



STAFF REPORT

TO: Environment & Planning Committee

FROM: Kat Bunting, Compliance Officer

REFERENCE: C653

SUBJECT: **ANNUAL DAIRY REPORT 2007 / 2008 - EP08/07/04 - Report**
Prepared for meeting of 17 July 2008

EXECUTIVE SUMMARY

This report presents the interim compliance results from the 2007/2008 farm dairy survey, in particular compliance with respect to Resource Consent conditions for the discharge of treated dairy effluent to water, and the discharge of dairy effluent to land as a Permitted Activity under the Proposed Tasman Resource Management Plan (PTRMP). Also presented is an up-date of Tasman's statistics with respect to the national targets of the Clean Stream Accord.

In the 2007/2008 season a total of 149 dairy sheds had active discharges in the Tasman District. Of those, 131 farm dairies operated as Permitted Activities and the remaining 18 hold Resource Consents to discharge treated effluent to water.

A revised monitoring programme was introduced this season. This was due to the continuing high level of compliance found on most farms in the previous two seasons and in response to the cost of running the programme. For the 131 farms that operate under permitted activity status we can not presently recover the costs of monitoring from the operator so is carried by the general rate payer. This revised programme now sees compliance monitoring of the districts farm dairies spread across two years with full reporting at the completion of each cycle. In the intervening years an interim report is produced. This year is an interim reporting period.

This new monitoring programme started this season with approximately 50% of the 131 farms operating under the Permitted Activity rules targeted for inspection. All those operating under Resource Consents are required to be inspected annually as per their consent conditions.

Of the 131 eligible farm dairies 82 or (63%) were ultimately inspected for compliance during the season as a result of follow ups, complaints or farmer requests.

When combined a total of 100 consented and permitted activity farms were inspected this season across Tasman district. The results of this initial survey were:

- 93% - Full Compliance.
- 5% - Non-Compliance/minor adverse effect.
- 0% - Non-Compliance/moderate adverse effect.
- 2% - Non-Compliance/significant and immediate adverse effect.

The 2007/2008 season has again proven to be a very positive one with respect to compliance. This is largely the result of the commitment of all farm owners and their staff to complete the works that were identified on their farms during surveys from previous seasons.

Tasman District currently has 143 farms that supply Fonterra and are therefore subject to the national targets of the Clean Streams Accord. The 2007/2008 season saw a large step forward by most farms in meeting the Accord targets. At the end of the season, Tasman Accord statistics were:

- 93% of streams have stock excluded from them.
- 100% of estuaries and lakes have stock excluded from them.
- 92% of regular crossings have bridges or culverts
- 100% of farms have a nutrient budget.
- 93% of Fonterra farms fully comply with their consent conditions or regional rules.

Heading into the 2008/2009 dairy season Tasman District has a very good rate of compliance with respect to farm dairy effluent management, and is very close to meeting all of the set targets. Again like last season there are no issues of non-compliance that stand out as being common issues of concern. Future compliance monitoring will focus on maintaining this high rate of compliance, seeking further improvements where necessary and progressing towards the five national targets of the Clean Stream Accord.

1. INTRODUCTION

1.1 Purpose

The purpose of this report is twofold. Firstly it is to present the interim results of compliance of the 2007/2008 dairy season with respect those farm dairies that hold Resource Consent to discharge treated dairy effluent to water, and also compliance with respect to those farms that operate under the Permitted Activity Rule 36.1.3 of the Proposed Tasman Resource Management Plan (PTRMP) – Discharge of Dairy Effluent to Land.

Secondly this report serves to up-date where Tasman District lies with respect to the five national targets as set out in the Clean Streams Accord (the Accord).

Presently Tasman District has 149 dairy farms. The results presented in this report come from a comprehensive survey of 100 farm dairies in Tasman District that operated during the 2007/2008 season. The survey specifically looked at the collection, containment, and disposal of effluent from the farm dairy and general farm management practices.

