

## STAFF REPORT

**TO:** Environment & Planning Committee

**FROM:** Kat Bunting, Compliance Officer

**REFERENCE:** C653

**SUBJECT:** **FARM DAIRY COMPLIANCE REPORT (2007-2009) – REPORT EP09/07/11** - Report prepared for meeting of 16 July 2009

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### EXECUTIVE SUMMARY

This report presents the full and final compliance results from the 2007-2009 reporting period of farm dairy surveys, 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 2008/2009 season a total of 148 dairy sheds had active discharges in the Tasman District (down from 149 since the previous season). Of those, 137 farm dairies operated as Permitted Activities and the remaining 11 hold Resource Consents to discharge treated effluent to water.

A revised monitoring programme was introduced last 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 137 farms that operate under permitted activity status we can not presently recover the costs of monitoring from the operator so it 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 a full reporting period.

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

Of the 137 eligible farm dairies that operate as permitted activities 127 or (93%) were ultimately inspected for compliance during the two year reporting period. All farms operating under Resource Consents were inspected twice during this two year period.

When combined a total of 149 inspections were made of 131 consented and permitted activity farms during the two year reporting period. The final results of this survey were:

- 89% - Compliant
- 6% - Non-Compliance
- 5% - Significant Non-Compliance

Tasman District currently has 142 farms that supply Fonterra and are therefore subject to the national targets of the Clean Streams Accord. Of the 142 Fonterra Farms, 133 (94%) were inspected. The 2007-2009 reporting period saw further efforts by most farms towards meeting the Accord targets. At the end of the 2008/2009 season, Tasman Accord statistics have increased to:

- 92% of streams have stock excluded from them.
- 100% of estuaries and lakes have stock excluded from them.
- 93% of regular crossings have bridges or culverts
- 99% of farms have a nutrient budget.
- 89% of Fonterra farms fully comply with their consent conditions or regional rules.

Heading into the 2009/2010 dairy season Tasman District farmers have for the most part continued to show very good rate of compliance with respect to farm dairy effluent management, and are very close to meeting all of the set Accord targets. Again like previous reports there are no issues of non-compliance that stand out as being common issues of concern. Rather non-compliance has been an issue for a selected few who have elected not to come up to speed. Future compliance monitoring will focus on maintaining this high rate of compliance across the board while seeking further improvements from those few who continue to drag the chain.

## **1. INTRODUCTION**

### **1.1 Purpose**

The purpose of this report is twofold. Firstly it is to present the final results of compliance for the 2007/2008 and 2008/2009 dairy seasons 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 148 dairy farms. The results presented in this report come from a comprehensive survey of all farms with resource consents and 93% of permitted activities in Tasman District that operated during the two year reporting period (2007-2009). 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 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 results from this 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 of each of the farm dairies inspected during this reporting period has been kept by Compliance. These costs are discussed in Section 5.

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

Section 7 provides an overall summary of compliance for this survey 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 2009/2010 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 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. This new monitoring programme sees approximately 50% of the farms operating under the Permitted Activity rules targeted for inspection each season. All those operating under Resource Consents are required to be inspected annually as per their consent conditions.

## 3. COMPLIANCE

For the purpose of this report, all farms once assessed were placed into one of three categories that described their level of compliance. The criteria for assigning these categories are:

- **Compliant:** No non-compliance with any Resource Consent conditions or any sections of Rule 36.1.3 of the PTRMP were found at the time of inspection.
- **Non-compliant:** All issues that did not fit into either "compliant" or "significantly non-compliant" e.g. technical non compliance with no adverse effect.

- **Significantly Non-compliant:** refer to Appendix 1 for a full list of criteria

These compliance terms are used by all Regional Councils when reporting on dairy compliance and will be referred to throughout the remainder of this report.

