/2014 survey, that the effluent storage was compromised due to ponds being full, solids build-up and/or vegetation not being removed. Dairy effluent is an asset that should be utilised to its fullest potential obtaining the benefits when applying the effluent to land.

Effluent application can be problematic when soils are seasonally wet due to a regular period of excessive rainfall. 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 (heavy rainfall events). For this purpose, an effluent storage pond or tank would be an appropriate storage facility. However, ponds do need to be managed so that they are only partially full, allowing for storage of effluent in unforeseen circumstances.

Marlborough still has 10 farms that have no contingency measures in place for system failures and/or heavy rainfall events. The plan rules do not outline how much storage is required, however a review is underway and new plan rules will address this matter. There are many variables when calculating how much effluent storage is needed, however the pond calculator method is widely used as a tool to measure this.

Under the Wairau/Awatere Resource Management Plan all new consents will require the installation of effluent storage ponds. A plan change requiring new conversions to dairying came into effect on 25 April 2013. The scale and intensity of dairy farming has changed over time and a plan change will enabled Council to stipulate that the farmer must install an effluent storage system. One farmer has recently been granted resource consent through the dairy conversion process and will be operating this coming dairy season.

Progress seen during the 2013/2014 dairy survey –

- One farmer has installed an above ground effluent storage tank and another is in the process of installing one;
- Two farmers are investigating the possibility of re-channelling a waterway that is within 20 metres of their effluent ponds. Resource consent needs to be obtained to undertake this work;
- Several farmers have indicated that changes and upgrades to their systems will be taking place and have engaged Fonterra's Sustainable Dairying Advisor for direction.

A Marlborough Sounds farmer in the process of installing an above ground Tank has agreed to run a field day at the property allowing other farmers to view and understand the workings of supporting components for this type of effluent management, also providing an opportunity for farmers to explore other effluent storage options that are available. Representatives from Fonterra, Landcare NZ, Federated Farmers, Council staff and Councillors will be invited to attend.

Council and the dairy industry are continually 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 plan rules, best practices and Farm Management Plans, it is likely that environmental performance standards will continue to improve.

1.6. 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. The plan rules have requirements in regards to effluent application to land as effluent can place pressure on the environment if it reaches groundwater or surface waterways. Proper application of dairy effluent to paddocks promotes improved pasture production and minimises environmental risks.

Throughout the 58 farms inspected farmers use a range of effluent application methods including K-line, travelling irrigators and effluent carts.

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.

Re-occurring problems throughout the 2013/2014 survey were unsatisfactory application rates from travelling irrigators i.e. ponding occurring, thick applications, sludge creating blockages with nozzles and mechanical failures. In three incidences lack of staff management led to the travelling irrigators not being set up correctly resulting in non-compliance with effluent discharges.

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.

Farmers have been asked to adopt a recommended disposal receiving area of 5 hectares per 100 cows, as a cost effective way to managing land application rates.

1.7. Summary of Compliance Ratings 2010/11 – 2013/14

	2010/2011 Percentage	2011/2012 Percentage	2012/2013 Percentage	2013/2014 Percentage
Full Compliance	47.5%	70%	84%	80%
Non-Compliance	29.5%	27%	14%	18%
Significant Non-Compliance	23%	3%	2%	2%

Please Note:

The increase in non-compliance was the result of incorrect discharges of effluent to land due to the poor management of effluent at the dairy shed and heavy application rates of effluent from travelling irrigators causing ponding.

Council is actively addressing the significant non-compliance through the course of enforcement orders granted 1 October 2013 and 17 April 2014; this is currently ongoing, progress has been slow mainly due to all of the legal arguments from the respondents.

2. Water Quality Marlborough – Water Accord

A new set of national good management practice benchmarks aimed at lifting environmental performance on dairy farms has been agreed between DairyNZ and dairy companies, with the support and input from a wide range of industry stakeholders including Federated Farmers.

This *Water Accord* is a new, broader and more comprehensive commitment than the previous Clean Streams Accord that ended in 2012. It includes commitments to targeted riparian planting plans, effluent management, comprehensive standards for new dairy farms and measures to improve the efficiency of water and nutrient use on farms.

Fonterra as a major stakeholder in the dairy industry is behind the dairy industry's new Sustainable Dairying: Water Accord, having spent the last nine years working to improve water quality through the Dairying and Clean Streams Accord.

The new Sustainable Dairying: Water Accord binds together the entire industry in a targeted and transparent effort to do what is right for the protection of New Zealand's water resources.

