



STAFF REPORT

TO: Environment & Planning Subcommittee - Special Meeting

FROM: Kathryn Bunting, Compliance Officer

REFERENCE: C653

SUBJECT: **RESULTS OF PERMITTED ACTIVITY DAIRY FARM SURVEY – REPORT EP06/05/18 - Report Prepared for 30 May 2006 meeting**

1. INTRODUCTION

The purpose of this report is to present results of compliance with respect to Permitted Activity Rule 36.1.3 of the Tasman Resource Management Plan (TRMP) – Discharge of Dairy Effluent to Land (Appendix 1).

The results presented in this report come from a comprehensive survey of all farm dairies in Golden Bay, Upper Motueka Catchments, Moutere, Waimea, and Murchison areas that operate under Permitted Activity status. The survey specifically looked at the collection, containment, and disposal of effluent from the farm dairy and general farm management practices. The data presented in this report was collected over two consecutive seasons (2004/2005 and 2005/2006).

This report does not assess compliance of those farm dairies that hold a Discharge Permit that authorises the discharge of treated farm dairy effluent to water. Compliance with respect to these farms is presented in a separate report. Furthermore, no sampling of waterways or soils was undertaken as part of this study, and this report does not assess effects of water quality, amenity, or aquatic ecology.

2. DAIRY FARMING IN TASMAN DISTRICT

Dairy farming is a significant primary industry in Tasman District. It is a major contributor to the district's economy, provides both primary and secondary employment, and helps maintain the district's network of regional towns.

Tasman District had 155 farm dairies operating during the 2005/2006 season. These farms are located between Puponga, at the base of Farewell Spit to Maruia, located approximately 50 kilometers south of Murchison. The largest concentration of farms is in Golden Bay, particularly within the Takaka Valley and Bainham/Rockville areas.

Of these 155 farms, 132 (85%) presently operate under Permitted Activity status, of which, 72 are located in Golden Bay, 28 in Murchison, and 32 are located in the Upper Motueka Catchment, and Moutere/Waimea areas.

In the Tasman District, farm dairy effluent is disposed of as either a land based application and is regarded as a Permitted Activity (i.e. no resource consent from Tasman District Council (TDC) is required), provided that conditions to minimise

potential adverse effects on water quality are met (Rule 36.1.3 of the TRMP), or treated effluent is discharged to water. In the latter case a resource consent from TDC is required, as there is greater potential risk of adverse effects on water quality.

3. THE PERMITTED ACTIVITY SURVEY

3.1 Identifying the Districts Farms

A list of supplier postal addresses was provided by Fonterra and Westland Milk Products for the 2004/2005 and 2005/2006 seasons. Currently, Tasman District has seven farms that supply Westland Milk Products. Each farm was then located on the Council's GIS database from which a map consisting of an aerial photograph of each farm dairy and surrounding land and water-ways was produced. This map was later used during the farm inspections, where it was annotated to show the effluent disposal area, and any stream crossings. There were a large number of farms that were not able to be located using the above method, as the postal addresses either related to post boxes or the farm owner resided outside Tasman District. In such cases each farm property was located on the ground by locating the supplier number at the farm gate. Once the farms had been found, a location map as described above was produced.

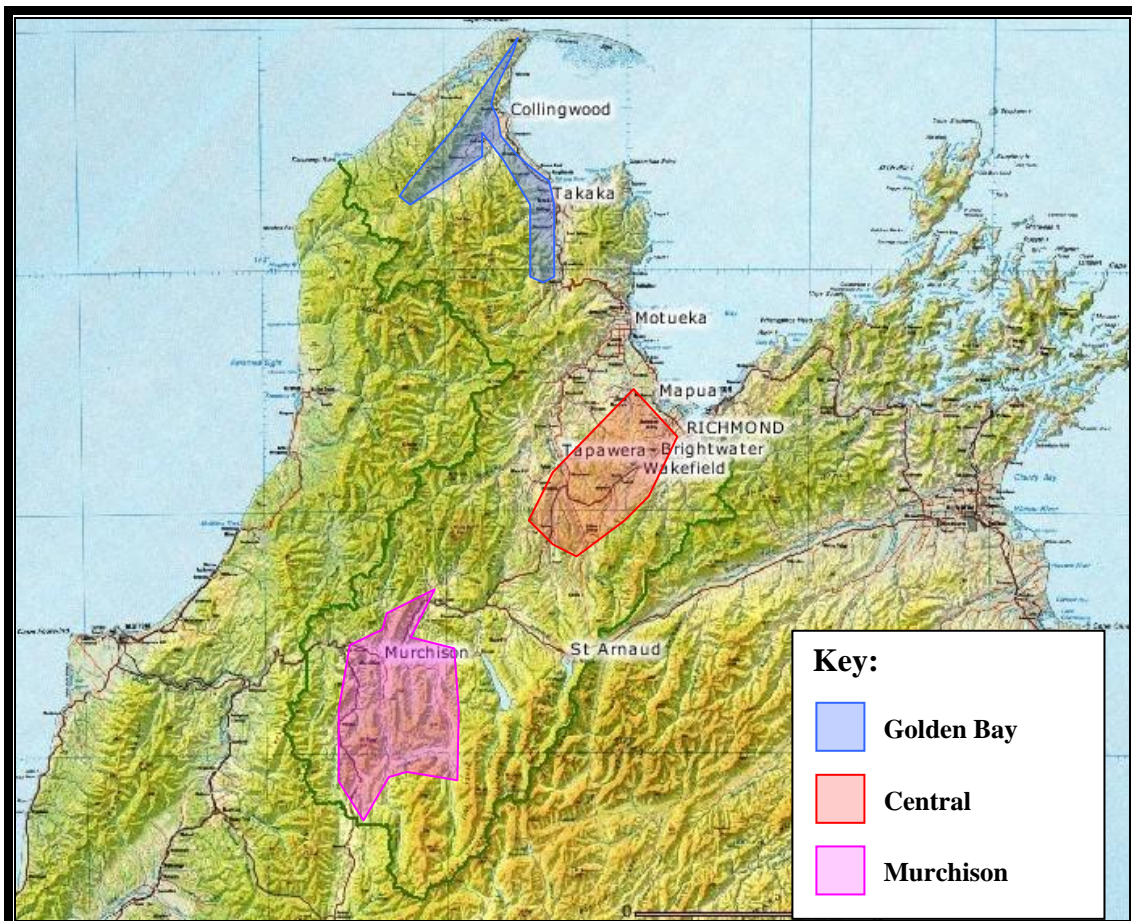


Figure 1 : Map of Tasman District with the three sub-regions overlaid.