### 3.1 2007-2009 Survey Results and Enforcement

#### Survey 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 farm inspection is presented in Figure 1.

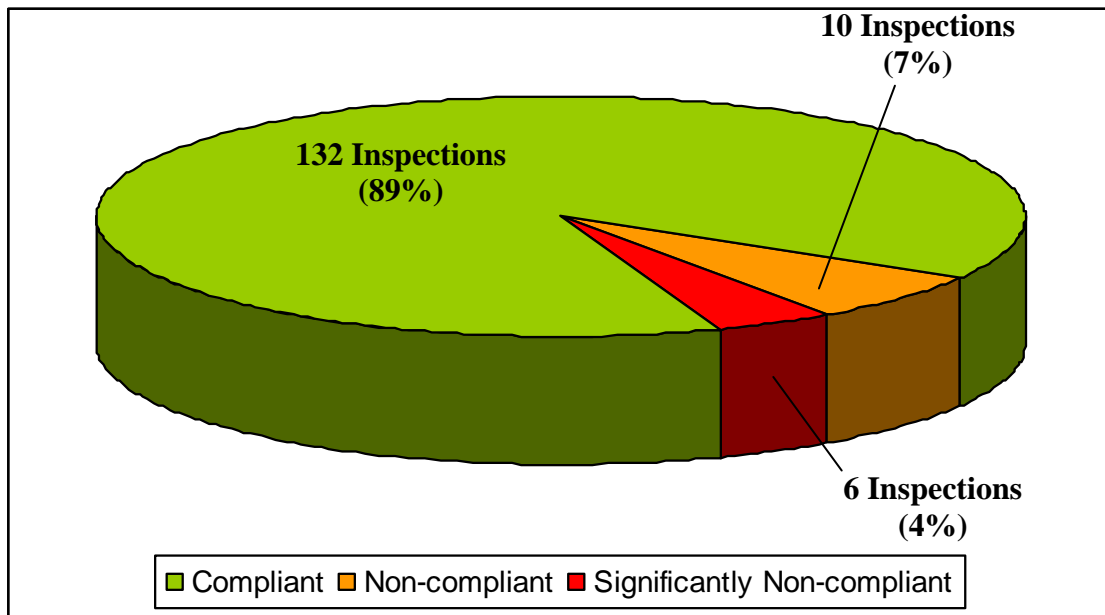
Of the 149 inspections made during 2007 and 2009, 132 (89%) of all inspections were graded 'Compliant'.

Ten (7%) inspections found issues that were graded as 'Non-compliant'. Such non-compliance included:

- Minor ponding of effluent on the ground surface.
- Having a nitrogen loading rate 1-10% greater than 200kgN/ha/yr (as shown by a recently completed nutrient budget).
- The final treated effluent exceeding the quality parameters (BOD<sub>5</sub> and TSS) by less than 10% of the respective consent limit, but no measurable impact on the receiving environment.