No sampling of waterways or soils was undertaken as part of this study, only the point of discharge from the pond systems (as required by the conditions of consent) was sampled, and this report does not assess effects of water quality, amenity, or aquatic ecology.

1.2 Structure of Report

The remainder of this report is split into four main sections. The first, Section 2, will discuss how the interim 2007/2008 farm dairy survey was conducted including the survey process itself and enforcement procedures initiated by Council's Compliance section.

Section 3 provides a discussion with respect to compliance with Rule 36.1.3 of the PTRMP, Resource Consent conditions, and Section 15(1) of the RMA 1991, where initial results from this season's survey are presented in Part 3.1.

Section 4 provides a discussion on Tasman District's progress towards meeting the five national targets of the Clean Streams Accord.

An accurate record of costs involved in the monitoring each of 100 farm dairies inspected this season has been kept by Compliance. These costs are discussed in Section 5.

A number of trends in dairy farming in Tasman District is presented in Section 6.

Section 7 provides an overall summary of compliance for this season and a summary of Tasman District's statistics relating to the Clean Streams Accord.

A discussion of 'where to from here' is presented in Section 8 where specific goals and targeted outcomes will be outlined for the upcoming 2008/2009 season. The report concludes with some recommendations in Section 9.

2. THE FARM DAIRY SURVEY

2.1 The Survey Process

The survey process was identical to that of previous surveys. It is not intended to detail that survey method in this report and the reader is referred to staff report EP06/05/18 for the methodology including the three 'sub-regions' specified in the reports. The only difference is that 82 of the 131 available farms that operate under Permitted Activity status were surveyed this season, with the remaining farms to be surveyed next season. The 82 farms selected for this season's monitoring consisted of those farms that required follow-up checks for outstanding compliance matters from last season and a random selection from of the 'sub-regions'.

3. COMPLIANCE

For the purpose of this report, all farms once assessed were placed into one of four categories that described their level of compliance. These categories are:

- **Full Compliance:** All Resource Consent conditions or all sections of Rule 36.1.3 of the PTRMP were complied with.
- **Minor Non-compliance:** technical non-compliance with respect to Resource Consent conditions or Rule 36.1.3 of the PTRMP, not resulting in any immediate adverse effect on the environment.

- **Moderate Non-compliance:** more than one technical non-compliance, and/or non-compliance with respect to Resource Consent conditions or Rule 36.1.3 of the PTRMP resulting in medium to long-term adverse effects on the environment.
- **Major Non-compliance:** non-compliance that resulted in a significant and immediate adverse effect on the environment, for example, unauthorised direct discharge of effluent to water.

These compliance terms will be referred to throughout the remainder of this report.

3.1 2007/2008 Initial Survey Results and Enforcement

Initial results

Compliance with respect to an individual's consent conditions, Rule 36.1.3 of the PTRMP and Section 15(1)(b) of the RMA 1991 as assessed from the initial farm inspection is presented in Figure 1.

Of the 100 farms inspected this season 93 (93%) of all farm dairies fully complied with their resource consents, rules in the plan or regulations. This very good result can be attributed to works completed as a result of enforcement procedures taken last season in response to non compliance, and farmers continued commitment to implementing best on-farm practices.

Five (5%) of farms presented non-compliance which caused a minor adverse effect on the environment. Such non-compliance included:

- Not having completed the installation of an adequate contingency plan in place to avoid discharges to water (1 farm).
- Having a nitrogen loading rate greater than 200kgN/ha/yr (as shown by a recently completed nutrient budget) (1 farm).
- The final treated effluent exceeding the quality parameters (BOD₅ and TSS) by less than 20% of the respective consent limit (3 farms).

No (0%) farm dairies presented non-compliance which resulted in a moderate adverse effect on the environment.

Two (2%) farms presented non-compliance that resulted in a significant and immediate adverse effect on the environment. This non-compliance involved the discharge of raw effluent onto land from where it then entered water.