In order to manage the project, all farms were divided into three 'sub-regions', these being Golden Bay, Central, and Murchison. Figure 1 shows the location and spatial area of each of these three sub-regions.

These sub-regions were then split into zones that either related to an area or had a common environmental feature such as a river. Figures 2, 3, and 4 show the location and spatial area of each zone within the Golden Bay, Central, and Murchison sub-regions respectively.

The Golden Bay sub-region is made up of six zones. These are Bainham/Rockville, Pakawau, Puramahoi/Onekaka, Motupipi, Kotinga/Anatoki, and Takaka Valley. The large majority of farm dairies in Golden Bay are concentrated in the Takaka Valley and Bainham/Rockville zones. The remaining farms in the Bay are located in small pockets along the narrow coastal margin between the Takaka River Mouth to Puponga.

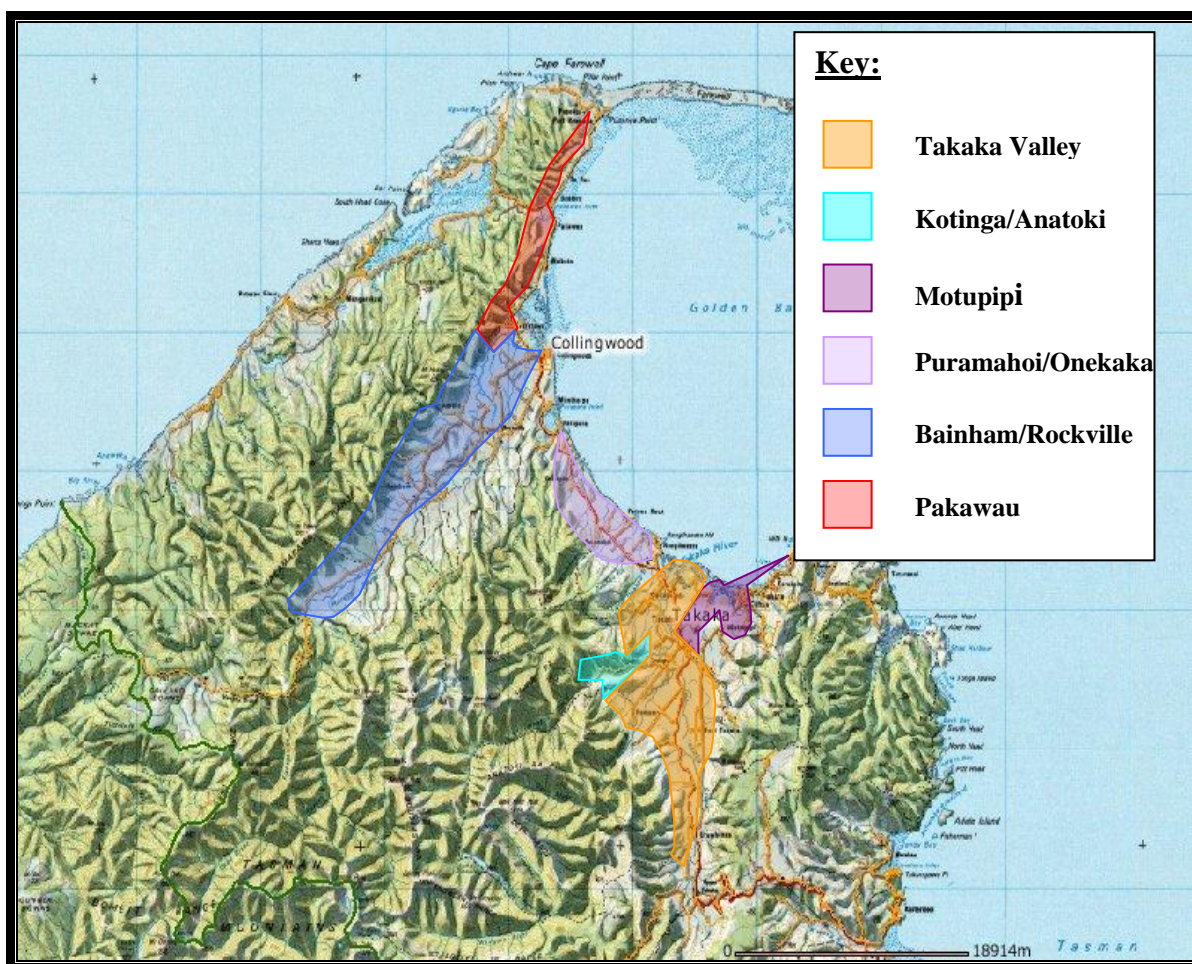


Figure 2: Golden Bay sub-region with zones overlaid

The 'Central sub-region' is made up of three zones that are quite separate from each other in the fact that they are located in isolated valleys or river flats. For the purpose of this report the zones are regarded as belonging to one group as they all lie within the central region of Tasman District. These zones are the Waimea Plains, Upper Motueka Catchment, and Moutere.

The Murchison sub-region is made up of six zones. These are Owen, Matiri Valley, Town, Mangles/Tutaki, Matakitaki Valley, and Maruia/Shenandoah. Each zone has a similar number of farms each, ranging from four to six.