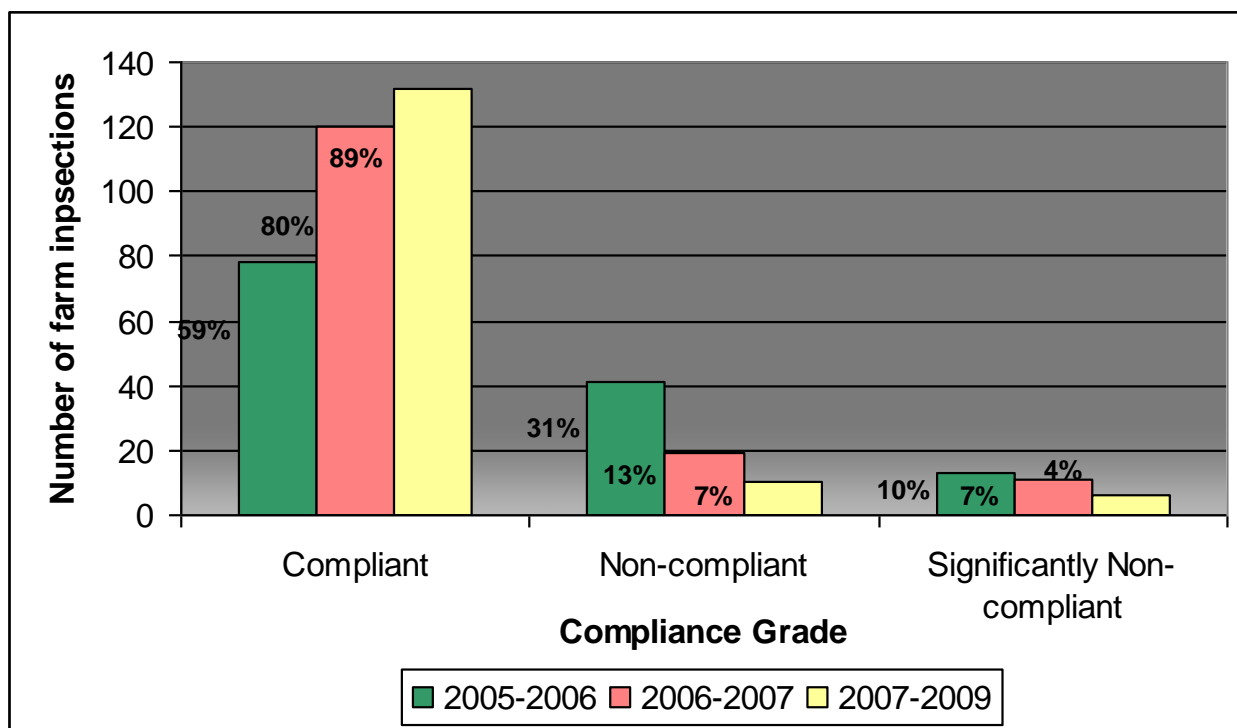
Six (4%) inspections found issues that were graded as 'Significantly Non-compliant'. Some inspections found more than one issue that was graded as being significantly non-compliant. Such non-compliance included:

- The discharge of raw effluent onto land where it subsequently entered water.
- The discharge of effluent directly into water.
- Severe ponding of effluent on the ground surface.
- The breach of an Abatement Notice.
- The breach of an Enforcement Order