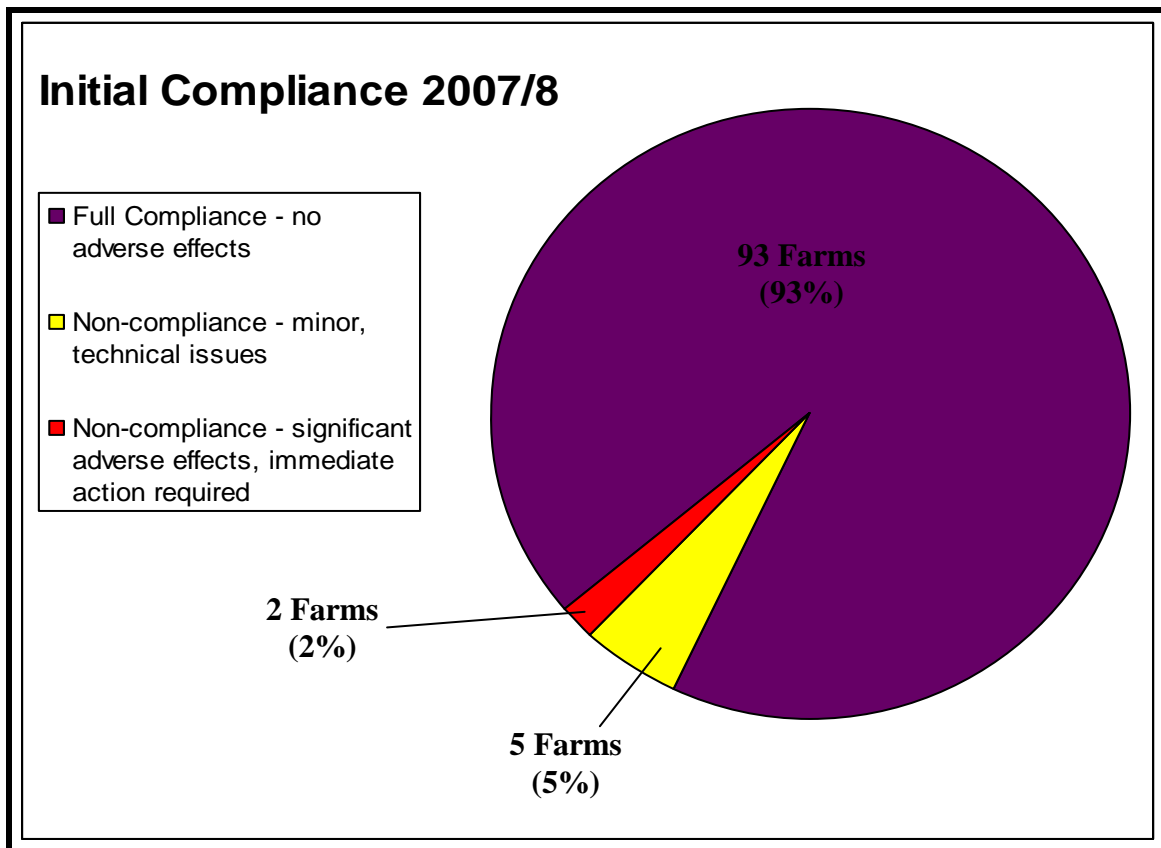


Figure 1: Compliance with respect to Rule 36.1.3 of the PTRMP, Resource Consent conditions, and Section 15(1) of the RMA 1991 following an initial assessment of 100 farm dairies.

3.2 Enforcement Action

Three modes of enforcement action were employed to address the non-compliance that arose from the farm inspections. These responses were largely determined on the level of non-compliance detected and the resulting adverse effect from the activity as a result of that non-compliance.

Farm Management Plans (FMPs)

Five FMPs were issued during the 2007/2008 season. FMPs were issued in circumstances where the environmental effects were minor. Common issues that these FMPs addressed were:

- To finish installing an appropriate contingency plan.
- To appropriately size the effluent disposal area (as shown by a recently completed nutrient budget) in order to comply with the 200kgN/ha/yr rule.