2.1. Stream Crossings 2013/2014

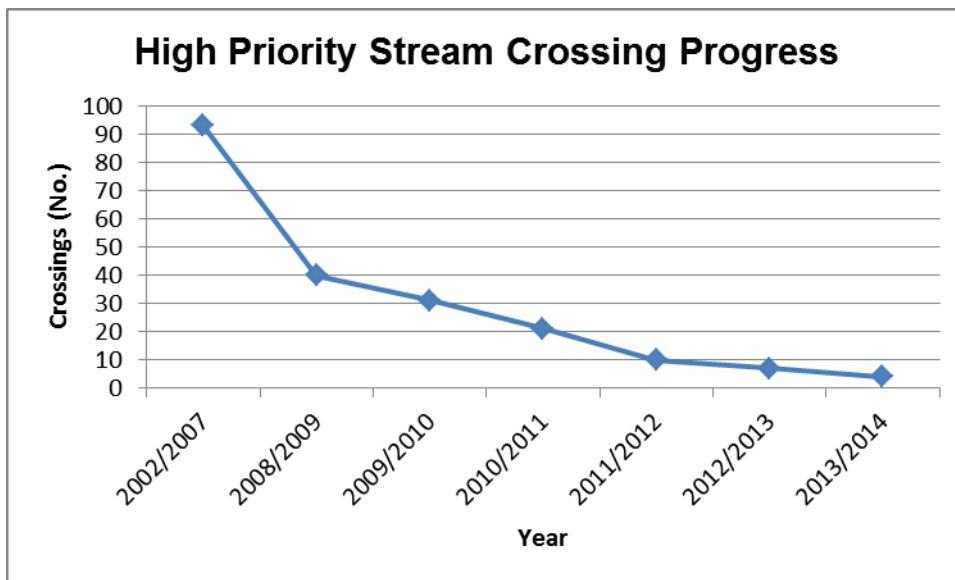
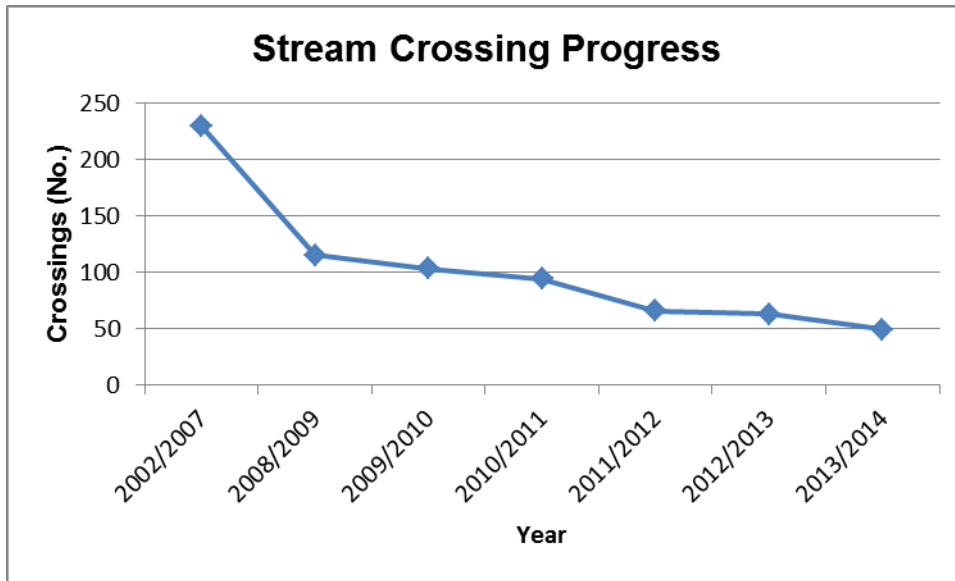
The purpose of the stream crossing survey is to improve water quality in Marlborough's waterways and to achieve this Council required the elimination of all places where cows walk through waterways. The total number of stream crossings has significantly reduced in the Marlborough Region since 2002 from 229 to 49 in 2014.

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 Appendix C.

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 now replaced by the water accord 2012, 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 a new condition of supply.

It was initially hoped that all stream crossings would have been eliminated and fencing completed by the end of December 2013. However, the dairy survey findings established there are still 49 stream crossings remaining.

The remaining 49 stream crossings are on 18 farms, 4 are high priority stream crossings and 45 are low priority stream crossings. Resource consent applications to eliminate the 4 high priority crossings have been received by Council following enforcement action.



Appendix C Shows the stream crossing sites in Marlborough from the first survey until the 2012/2013 dairy season.

3. Conclusion


In 2013/14 Council undertook site inspections on 58 of all of its current dairy farms. The purpose of the inspections was 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; although resource consent has been granted to some of these systems to remain active, this consent is only short term. Those farmers that have not sought resource consent need to address the issues surrounding the short comings of their systems;

- there is a lack of back up storage of effluent for adverse weather conditions; of those that did have an effluent storage facility, it was often found that the storage was compromised as the ponds had not been managed correctly and ponds were commonly full;
- there are still 49 stock stream crossings that need to be eliminated; and fencing of these waterways to be completed to exclude stock;
- the management of travelling irrigator units were found to be applying effluent too thickly, ponding was occurring, the irrigator units were stationary (follow up visits were carried out on a number of farms with recurring effluent discharges to land and the receiving area re-inspected).