**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 149 inspections of 138 farm dairies.

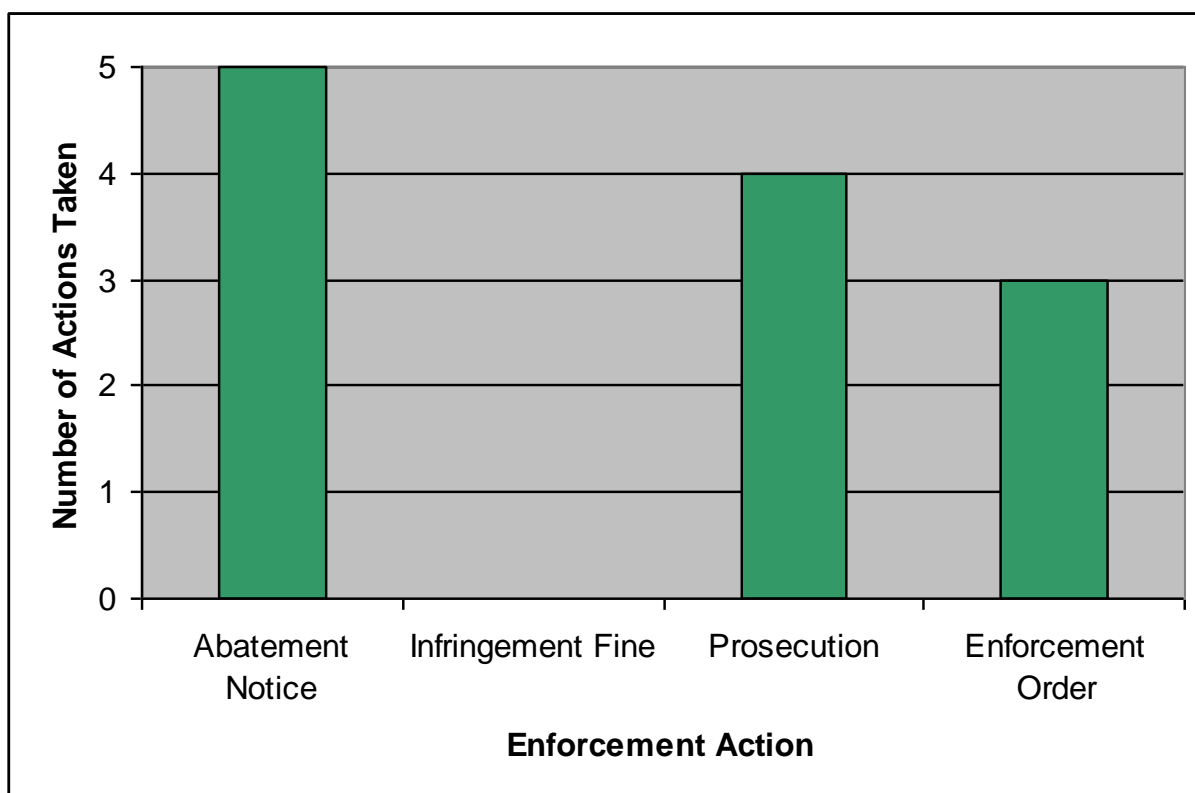
Figure 2 shows a comparison of the compliance rates from the 2005/6 and 2006/7 surveys with this survey. From Figure 2 it can be seen that full compliance has continued to improve from season to season with this reporting period being no exception. The percentage of farm inspections graded as 'Compliant' has improved each year since the initial survey in 2005/6. This continual improvement can be directly attributed to the commitment of most farm owners and their staff to employ best farm practices with respect to the disposal of farm dairy effluent. All but one farm that were graded 'Significantly Non-compliant' during the 2007/2009 survey are repeat offenders that have elected not to improve their performance since the initial survey in 2005/6. In response to this unwillingness Council was left with no option but to undertake consequential enforcement action that included action before the courts. Enforcement Action undertaken for the 2007-2009 reporting period is detailed below.



**Figure 2:** Comparison of Compliance with respect to Rule 36.1.3 of the PTRMP, Resource Consent conditions, and Section 15(1) of the RMA 1991 from previous dairy seasons.

### 3.2 Enforcement Action

Four modes of enforcement action were employed to address the non-compliance that arose from farm inspections, these being Abatement Notices, Infringement Fines, Prosecutions, and Enforcement Orders. Six inspections resulted in Council taking enforcement action during the 2007-2009 reporting period. In some circumstances more than one form of action was taken against a given farm/landowner/farm worker. The type of enforcement action taken is largely determined on the resulting adverse environmental effect arising from that non-compliance. Enforcement Action taken by Council during the 2007-2009 reporting period is presented in Figure 3.



**Figure 3:** Enforcement Action taken against Non-Compliance with respect to Rule 36.1.3 of the PTRMP, Resource Consent conditions, and Section 15(1) of the RMA 1991 following 149 inspections of 138 farm dairies.

### Abatement Notices

An abatement notice prescribed under Section 322 of the Resource Management Act is a formal and legal directive from Council to cease an activity and/or undertake an action(s) in order to avoid, remedy or mitigate an actual or potential adverse effect on the environment. An abatement notice is used by Council to immediately deal with an illegal activity and to instigate corrective action. Further enforcement action can follow the issuing of an abatement notice.

Five Abatement Notices were issued during this reporting period. All five notices required that an actual or potential unauthorised direct or indirect discharge to water be ceased immediately. Two of these notices also required immediate improvements to effluent systems to avoid, remedy or mitigate further discharges occurring. Three recipients of an abatement notice were also subject to prosecution and enforcement orders from the courts. These three cases were the result of significant unauthorised discharges coupled with extensive past history of non-compliance with consent conditions or the permitted activity rules.