Abatement Notices

Only one Abatement Notice was issued following the initial compliance inspections. This Notice was issued in circumstances where the environmental effects were moderate to significant and immediate action required to rectify the situation. This case involved a discharge onto land in circumstances that resulted in severe ponding and in a way where it may have entered water. This farm is also under investigation for other related matters to which further enforcement action may result.

At present this Abatement Notice still stands and will continue to do so until Compliance is completely satisfied that all actual and potential adverse effects that the Notice addresses are satisfied.

Infringement Fines

No Infringement Fines were issued during the 2007/2008 dairy season.

Prosecutions

One prosecution before the Environment Court was initiated during the season. It was initiated as a result of the indirect discharge of effluent to land in circumstances where it entered a waterway. This discharge had a significant adverse effect on the downstream environment. This matter is before the court and will be reported on at a later date upon completion of sentencing.

4. CLEAN STREAMS ACCORD NATIONAL TARGETS

There are five separate targets to the Accord. In broad terms these are:

- that dairy cattle be excluded from larger streams;
- that regular dairy crossings be bridged or culverted;
- that all dairy farmers comply with resource consent or permitted activity standards;
- that all dairy farmers carry out nutrient budgeting;
- and that all regionally significant wetlands on dairy farms be fenced out.

Tasman District's performance in relation to each of the five targets is discussed in detail below. The statistics presented relate only to the 143 farm dairies in Tasman that supply Fonterra. The remaining six farms supply Westland Milk Products and are not subject to the Accord. This season 97 (68%) of the 143 Fonterra supply farms were inspected.

4.1 Preventing Stock Access to Waterways

Accord Target:

**Dairy cattle are excluded from 50% of streams and rivers by 2007, 90% by 2012.
Dairy cattle are excluded from 100% of estuaries and lakes by 2007.**

In most cases, fencing is the only practical method of excluding stock access to waterbodies. However, there may be circumstances where fencing is not required due to natural barriers, such as dense vegetation and steep river and stream banks.

Comparisons of fencing rates between previous seasons and this survey are difficult to make. A full and complete comparison will be achievable once all farm surveys have been completed at the end of the 2008/2009 season. However it can be reported that considerable effort has been made within the last 12 months to exclude stock from Tasman's waterways, this is particularly so for the Bainham/Rockville zone.

Fencing in this area is a massive task for some farm owners, with some farms having up to 15 km of streams running through their properties which means that it will take 30 km of fencing material to fence both sides of these streams. Taking this into consideration, of the 15 farms surveyed in the Bainham/Rockville zone, 94% of streams on these farms now have stock excluded from them. One farm has completed 6 km of fencing in the past year and aims to have the remaining waterway fenced by the start of next season.

The Matakītaki and Maruia zones were also areas that in previous years have lagged behind the average fencing rates for Tasman District. All three Fonterra farms in Maruia were inspected this season. Stock exclusion has increased from an average of 68% to 92%. Five farms (83%) in the Matakītaki zone were inspected this season where stock exclusion across these five farms is at an average of 97%. Compliance has made considerable effort over the past two seasons to make farmers aware of Council's 'River and Stream Management Fund'. This fund is available to farmers to assist with providing fencing materials. The fund has proven to be a very effective and valuable resource in helping farmers meet the Accord targets.

All estuaries and lakes have 100% stock exclusion and meet the 2007 target.

4.2 Stock Crossings

A 'regular stock crossing' is defined under the Accord as a stream that is "deeper than a 'Red Band' (300 mm) and 'wider than a stride' (1 m), and permanently flowing"... "where stock regularly (more than twice a week) cross a watercourse".

Accord Target:

50% of regular crossing points have bridges or culverts by 2007, 90% by 2012.

During the 2005/2006 farm survey a total of 244 stock crossings, were identified as being subject to the Accord definition in Tasman District. At the end of the previous season 214 (88%) had been bridged/culverted or had been retired. The initial results from the 2007/2008 survey reveal that at least three resource consents for new stock bridges have been granted and these bridges are to be installed over the 2008 winter. Two culverts have been installed, and four crossings have been done away with through the redesign of raceways. From this initial survey, 93% (227) of the regular crossings have been improved such that cattle do not access the waterway. This means Tasman District as a whole meets the 2012 target of regular 90% of crossings points having bridges.