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. The total of stream crossings has significantly reduced in Marlborough since 2002 from 229 down to 49.

Appendix A - Example

I C Cows – 13/1/1/-		
Inspection:	01/12/2014 00:00a.m.	
Plan:	MSRMP – Plan Rules	
Number of Cows:	175	
Disposal Area:	7 hectares	
Method of Irrigation:	Travelling Irrigator	
Dairy Plan Rules Assessment - Rule 36.1.7.3		
(a)	The discharge shall not be within 20 metres of a surface water body or over any unconfined aquifer; <i>No discharge within 20 metres of water bodies.</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>No run-off noted on the site inspection.</i>	
(c)	The total nitrogen loading on the area to be used for discharging shall not exceed 200 kg N/ha/yr; <i>The effluent from 175 cows is spread over 7 hectares. During this site visit effluent application to land by irrigator was being applied too thickly in some areas.</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>No discharge within 10 metres of property boundaries.</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>Council has given permission for the location of the cowshed within 20 metres of the boundary.</i>	
(f)	The wash water collection and containment system shall not be within 20 metres of any surface water body; <i>The old pond has been decommissioned and a new pond constructed. However, during this site visit there was evidence of a recent effluent discharge to land in the area of the old pond which is within 20 metres of a surface water body.</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>Tangata Whenua and archaeological sites were discussed with the farmer who advised that there are no special value sites on the farm.</i>	
(h)	There shall be no spray drift beyond the boundary of the land to which the effluent is discharged; <i>No spray drift noted on the site inspection.</i>	
(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>No objectionable odour noted on the site inspection.</i>	
(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>One pond for contingency measures estimated total capacity 23x11</i>	
Stream Crossing		
Stream Crossings:	Surveyed 2003	
Survey Found:	7 sites where cows walk through waterways. 1 bridge and 3 culverts installed.	

Current Situation:	There are 3 low priority crossings remaining. These crossings and fencing of waterways should have been eliminated by 1 December 2013.
Overall Comment	Council has given permission for the location of the cowshed within 20 metres of the boundary. There is no change to the remaining stream crossings. A new pond was installed and is now more than 20 metres away from a waterway. The pond has not been used. It appeared that the effluent was being overflowed into the nearby old pond area from the sump. No stream crossings have been eliminated since last years dairy inspection.
Action Required to be Undertaken	<ul style="list-style-type: none"> • Eliminate the remaining places where cows walk through waterways, fence off all waterways. • Prevent effluent from being discharged through the overflow pipe in sump. • Efficiently spread effluent on recently grazed pasture so that nutrients are taken up by the soil and to prevent thick patches of effluent sitting on the grass. • Bund bridge next to cowshed to prevent effluent discharging into the waterway. • Use the pond for effluent storage during times of heavy rainfall or during mechanical failure. The pond may need to be resealed as its lack of use may have compromised the seal.

Appendix B

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.
- Review previous year's inspection results to check history and compliance rating in previous seasons.
- During the site visit stone traps, sumps and effluent ponds are inspected and photographed. 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.
- Following inspections, farmer's inspection sheets, report cards, post inspection letters 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, investigation and follow up action is taken as required.

If the non-compliance issue can be fixed, the farmer is asked to fix it straight away, for example, if there was overloading of effluent to the disposal field the farmer needs to turn off the discharge or move a travelling irrigator.

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

Any serious non-compliance is put before the Enforcement & Prosecution Committee to determine what enforcement will be taken.

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 also rely on information the farmer provides.



Compliant



Non Compliant

Appendix C

The table below shows the stream crossing sites in Marlborough from the first survey to the 2013/2014 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

Stream Crossings (SC) at 2012/13 Dairy Season				
	Farms with SC	High Priority SC	Low Priority SC	Total
Rai Valley	6	1	20	21
Pelorus	4	0	5	5
Tuamarina	5	2	19	21
Linkwater	2	1	1	2
Havelock	2	1	3	4
Wider Marlborough	3	2	8	10
Total	22	7	56	63

Stream Crossings (SC) at 2013/14 Dairy Season				
	Farms with SC	High Priority SC	Low Priority SC	Total
Rai Valley	6	1	20	21
Pelorus	2	0	3	3
Tuamarina	4	0	11	11
Linkwater	3	1	2	3
Havelock	1	0	2	2
Wider Marlborough	2	2	7	9
Total	18	4	45	49