### Infringement Fines

An infringement fine prescribed under Section 343C of the Resource Management Act is an instant fine issued by Council to a person(s)/company who has committed an offence against the Act. No Infringement Fines were issued during the 2007-2009 reporting period.

## **Prosecutions**

Four prosecutions before the Environment Court were initiated during the 2007-2009 reporting period. Only one of these cases has been finalised at the time of the writing of this report. This case concerned the discharge of effluent to land where that effluent subsequently entered water. The offender pleaded guilty to this offence and was subsequently convicted and fined \$7000 with additional court costs.

Two prosecutions are currently before the court as a result of significant effluent discharge offences. In both cases the discharge had a considerable adverse effect on the downstream environment. Both defendants are also subject to enforcement orders in order to get system improvements in place to avoid future incidents. Both matters are yet to be finalised and outcomes will be reported on at a later date.

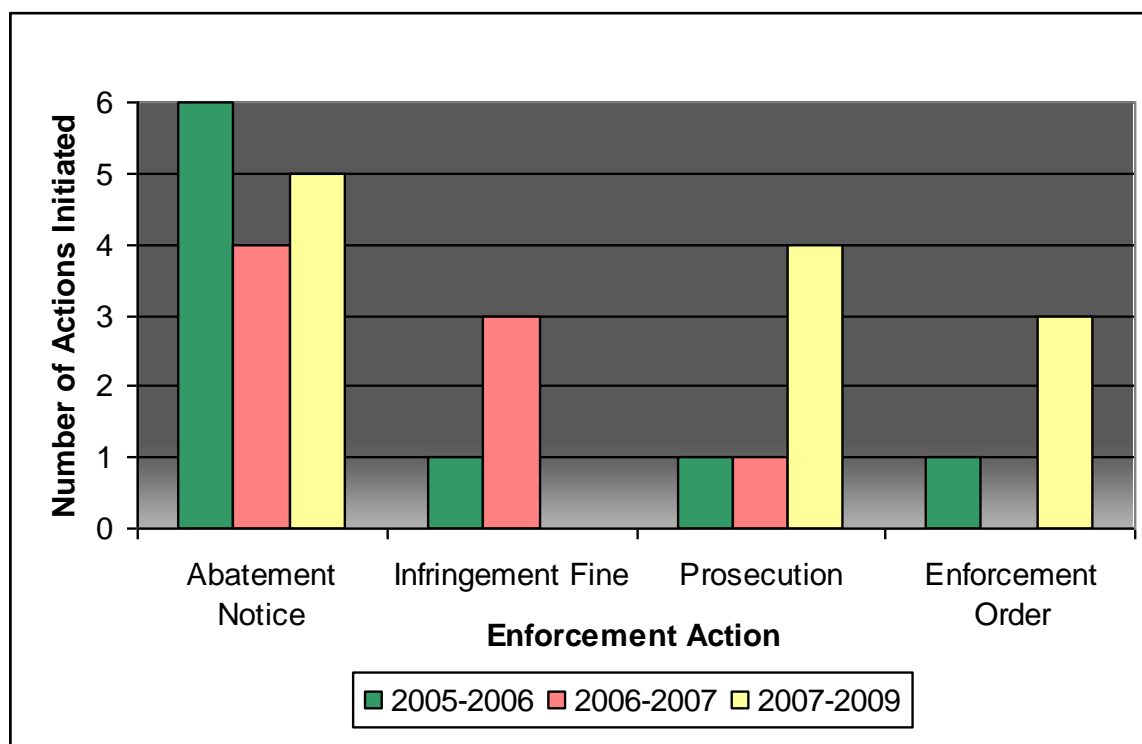
The fourth matter relates to the breach of an existing enforcement order that was placed on the particular farm during a previous season. Recent inspections have found a range of offences against both the Act and the enforcement order itself and the matter is now proceeding through the system.