4.3 Nutrient Management

Accord Target:

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

All of the 97 Fonterra farms inspected this season had a current nutrient budget completed for the dairy platform of the farm. In most cases a separate budget had also been completed for the effluent disposal area. Since the 2006/7 inspection, five of these 97 farms have had their first nutrient budget completed.

4.4 Management of Farm Dairy Effluent

Accord Target:

100% of farm dairy effluent discharges to comply with resource consents and regional plans immediately.

Compliance with respect to Resource Consents and the PTRMP is discussed in full in Section 3 of this report. Presented below in Figure 2 is the number of fully compliant Fonterra supply farms (both Permitted Activities and those with Discharge Permits).

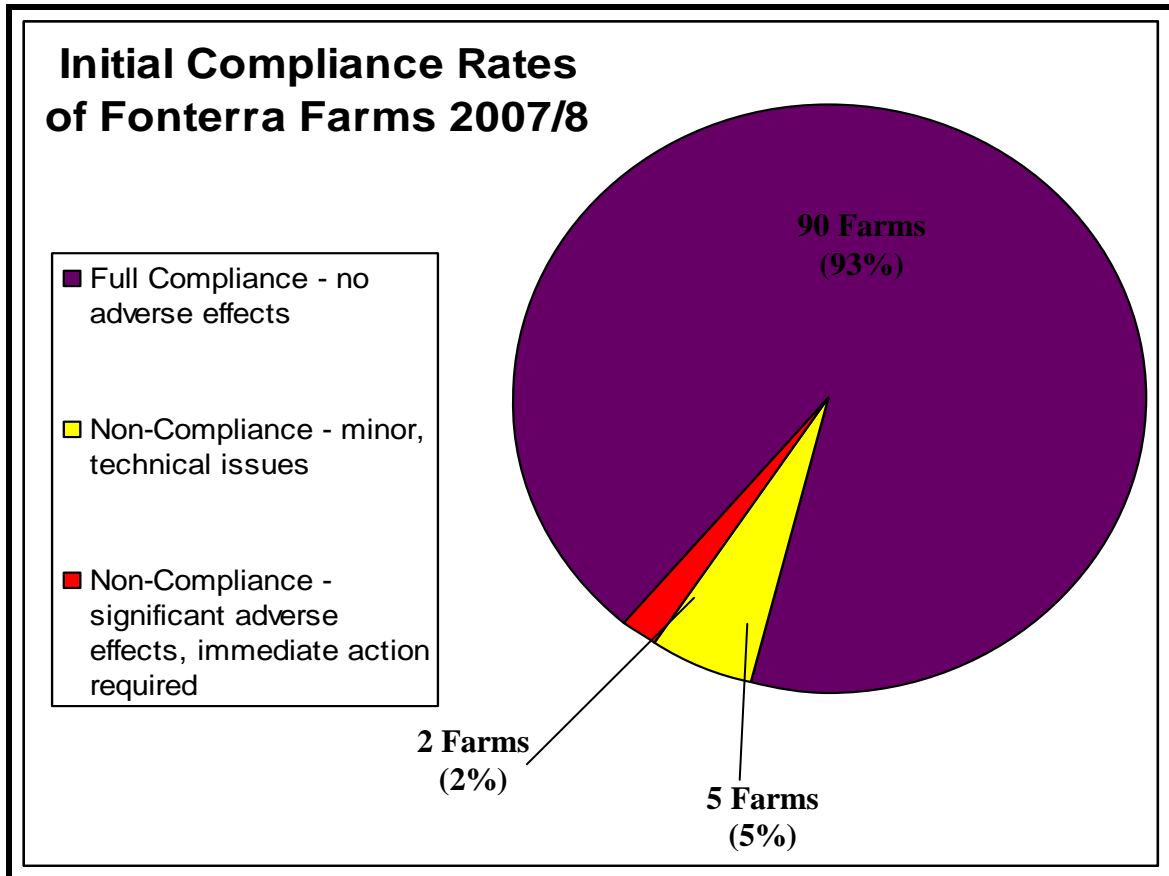


Figure 2: Compliance with respect to Rule 36.1.3 of the PTRMP, Resource Consent conditions, and Section 15(1) of the RMA 1991 following an initial assessment of 97 Fonterra supply farms.