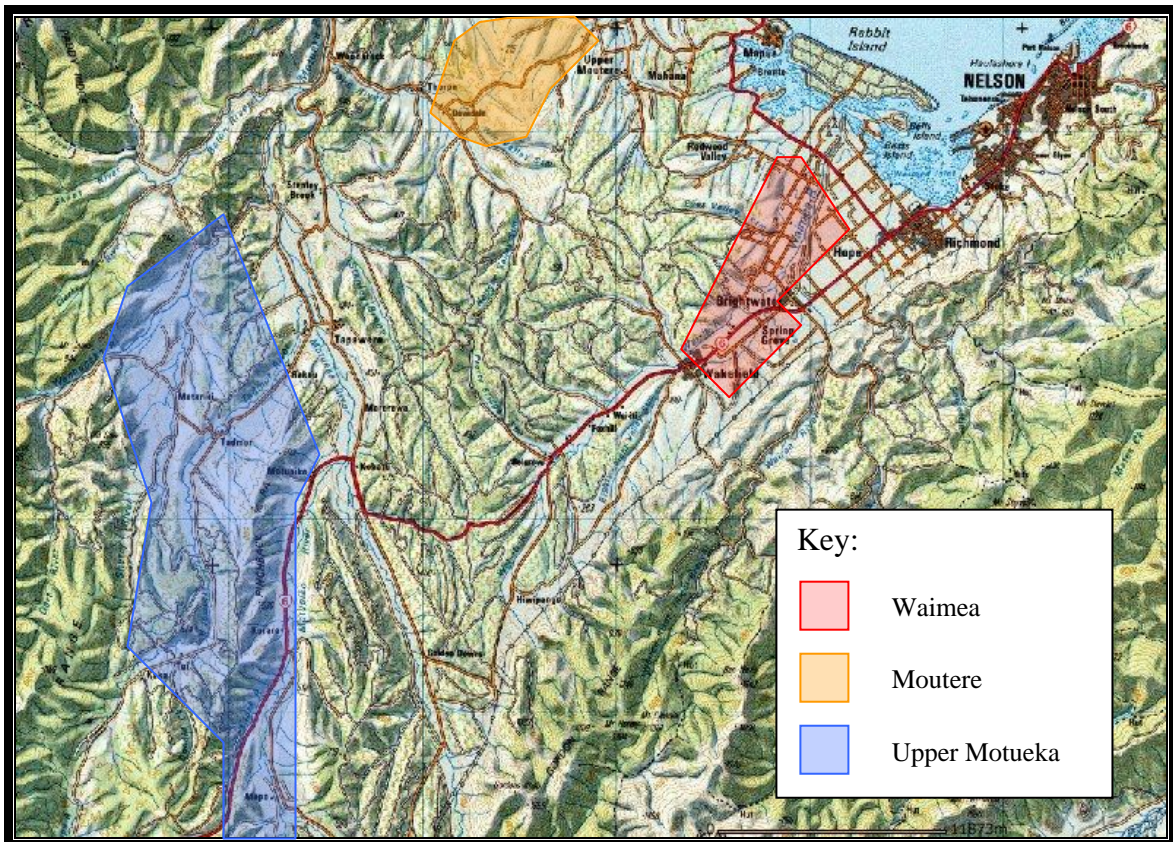


Figure 3: Central sub-region with Waimea, Moutere, and Upper Motueka zones overlaid

3.2 The Survey Process

Approximately two weeks prior to the first inspection, all farm owners were notified by letter that the survey was going to be undertaken. A copy of the Permitted Activity Rules for the disposal of dairy effluent to land (Rule 36.1.3) was also included with this letter. All farm owners were then contacted by telephone closer to the time of the survey to make an appointment to meet onsite.

A survey form (Appendix 2) was developed and each farm was assessed against this form to ensure that a common standard was achieved. An element of each farm dairy inspection was to photograph (as a way of documenting) the washdown system, sump, effluent area, stream crossings, bridges, fencing, and any potential non-compliance. Also photographed were fully compliant farm dairies, both old and new systems and examples of different measures that have been implemented to prevent run-off of effluent from races or yards into water with the aim to provide future educational tools.

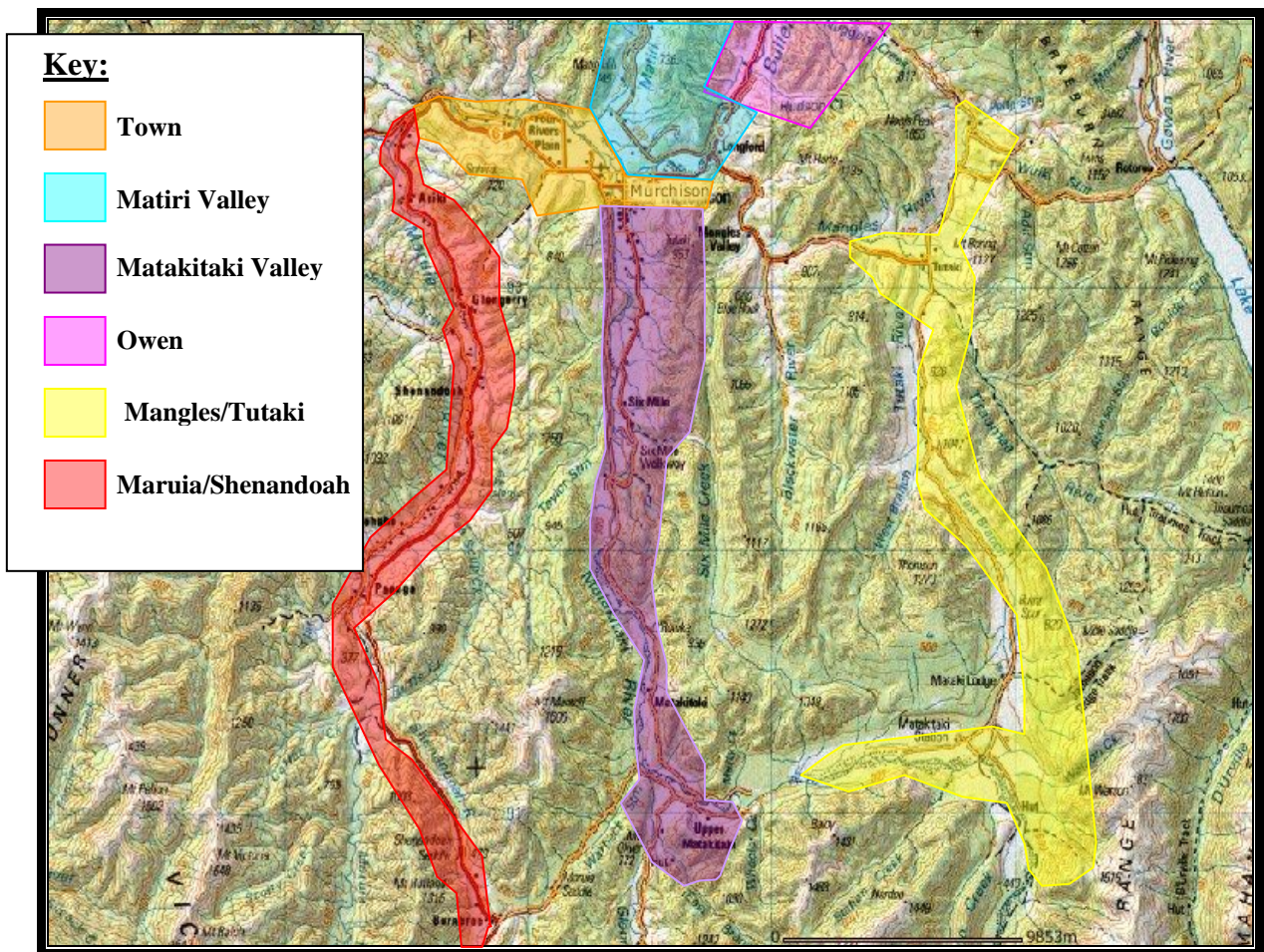


Figure 4: Murchison sub-region with zones overlaid

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 sections of Rule 36.1.3 of the TRMP were complied with.
- **Minor Non-compliance:** technical non-compliance with respect to Rule 36.1.3 of the TRMP, 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 Rule 36.1.3 of the TRMP 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 the direct discharge of effluent to water.