## **Enforcement Orders**

An enforcement order prescribed under Section 319 of the Resource Management Act is a directive from the Court to a person(s)/company to cease an activity and/or undertake an action(s) in order to avoid, remedy or mitigate an actual or potential adverse effect on the environment from their activity. As stated three enforcement orders against two farms were initiated this reporting period. All three orders concerned inadequacies in farm infrastructure and/or poor management practices resulting in unnecessary risk to the environment or repeat offending. All three enforcement orders are before the court and yet to be finalised.

Figure 4 shows a comparison of enforcement actions taken from the 2005/2006 and 2006/2007 surveys with this survey. From Figure 4 it can be seen that enforcement action before the courts has increased during this reporting period when compared to previous seasons (note that the last reporting period covers two seasons). This is a direct result of Council taking assertive action against a small percentage of farmers who have shown disregard or simply elected not to comply with the effluent rules despite been given the same opportunities as others. All but one of these farmers has featured in the non-compliance statistics for all three previous dairy seasons.





**Figure 4:** Comparison of Enforcement Actions initiated for non-compliance against Rule 36.1.3 of the PTRMP, Resource Consent conditions, and Section 15(1) of the RMA 1991 from previous dairy seasons.

#### 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 142 farm dairies in Tasman that supply Fonterra. The remaining six farms supply Westland Milk Products and are not subject to the Accord. During the 2007-2009 reporting period 133 (94%) of the 142 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.

Table 1 shows the average 'rate of stock exclusion' for each of the sub-regions for Tasman District has increased from 76 to 90% between the 2005/6 and 2006/7 seasons and increased further to be 92% by the end of the current reporting period. 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 15km 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 21 farms surveyed in the Bainham/Rockville zone, 89% of streams on these farms now have stock excluded from them. One farm has completed more than 6km of fencing in the past two seasons.

Tasman District as a whole now comfortably meets the 2012 Accord target. However, there are still zones that lag behind the average fencing rates for Tasman District. Stock exclusion has not progressed in Maruia and Motupipi as hoped. The stock exclusion rate in these two zones is still 75% and 85% respectively. 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 in other zones meet the Accord targets.

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

Sub-Region	Zone	Average % of streams with stock exclusion		
		2005/2006	2006/2007	2007/2009
Central	Waimea	92%	92%	96%
	Upper Motueka	88%	91%	91%
	Moutere	80%	100%	100%
Golden Bay	Bainham/Rockville	70%	82%	89%
	Pakawau	79%	89%	93%
	Puramahoi/Onekaka	75%	92%	93%
	Motupipi	75%	85%	85%
	Kotinga/Anatoki	95%	97%	97%
	Takaka Valley	76%	98%	98%
Murchison	Owen	70%	83%	86%
	Matiri Valley	95%	95%	97%
	Murchison Town	71%	81%	96%
	Mangles/Tutaki	85%	90%	90%
	Matakitaki	68%	95%	96%
	Maruia	25%	75%	75%
	<b>TOTAL</b>	<b>76%</b>	<b>90%</b>	<b>92%</b>

**Table 1:** Comparison of the 2005/6, 2006/7, and 2007-2009 seasons with respect to the percent of streams on Fonterra supply farms in Tasman District that have stock excluded from them

## 4.2 Stock Crossings

A 'regular stock crossing' is defined under the Accord as a stream that is "deeper than a 'Red Band' (300mm) and 'wider than a stride' (1m), 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 2006/7 season 214 (88%) had been bridged/culverted or had been retired. The final results from the 2007-2009 survey reveal that six regular crossing have been eliminated. Two culverts/bridges have been installed, and four crossings have been done away with through the redesign of raceways. From this 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. However, there are still a number of significant crossings in terms of size and potential environmental impact in that remain Tasman. One of these crossing will be bridged before the start of the 2009/2010 season.