Figure 2 shows that of the 97 Fonterra supply farms inspected this season 90 (93%) fully complied with Section 15(1)(b) of the RMA 1991, all sections Rule 36.1.3 of the PTRMP or consent conditions.

Five farms (5%) presented non-compliance which caused a minor adverse effect on the environment, no farms presented non-compliance of a moderate nature, and two farms presented non-compliance that resulted in a significant and immediate adverse effect on the environment. The circumstances of the non-compliance and subsequent enforcement action are detailed in full in Section 3.1 of this report.

Table 1 provides a further breakdown of compliance rates and compares these initial compliance rates between the two previous seasons for farms subject to the accord target.

Table 1: Comparison of the 2005/6 and 2006/7 seasons and the initial results from the 2007/2008 season with respect to the rate of compliance on Fonterra supply farms in Tasman District.

SEASON	% of Fonterra suppliers inspected	Compliance Grade			
		% of Fonterra farms complying fully with consent or permitted activity requirements	% of Fonterra farms with technical non-compliances resulting in a minor adverse effect.	% of Fonterra farms with non-compliances resulting in a moderate adverse effect	% of Fonterra farms with serious non-compliance resulting in a significant and immediate adverse effect
2005/6	148 (100%)	88 (59%)	43 (29%)	11 (7%)	6 (4%)
2006/7	143 (100%)	121 (85%)	20 (14%)	2 (1%)	0 (0%)
2007/2008	97 (68%)	90 (93%)	5 (5%)	0 (0%)	2 (0%)

Table 2 shows the formal enforcement action taken by Council over the previous two seasons and this season. Although only 68% of farms were inspected the diminishing number of abatement notices issued reflects the increasing compliance in this sector. As expected a similar trend is also apparent with respect to the number of Infringement Fines issued. Court action was similar for each season and continues to make up a very small proportion of enforcement action necessary to be taken in Tasman.

Table 2: Comparison of the 2005/6 and 2006/7 seasons and the initial results from the 2007/2008 season with respect to enforcement action initiated in Tasman District

Season	% of Fonterra suppliers inspected	No. of Abatement Notices Issued	No. of Infringement Fines Issued	No. of Prosecutions and/or Court Orders Initiated
2005/6	148 (100%)	17	4	1
2006/7	143 (100%)	4	3	1
2007/2008	97 (68%)	1	0	2

4.5 Wetlands

Accord Target:

50% of regionally significant wetlands to be fenced to prevent stock access by 2009, 90% by 2012.

The Accord acknowledges that over 90% of lowland wetlands in Tasman District have been drained and that natural water regimes of wetlands need to be protected.

The Council is in the process of further developing the inventory of wetlands from which staff will determine the level of significance (at a regional level) of the wetlands on or adjacent to dairy farms. Until this work is completed the level of compliance with respect to each of the Accord targets cannot be accessed.

5. COSTS

Presently there are no means to recover the costs incurred by Compliance in the monitoring of farm dairies with respect to the Permitted Activity Rules. Typical costs involved in the monitoring of each farm dairy including site visits and administration fall to Council and is general rate funded.

5.1 Permitted Activities (non recoverable)

A costs analysis was undertaken at the completion of the 2007/2008 season for the purpose of ascertaining the costs involved in compliance monitoring of those farms operating under Permitted Activity status. During the 2007/2008 season the average cost of monitoring a fully complaint farm dairy was \$145.25. These costs are non recoverable and do not take into account the time spent travelling to the properties which would likely double this cost. Table 3 presents a break-down of costs.