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

Once each farm inspection had been completed any issues of non-compliance were addressed. This was achieved in two ways. Firstly, if it was assessed that the non-compliance found at a farm presented a minor adverse effect of the environment, a Farm Management Plan (FMP) was drawn up for the farm. This Plan detailed the works that needed to be completed to fully comply with Rule 36.1.3 and the RMA, and a date by which these works were to be completed. If it was assessed that the

non-compliance presented a moderate adverse effect and/or past history showed that the farm owner had not responded to requests by Council to remedy a problem that was found to still exist, or there was a significant environmental adverse effect, the FMP was formalised in an Abatement Notice.

3.3 Structure of Report

A general discussion with respect to common issues found during the farm inspections is presented in Part Four of this report.

Part Five presents the results of this survey and gives a breakdown of compliance with respect to the Permitted Activity rules as set out in Rule 36.1.3 of the TRMP, both prior and after enforcement action.

Typical costs involved in the monitoring of each farm dairy that operates under Permitted Activity status has been kept during the 2005/2006 season. These costs are discussed in Part Six.

Part Seven concludes the report with an overall summary of compliance with respect to Rule 36.1.3 of the TRMP. Recommendations from the findings of this report are put forward in Part Eight.

4. WHAT WAS FOUND – COMMON ISSUES OF NON-COMPLIANCE

A number of issues of non-compliance arose from the initial farm inspections that required the farms concerned to be revisited to inspect remedial actions that were undertaken. Each issue is discussed in turn below.

4.1 Contingency Plans

An adequate contingency plan is a requirement of Section C of Rule 36.1.3 of the TRMP and states that there be contingency measures in place to avoid discharges to water in the event of system failure.

In order to fully comply with Section C there must either be an alternative means of disposing the washwater onto the irrigable area, and/or provision for storage of the effluent until such time that the effluent system is fully operational again.

Typical contingency measures employed in Tasman District are:

- Utilising old oxidation ponds (all discharge pipes removed) for storage.
- Having an overflow from the sump directed to a fully sealed emergency holding pond. This pond then has to be emptied once the main system is made operational in order to maintain its holding capacity.
- Using a slurry tanker to empty the sump and discharge to land.
- Contracting a commercial septic tanker cleaning company to empty the sump and disposing the effluent off-site.
- Keeping spare parts and spare pumps onsite.

- Immediately ceasing wash-down in order to minimise waste-water entering the collection sump.
- Allowing the effluent to back-wash up into the milking pit from the sump, this typically provides containment for one milkings worth of effluent.

Farm dairies within the Golden Bay sub-region also have the services of a local contractor, Mr W Langford, who has a 7000 litre slurry tanker available for hire. In addition to this service the Rural Farm Service Centre in Takaka also has an emergency petrol powered pump available to be used in times of pump failure. All farm owners in Golden Bay were made aware of these services.

Those farms located on the Waimea Plains rely heavily upon the fact that they are in close proximity to Richmond and can have their systems serviced, and the pump and other machinery replaced within the same working day.

The absence of appropriate contingency measures is of great concern, particularly when many farms have less than one days storage for effluent produced in the farm dairy, with most of these farms not having adequate storage for effluent produced from one milking.

The potential problems associated with insufficient storage on these farms are further enhanced by the fact that there are often no mechanisms in place to divert stormwater away from the collection sump. As a result the systems are quickly inundated by the extra water and overflow with stormwater contaminated by effluent remaining in the sump, this potentially presents a situation where effluent can enter water.

The farm owners who did not have an adequate contingency plan in place were explained the reasons for such plans and the possible adverse effects that contingency plans aim to mitigate. Different contingency options were discussed on-site during the inspections (such as those present above) and the farm owners were asked how they could employ a suitable back-up plan in order to comply with Section C.

4.2 Nitrogen Loading Rates

Elevated groundwater nutrient levels, particularly nitrate, can be caused by excessive application rates of effluent and washwater onto the land or seepage from effluent storage systems. Elevated nitrate levels in potable groundwater can give rise to human health risks, and have been linked to the blood disorder in bottle fed babies known as Blue Baby Syndrome.

Rule 36.1.3 (f) of the TRMP requires that the application of effluent be at a rate of not more than 200 kilograms of nitrogen per hectare per year by itself or in combination with any other applied fertiliser.

With respect to applying just effluent to land with no other form of fertiliser this equates to approximately four hectares of land per 100 cows. However, if other sources of nitrogen (such as fertilizers) are also applied to the land that receives effluent from the farm dairy, this application area must be increased accordingly.

The Dexcel 'Nutrient Management Roadshow' toured Tasman District during March 2006. The aim of this roadshow was to provide farmers with information on nutrient loss, and the management of nutrients on their farm in order to reduce these losses. One concept presented during this roadshow was that of nutrient budgeting. A nutrient budget is an annual snapshot of the farm which takes into account the total nutrient inputs and outputs. The information is then used to address any deficiencies or excesses of nutrients in the soil structure.

Inputs include: fertiliser, effluent added, atmospheric/clover N, nutrients from irrigation, slow release supply from soil and fertiliser, and supplement brought onto the farm.

Outputs include: losses through product leaving the farm, transfer of nutrients to unproductive parts of the farm (for example, laneways and troughs), supplement sold from the farm, atmospheric losses (volatilisation), leaching/run-off immobilisation/absorption which is when nutrients are converted by the soil to less available forms.

As a result of a nutrient plan, farmers are able to modify their fertiliser plan to promote optimal grass growth and reduce the amount of nutrients lost through leaching to ground and surface waters.