#### **4.3 Nutrient Management**

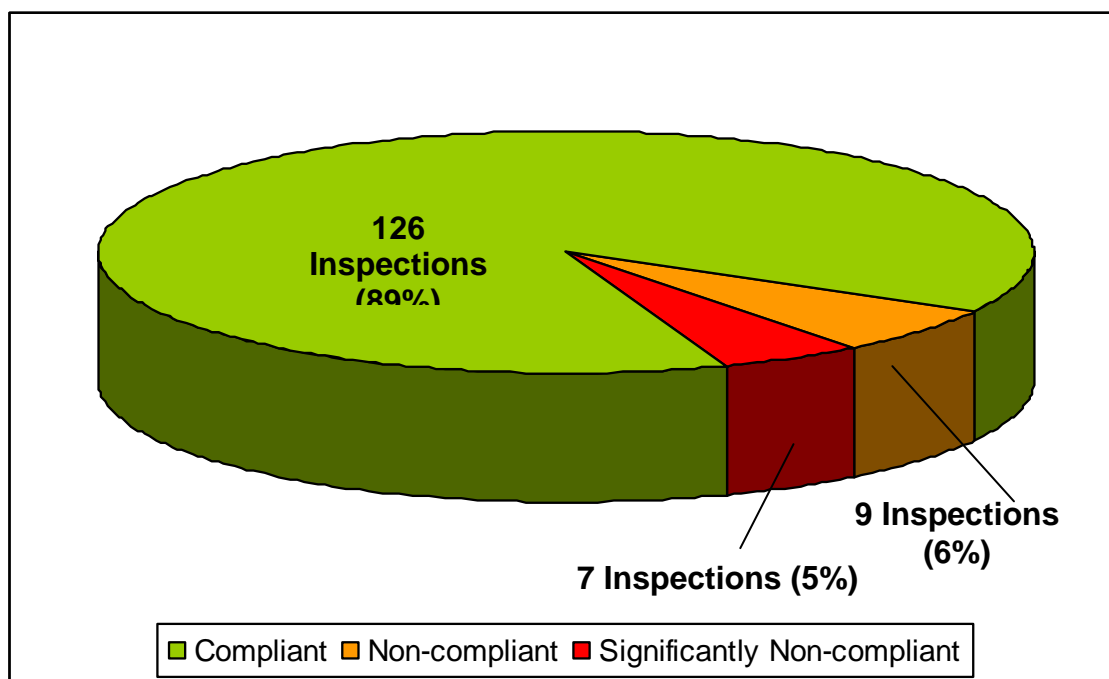
**Accord Target:****100% of dairy farms to have in place systems to manage nutrient inputs and outputs by 2007.**

Of the 142 Fonterra farms inspected this season 99% 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.

#### **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 5 is the number of fully compliant Fonterra supply farms (both Permitted Activities and those with Discharge Permits).



**Figure 5:** Compliance with respect to Rule 36.1.3 of the PTRMP, Resource Consent conditions, and Section 15(1) of the RMA 1991 following 142 inspections of 133 Fonterra supply farms.

Figure 5 shows that of the 142 inspections made during 2007-2009 reporting period 126 inspections (89%) fully complied with Section 15(1)(b) of the RMA 1991, all sections Rule 36.1.3 of the PTRMP or consent conditions.

Nine (6%) of inspections were graded 'non-compliant' and seven inspections (5%) were graded 'significantly non-compliant'. The circumstances of the non-compliance and subsequent enforcement action are detailed in full in Section 3.1 of this report.

#### 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. The costs associated with consent monitoring are recovered by way of a Section 36 (RMA) charge.

## 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 number of successful field-days in Golden Bay that have allowed farmers to see the system working, five systems have been commissioned since 2007 in Golden Bay with two more to be commissioned in Golden Bay next season, and one in the Upper Motueka 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 that has occurred in the last two seasons. 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 effluent 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 final results of compliance of the 2007-2009 two season reporting period 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 148 dairy sheds had active discharges in the Tasman District during the 2007/2009 seasons. Of these, 137 farm dairies operated as Permitted Activities and the remaining 11 held Resource Consents to discharge treated effluent to water.