Table 3: Typical costs incurred by a fully compliant farm dairy (non recoverable) and excluding any travelling time.

DETAILS	HOURS (\$83/hr)	COSTS
Administration (mail out advising farmers of farm inspections)	0.25	\$20.75
Farm Inspection	0.5	\$41.50
Administration (filing of correspondence)	0.5	\$41.50
Miscellaneous (advise given/phone calls/ information posted/etc)	0.5	\$41.50
TOTAL	1.75	\$145.25

These costs increase further when a farm has issues of non-compliance with an average 1.5 hours additionally spent on re-inspection. This increase equates to around \$269.75 for those farms requiring work.

This season 82 farms operating as Permitted Activities were inspected. With mixed levels of compliance the non-recoverable cost of operating this program over the 2007/2008 season was approximately \$12,408.50. These total costs are presented in Table 4.

Table 4: Approximate total non recoverable costs of this survey

	Number of Farms	Staff Hours (\$83/hr)	Cost per farm	Total Costs
Fully Compliant	78	136.5	\$145.25	\$11,329.50
Non-Compliant	4	13	\$269.75	\$1,079.00
TOTAL	82	149.5	-	\$12,408.50

5.2 Resource Consents (recoverable cost)

The annual monitoring fee placed on all farm dairy Discharge Permits is \$300. This fee is set to cover monitoring and associated costs including sample analysis of the final discharge.

A costs analysis was undertaken at the completion of the 2007/2008 season for the purpose of ascertaining the costs involved in compliance monitoring of those farms operating under resource consent. This analysis included comparison of costs between monitoring the older (and now generally expiring consents) against the new generation of discharge consents replacing them. During 2007/2008 any additional cost incurred in monitoring these consents was recovered under section 36 of the RMA. Table 5 presents a break-down of costs involved in compliance monitoring of farm dairies with the older style Discharge Permits.

Presently there is one 'new generation' discharge consent, however six more are in the process of being authorised by Council. These new permits have a standard condition of consent that requires a five sample running median each season which carries a laboratory cost of \$485 alone. Table 6 presents a breakdown of costs incurred through the monitoring of 'new generation' consents.

Table 5: Typical costs of monitoring an older consent fully compliant farm dairy

DETAILS	HOURS (\$83/hr)	COSTS
Administration (mail out advising farmers or farm inspections)	0.25	\$21
Farm Inspection including obtaining samples	1.0	\$83
Sample analysis (BOD ₅ and TSS)	N/A	\$80
Administration (summary report to consent holder)	0.5	\$41
Administration (filing of correspondence)	0.5	\$41
Miscellaneous (advise given/phone calls/ information posted/etc)	0.5	\$41
TOTAL		\$307

Table 6: Costs of monitoring a new generation fully compliant farm dairy

DETAILS	HOURS (\$83/hr)	COSTS
Administration (mail out advising farmers or farm inspections)	0.25	\$21
Farm Inspection including obtaining 5 sample running median	3.5	\$290
Sample analysis (BOD ₅ and TSS)	N/A	\$485
Administration (summary report to consent holder)	0.5	\$41
Administration (filing of sample results, correspondence, and updating database)	0.5	\$41
Miscellaneous (advise given/phone calls/ information posted/etc)	0.5	\$41
TOTAL		\$919

These new consents are due to replace all existing consents as and when they expire. All 'older style' consent will expire within the next three years. When they are due to expire the consent holder will have the choice whether to apply for a 'new generation' consent, or opt for a land based discharge system and operate as a Permitted Activity.

As the fees and charges have been set for the year, council is able to use Section 36 (3) to recover outstanding monitoring in the interim however it will be necessary for Council to review the annual plan in the upcoming year to reflect these cost changes including the increased charge out rate. Again these costs do not account for the time spent travelling as per standard council policy and they do not include the new charge out rate.