4.3 Run-off of Effluent into Water

While the effluent left on the yard and milking area is a small proportion of the total waste farm stock produce each day, farm dairy discharges can have significant adverse environmental effects on ecosystems within water-ways. These effects include:

- Increased nutrient loadings and thus increasing algal growth that can escalate into algal blooms that often cause odour and a reduction in biodiversity within the waterway.
- A rise in ammonia concentrations, which can be toxic to fish species.
- A decrease in dissolved oxygen within the water column which reduces the life supporting capacity of the waterway and reduces biodiversity.
- Microbial contamination of waterways rendering them unsuitable for drinking, contact recreation use, and shellfish gathering.
- Inputs of pathogenic bacteria (such as *Campylobacter*), which pose a significant threat to human and animal health.
- The reduction of water quality and the smothering of benthic (bottom-dwelling) organisms caused by excessive suspended solid loads.

- Loss of amenity values through discolouration of water and odour.

5. SURVEY RESULTS AND ENFORCEMENT

5.1 Initial Results

Compliance with respect to Rule 36.1.3 of the TRMP and Section 15(1)(b) of the RMA 1991 as found on the first visit to each farm is shown in Figure 5. These data relate to compliance before any enforcement action had been taken.

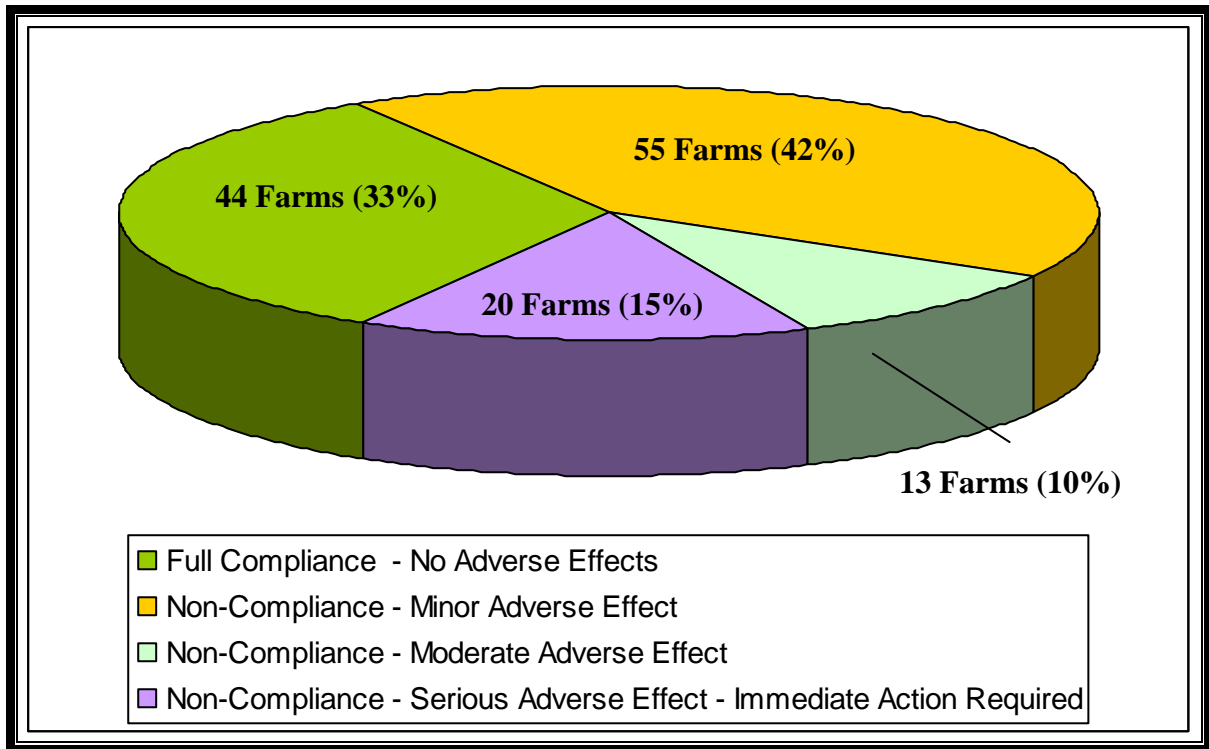


Figure 5: Compliance with respect to Rule 36.1.3 of the TRMP and Section 15(1)(b) of the RMA 1991 once initial assessment of all farm dairies had been completed and prior to any enforcement action.

Figure 5 shows that of the 132 farm dairies that operate under Permitted Activity status, 44 farms (33%) fully complied with all sections of Rule 36.1.3 and Section 15(1)(b) of the RMA at the time of the first visit.

Non-compliance which caused a minor adverse effect on the environment was found at 55 farm dairies (42%). Such non-compliance all related to these farm dairies not having an adequate contingency plan to avoid discharges to water in the event of system failure (Rule 36.1.3(c)).

Thirteen farm dairies (10%) had matters of non-compliance that are considered to cause a moderate adverse effect on the environment. Such non-compliance included:

- Severe ponding and run-off resulting from broken down irrigators or no irrigator installed to spread the effluent. The consequence of this non-compliance is the potential for contamination of groundwater and run-off into water-ways.

- Overflow pipes/drains from the collection and holding sump directed to a stream or a farm ditch that leads to a water-way, thus a discharge to water would occur in the event of system failure (pump breakdown).
- Discharge of effluent less than 20m from a waterway resulting in run-off to the waterway.

Twenty farm dairies (15%) presented non-compliance that resulted in a significant and immediate adverse effect on the environment. Such non-compliance included one or more of the following:

- Direct run-off of effluent from raceways into water.
- Direct run-off from feed pads/stand off pads into water.
- Direct discharge of effluent from the farm dairy (yard and/or milking pit) to water.
- No containment facilities for effluent from the farm dairy with the resulting effluent being flooded onto land or into unlined excavated holes and tomos, thus resulting in the potential contamination of groundwater.

5.2 Enforcement Methods

Three methods of enforcement action were employed by Council's Compliance Section including the issuing of 'Farm Management Plans' (FMPs), Abatement Notices, and Infringement Fines. FMPs were an informal written directive given to the farm owner where non-compliance was found to be minor and the effect on the environment was considered to be minor. There were three exceptions to this where the non-compliance was considered to cause a moderate effect on the environment, but the farm owner had already identified the issues and was in the process of remedying the problem at the time of the farm inspection. In these cases a completion date was agreed upon and put in a FMP. In circumstances where there were a number of minor to moderate matters on non-compliance these FMPs were formalised in an Abatement Notice. An Abatement Notice was also used when a matter of non-compliance had been noted on file from previous inspections and the farm owner had in the past been directed informally by Compliance to remedy the problem and had not done so. Finally, an Infringement Fine (an instant fine of \$750) was used in circumstances where the non-compliance resulted in a significant and immediate adverse effect and/or was the result of continual non-compliance.