Throughout the current reporting period 127 (93%) of the farms that operate under Permitted Activity status were inspected at least once for compliance against the 10 conditions that comprise Rule 36.1.3 of the TRMP. All farms that hold a Discharge Permit were inspected at least twice for compliance of their respective consent conditions. A total of 149 inspections of 138 farms were made during the two year reporting period. The results of this initial survey were:

- 89% - Compliant.
- 6% - Non-Compliant
- 5% - Significantly Non-Compliant

Tasman District currently has 142 farms that supply Fonterra and are therefore subject to the national targets of the Clean Streams Accord. During this reporting period 133 inspections were made of these farms. The 2007-2009 reporting period saw further positive steps forward by most farms towards 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 lakes have stock excluded from them.
- 93% of regular crossings have bridges or culverts.
- 99% of farms have a nutrient budget.
- 89% of farms comply with their consent conditions or regional rules.

Heading into the new dairy season Tasman District continues to present a good rate of compliance with respect to farm dairy effluent management. These final survey results show that it is very likely that Tasman District will meet all of the Accord targets by 2012.


## **8. WHERE TO FROM HERE?**

The 2007-2008 and 2008-2009 seasons have again proven positive with respect to compliance. The large majority of farm dairy owners and operators and Tasman District continue their good record of compliance. Their ongoing commitment for best farm practices and positive attitude to compliance standards and the Clean Streams Accord is reflected in the continuing high standard of compliance in Tasman.

All Discharge Permits and Permitted Activities will be inspected next season. Particular attention will be paid to those that have a poor compliance history.

## **9. RECOMMENDATIONS**

It is recommended that the Committee receives this report.



Kat Bunting  
**Compliance Officer**

Criteria for assigning a grade of significant non compliance, and examples of situations that would meet the criteria.

Criteria	Examples
Unauthorised discharges that have entered water (Ground or surface water)	<ul style="list-style-type: none"> <li>• Overflowing ponds or sumps into surface water</li> <li>• Overland flow /runoff into surface water</li> <li>• Irrigating over surface water</li> <li>• Race/feedpad/standoff pad runoff into surface water</li> <li>• Discharges in breach of consent or plan rule conditions, and where adverse effects are visible/measurable/likely: e.g.                             <ul style="list-style-type: none"> <li>• S107 considerations e.g. change in colour or clarity after mixing</li> <li>• Exceeding ammonia limits</li> <li>• Exceeding NTU/SS limits</li> <li>• Exceeding BOD limits</li> <li>• Exceeding faecal limits</li> <li>• Exceeding ground water nitrogen concentration limits</li> </ul> </li> </ul>
Unauthorised Discharges that may enter water (Ground or surface water)	<ul style="list-style-type: none"> <li>• Significant surface ponding</li> <li>• Irrigating when soil conditions are too wet</li> <li>• Discharge without using an irrigator (e.g. pipe end discharge)</li> <li>• Sludge dumping</li> <li>• Discharges in breach of consent or plan rule conditions, and where adverse effects are visible and/or measurable and/or likely: e.g.                             <ul style="list-style-type: none"> <li>• Exceeding nutrient application rates</li> <li>• Exceeding effluent application depths/rates</li> </ul> </li> </ul>
Breach of abatement notice	<ul style="list-style-type: none"> <li>• Any breach of an abatement notice</li> </ul>
Objectionable effects of odour	<ul style="list-style-type: none"> <li>• Serious adverse effects of odour have occurred</li> </ul>
System shortcomings (where required by a rule in a plan or a resource consent)	<ul style="list-style-type: none"> <li>• Serious lack of contingency storage or backup plan.</li> </ul>
Multiple minor non compliances on site with cumulative effects	<ul style="list-style-type: none"> <li>• Multiple minor discharges into a sensitive environment</li> </ul>