6. FARM CHANGES IN TASMAN DISTRICT

Several changes in dairy farming have become apparent this season in Tasman. The most positive is the installation of K-Line irrigation systems for the purpose of improved effluent disposal. K-Line is a flexible hose line sprinkler system originally designed for pasture irrigation. Once the solids have been removed from farm dairy effluent K-Line provides an excellent method of disposal of the liquid part of the effluent. K-Line applies effluent to pasture at a lower rate of application over a longer period of time, a method of effluent disposal that is better suited for areas of high rainfall, and sloping pastures where run-off is an issue. The first K-line system was installed in Golden Bay during the 2006/7 season. Following a successful field day by Dexcel that allow farmers to see the system working, two more systems have been commissioned this season in Golden Bay with three more to be commissioned in Golden Bay next season, and two in the Murchison area.

Dairy conversions do not appear to be a trend in Tasman District, most likely due to a shortage of suitable land. There is only one conversion planned for the near future. However, the number of farm dairies is set to increase slightly in the coming seasons. This is due to two former dairy farms coming out of mothballs. They are to be fitted with new effluent systems, with large storage facilities. There are also two large farms in Tasman District that plan to split their herd in half and build a separate farm dairy to serve the other half of the herd.

7. CONCLUSION

It will be recalled that the purpose of this report was two fold. Firstly it is to present the interim results of compliance of the 2007/2008 dairy season with respect those farm dairies that hold Resource Consent to discharge treated dairy effluent to water, and also compliance with respect to those farms that operate under the Permitted Activity Rule 36.1.3 of the PTRMP – Discharge of Dairy Effluent to Land. Secondly this report presented an up-date of where Tasman District lies with respect to the five national targets as set out in the Clean Streams Accord (the Accord).

Summarised below are the major findings of this report.

A total of 149 dairy sheds had active discharges in the Tasman District during the 2007/2008 season. Of these, 131 farm dairies operated as Permitted Activities and the remaining 18 held Resource Consents to discharge treated effluent to water.

Throughout the 2007/2008 season 82 (63%) of the farms that operated under Permitted Activity status were inspected for compliance against the 10 conditions that comprise Rule 36.1.3 of the TRMP. All farms that hold a Discharge Permit were inspected for compliance of their respective consent conditions. The results of this initial survey were:

- 93% - Full Compliance.
- 5% - Non-Compliance/minor adverse effect.
- 0% - Non-Compliance/moderate adverse effect.
- 2% - Non-Compliance/significant and immediate adverse effect.

Tasman District currently has 143 farms that supply Fonterra and are therefore subject to the national targets of the Clean Streams Accord. During the 2007/2008 season 97 (68%) of these farms were inspected. The 2007/2008 season saw a large step forward by most farms in meeting the Accord targets. At the end of the season, Tasman Accord statistics were:

- 92% of streams have stock excluded from them.
- 100% of estuaries and lake have stock excluded from them.
- 93% of regular crossings have bridges or culverts
- 100% of farms have a nutrient budget.
- 93% of farms comply with their consent conditions or regional rules.

Heading into the new dairy season Tasman District has a very good rate of compliance with respect to farm dairy effluent management. This initial survey shows that it is very likely that Tasman District will meet all of the Accord targets by the end of the 2008/2009 season.

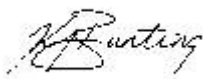
8. WHERE TO FROM HERE?

The 2007/2008 season has again proven to be another very positive one with respect to compliance. Much has been achieved by all farm dairy owners and operators and Tasman District now has its best compliance rate on record. The farmers of Tasman District and their staff need to be recognised for their ongoing commitment for best farm practices. On the whole their positive attitude to compliance standards and the Clean Streams Accord is truly commendable.

The 2008/2009 season will see all the remaining Permitted Activities inspected and all of the farms that hold a discharge permit will again be inspected. With respect to oxidation pond systems Council's Compliance Section will continue to work with farmers during the 2008/2009 season to ensure that all ponds work effectively and the ponds are desludged during the season. Samples will continue to be taken of the final discharge from these pond systems as required by the conditions of consent to monitor on-going performance of these systems.

9. RECOMMENDATIONS

From the findings of this report it is recommended that this report be received.



Kat Bunting
Compliance Officer