5.2.1 Farm Management Plans (FMP's)

These plans were an informal written request to the farm owner to remedy the problem(s) found and listed any works that were required to be undertaken to fully comply with Rule 36.1.3 and the Resource Management Act (1991) and a date by which the works were to be completed by.

A total of 17 FMPs were issued during the course of this survey. Common issues that these FMPs addressed were predominantly related to the 'set-back' rules and included:

- To maintain a distance of at least 20m between the discharge and a waterway.
- To maintain a distance of at least 10m between the discharge and a property boundary.
- To maintain a distance of at least 50m between the discharge and a dwelling on a neighboring property.
- Have in place an adequate contingency plan to prevent effluent entering water in the event of system failure.
- Apply effluent at a rate not more than 200kg of nitrogen per hectare per year by itself or in combination with other applied fertiliser.

Nine farms had been applying effluent to land at a rate of more than 200 kilograms of nitrogen per hectare per year when considered in combination with other applied fertiliser.

All nine farms concerned have a representative from their respective fertiliser supplier visiting their farm during the 2005/2006 or 2006/2007 seasons to complete a nutrient budget.

A nutrient budget specific to each of the nine farms concerned should address and rectify the problem. All nine farms are fortunate in that they have expansive areas of flat land with good drainage over which they can expand their effluent disposal area, thus decreasing the nitrogen loading rate. All farm owners concerned are actively seeking options to expand their respective disposal areas.

In the case of contingency plans, only those farms that presented other forms of non-compliance that resulted in minor effects on the environment were issued with a FMP, with the requirement of this contingency plan being part of the FMP. Those farms where non-compliance only related to not having a contingency plan have not been subject to enforcement action of any kind to date, as it was established early on in this survey that this non-compliance was a common issue. It was decided by Compliance that a record of all farms that did not have an adequate contingency plan would be maintained, and those farms will be dealt with once the survey of all farm dairies were completed, so that this matter will be dealt with in a universal way.

It was made clear to each farm owner who received a FMP that Compliance will formalise any works that failed to be completed by the required due dates in a formal Abatement Notice. At the time of writing this report such enforcement action has not been needed, with all farmers being willing to work with Council in order to comply with Rule 36.1.3 of the TRMP and the RMA 1991. Compliance is making regular contact with the farm owners concerned in order to keep up-to-date on their progress and any problems they may be incurring.

5.2.2 Abatement Notices

A total of eleven Abatement Notices were issued during the course of this survey. Notices were issued in circumstances where the environmental effects were moderate or significant, or where past informal requests to remedy the same problem had not been heeded. Common issues that Abatement Notices addressed were:

- Run-off of effluent from raceways feed/stand-off pads entering water.
- Run-off from yard washdown entering water.
- Overflow pipes from the sump directing effluent to a waterway in the event of system failure.
- Discharge of effluent from the milking pit directly or indirectly entering water.

Run-off of effluent from either race-ways, feed/stand-off pads into water-ways was found on six farms. In two cases the farm owners had already identified this as a problem and were undertaking remedial and mitigation measures at the time of the farm inspection. The other four farm owners were served with Abatement Notices that required them to immediately cease the discharge and implement a long-term solution to prevent any run-off entering water in the future.

These race-ways and feed/stand-off pads have all been bunded along their sides with any run-off directed to a collection point from where it is then directed to the main effluent system.

Three farms were found to have effluent from the milking pits discharging into a water-way. All three farms have now connected the milking pits to the main effluent collection system from where it is then discharged to land.

At another farm there was the probability of effluent entering water due to an aging and deteriorating effluent holding facility. In this case a new effluent collection system and over-flow containment facility has been installed and commissioned.

5.2.3 Infringement Fines

Three infringement fines were issued during. These infringement fines all related to the direct discharge of untreated effluent to water from the farm dairy, a serious breach of the RMA. Such offences included the discharge from the farm dairy yards, milking pits, and effluent storage areas. In all three cases these were issues of non-compliance that the farm owner had been made fully aware of in the past and therefore knew that failure to address and remedy the problem would result in further enforcement action being taken. It was the result of this lack of action and the significant adverse effect that the discharge was having on a receiving water-ways that these Infringement Fines were issued. All three fines were issued with an Abatement Notice that required that the discharge cease immediately.

It has been general policy in recent years that all farm owners who received an Abatement Notice are made aware in writing that failure to comply with the Notice will result in further enforcement action being taken which may include an Infringement Fine.

5.3 Compliance after Enforcement Action

Compliance with respect to Rule 36.1.3 of the TRMP and Section 15(1)(b) of the RMA 1991 once enforcement action had been taken against any non-compliance found is shown in Figure 6. These data relate to compliance once all follow-up inspections that were undertaken to check that works required under Abatement Notices and Farm Management Plans had been completed in the Golden Bay and Central areas, but prior to Abatement Notice checks in Murchison.

Figure 6 shows that at the time of the writing of this report that of the 132 farm dairies that operate under Permitted Activity status, 74 farms (56.5%) now fully complied with all sections of Rule 36.1.3 and Section 15(1)(b) of the RMA.

Non-compliance which caused a minor adverse effect on the environment still exists at 53 farm dairies (40%). Such non-compliance all relates to these farm dairies not having an adequate contingency plan to avoid discharges to water in the event of system failure (Rule 36.1.3(c)). This minor non-compliance makes up 91% of all non-compliance the presently exists with respect to Rule 36.1.3 of the TRMP, and highlights an area of compliance that needs to be addressed during the up-and-coming season (2006/2007).

Three farm dairies (2%) still have matters of non-compliance that are considered to cause a moderate adverse effect on the environment. In all three cases this non-compliance relates to overflow pipes/drains from the collection and holding sump directed to a stream or a farm ditch that leads to a water-way, thus a discharge to water would occur in the event of system failure (pump breakdown). All three farms had an Abatement Notice served on them that required that these issues be remedied. The due date of these notices is mid July 2006, and hence this non-compliance still statistically exists. All three farm owner have been contacted by Compliance since the issues in the Notices, and all are confident on having the respective works completed by the due date, this making them all fully compliant farms.

Two farm dairies (1.5%) still present non-compliance that results in a significant and immediate adverse effect on the environment. This non-compliance relates to the direct discharge of effluent from the farm dairy (yard and/or milking pit) to water. One farm has until mid June 2006 as prescribed in an Abatement Notice to remedy this problem and hence is still a current statistic. The other farm has a long history of non-compliance and offending both in Tasman District and in another region and continues to do so. Further enforcement action that may include prosecution will be taken against this farm owner.

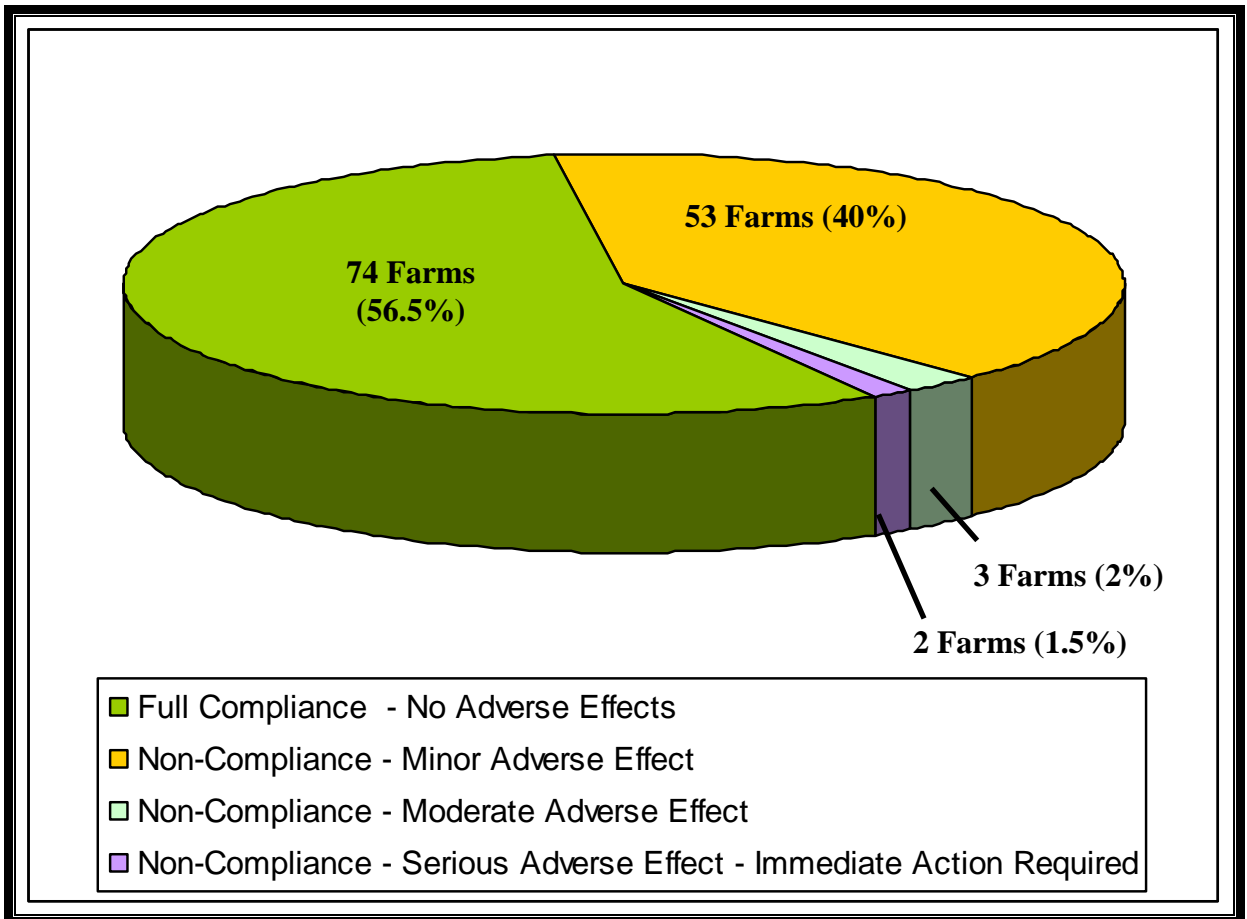


Figure 6: Compliance with respect to Rule 36.1.3 of the TRMP and Section 15(1)(b) of the RMA 1991 following follow-up visits to Golden Bay and Central region farms and initial farm inspections in Murchison

6. 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 included a site visit and administration (mail-outs and the maintenance of files) fall to Council.

A running total of costs were maintained by Compliance during the 2005/2006 season with the purpose to ascertain the typical costs involved in compliance of those farms operating under permitted activity status. Table 1 presents a typical break-down of costs involved in compliance monitoring of fully compliant farm dairies. From Table 1 it can be seen that typical costs incurred by a fully compliant farm include staff time involved in mail outs, file keeping, the farm inspection, and advice given to the farm owners throughout the season. During the 2005/2006 season the average cost of monitoring a fully complaint farm dairy was \$200.

Table 1: Typical costs incurred by a fully compliant farm dairy

DETAILS	HOURS (\$80/hr)	COSTS
Administration (mail out advising farmers or farm inspections)	0.5	\$40
Farm Inspection	1	\$80
Administration (filing of correspondence)	0.5	\$40
Miscellaneous (advise given/phone calls/information posted/etc)	0.5	\$40
TOTAL	2.5	\$200

These costs increase further when a farm has issues of non-compliance as additional staff time is needed in the issuing of FMPs, Abatement Notices and/or Infringement fines, and follow-up farm inspections. Table 2 presents the typical costs incurred by a non-compliant farm which is in the order of \$320.

Table 2: Typical costs incurred by a non-compliant farm dairy

DETAILS	HOURS (\$80/hr)	COSTS
Administration (mail out advising farmers or farm inspections)	0.5	\$40
Farm Inspection	1	\$80
Administration (filing of correspondence)	0.5	\$40
Miscellaneous (advise given/phone calls/information posted/etc)	0.5	\$40
Administration (issuing of FMPS, Abatement Notice, Infringement Fine and covering letters.	1	\$80
Follow-up farm inspection	0.5	\$40
TOTAL	4.0	\$320

All 132 farms dairies in Tasman District operating under Permitted Activity status were visited for this survey. When taking into account the typical costs presented above in Tables 1 and 2, a total approximant cost of this monitoring program can be calculated. These total costs are presented in Table 3.

Table 3: Approximate total costs of this survey

	Number of Farms	Staff Hours	Cost per farm	Total Costs
Fully Compliant	44	110	\$200	\$8800
Non-Compliant	88	352	\$320	\$28160
TOTAL	132	462	-	\$36960

(NB: statistics of compliance taken from initial survey results)

Table 3 shows that there were 44 fully compliant farms once all initial assessment had been completed. Based on an average cost of \$200 per farm, this equates to a total cost of approximately \$8800 incurred by these farms. Table 3 also shows that there were 88 farms that did not fully comply with Rule 36.1.3 of the TRMP at the initial assessment, hence additional staff time was required to undertake the resulting enforcement actions. Based on an average cost of \$320 per non-compliant farm, this equates to approximately \$28160. The total approximate costs involved in monitoring the 132 farm dairies for this report was in the order of \$36960 (462 staff hours), all of which is not recovered by Compliance and is covered by the General Rate.

7. CONCLUSION

It will be recalled that the purpose of this report was to present the results of compliance with respect to Rule 36.1.3 of the TRMP from the 2004/2005 and 2005/2006 dairy seasons. Summarised below are the major findings of this report.

A total of 132 farm dairies operate as Permitted Activities in Tasman District, all of which were inspected.

The levels of compliance in relation to Rule 36.1.3 of the TRMP once all follow-up visits to the farms located in the Central and Golden Bay sub-regions had been completed and the initial inspections of the Murchison farms had been completed are at the time of the writing of this report:

- 56.5% - Full Compliance
- 40% - Non-Compliance/minor adverse effect
- 2% - Non-Compliance/moderate adverse effect
- 1.5% - Non-Compliance/significant and immediate adverse effect.

Issues of non-compliance that resulted in enforcement action being taken by Council related to set-back rules, the discharge of effluent onto bare land, seepage from holding sumps to water, the direct discharge (from the farm dairy and also from overflow pipes leading from the sump) of effluent to water.

Section C of Rule 36.1.3 of the TRMP requires that a contingency measure is in place to avoid discharges to water in the event of system failure. The main finding of this survey was that overall, compliance with Section C is particularly poor with approximately one in every three farms not having an adequate contingency plan. At the time for the writing of this report 91% of non-compliance in Tasman District is the result of farm dairies not having an adequate contingency plan. In order to fully comply with Section C there must either be an alternative means of disposing the washwater onto the irrigable area, and/or provision for storage in the event of system failure. This high level of non-compliance highlights a major issue that needs to be addressed.

This study has shown that it cost approximately \$36960 to monitor all 132 farm dairies that operate under permitted activity status. If this current monitoring regime is to continue, a means of financing may have to be investigated. This survey was incorporated into a larger study that investigated compliance with the five national Clean Stream Accord performance targets. This is an on-going monitoring project with the results reported by TDC to Fonterra on an annual basis (an arrangement

under the Regional Action Plan). One of the Accord targets is to have all farm dairies fully compliant with regional plan rules and resource consent conditions immediately. Funding from Fonterra to continue this reporting could be investigated as a means of covering the costs associated with this monitoring and reporting.

7. RECOMMENDATIONS

From the findings of this report it is recommended that

- the report be received.
- the RAP signatories (TDC and Fonterra) develop and implement a strategy to ensure full compliance with Section C of Rule 36.1.3 of the TRMP.
- ongoing and regular (annual) inspections of all farm dairies be undertaken to ensure compliance with the permitted activity rules, resource consent conditions, and to keep track of Tasman's progress towards meeting the various performance targets as asset out in the Clean Streams Accord.
- Funding from Fonterra be investigated as a means of covering some of the costs of this ongoing monitoring of farm dairies as required by the Clean Stream Accord.

Kathryn Bunting
Compliance Officer

**Tasman Resource Management Plan
Rule 36.1.3
- Discharge of Dairy Effluent to Land -**

TASMAN RESOURCE MANAGEMENT PLAN

36.1.3 Discharge of Dairy or Piggery Effluent

The discharge of:

1. Dairy shed effluent... onto land is a permitted activity that may be undertaken without a resource consent if it complies with the following conditions:

- (a) There is no discharge in the Waimea Plains Aquifer Protection Area.
- (b) There is no discharge or run-off of effluent into any water or riverbed.
- (c) Contingency measures are in place to avoid discharges to water in the event of system failure.
- (d) There must be no discharge of effluent within:
 - (i) 20 metres of any surface water body, or the coastal marine area;
 - (ii) 20 metres of any bore for domestic water supply;
 - (iii) 10 metres of any adjoining property;
 - (iv) 50 metres of any dwelling on an adjoining property.
- (e) Any effluent storage facilities are sealed so as to prevent any contamination of water by seepage.
- (f) The application of effluent is:
 - (i) at a rate of not more than 200 kilograms of nitrogen per hectare per year by itself or in combination with any other applied fertiliser; or
 - (ii) at a rate not resulting in an elevation of groundwater nitrogen concentration.
- (g) Discharge of effluent is only onto land with a vegetative cover over 90 percent of the ground surface or immediately prior to sowing a crop.
- (h) The discharge does not create an offensive or objectionable odour discernible beyond the property boundary.
- (i) The application of effluent is not at a rate which results in ponding on the land surface for longer than one hour.
- (j) The discharger must provide such information as may be requested by the Council to show how the conditions of this rule are being met.

- Survey Form -

Farm Dairy Inspection 2004/2005
(Permitted Activities)



Private Bag 4
RICHMOND 7031
Telephone: (03) 543 8400
Facsimile: (03) 543 9524

Date of inspection _____

**FARM DAIRY INSPECTION 2004/2005
(PERMITTED ACTIVITIES)**

PROPERTY DETAILS

Farm Name _____

Supply Number

Valuation Number

Easting

Zone

Northing

Herd numbers

Friesians/Jersey/Mix

Farm Address

Postal Address

Farm Owner

Phone: _____

Share-milker

Phone: _____

MANAGEMENT OF EFFLUENT FROM FARM DAIRY

Description of effluent collection

Description of stormwater controls

Sump size (m³)

Number of storage days provided by sump

Contingency measures in place in case of system failure

Method of effluent application

Total discharge area (ha)

Frequency of discharge

Volume of discharge/application

Area of discharge/application

Application depth(mm)

Soil type

Quantity of artificial fertiliser used (kg/ha/yr)

Source of water

Total area that is pasture irrigated (ha)

Name of nutrient budget model/ programme

Number of un-bridged stream crossings

Percentage of fenced water ways

PERMITTED ACTIVITY RULES

YES	NO		COMPLIANT	NON-COMPLIANT
<input type="checkbox"/>	<input type="checkbox"/>	Is the discharge in the Waimea Plains aquifer Protection Area	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Does the discharge result in run-off into any water way or river bed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Are there contingency measures in place to avoid discharge into water in the event of system failure	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Is the discharge more than 20 meters from a surface waterbody or the coastal marine area	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Is the discharge more than 20 meters from any bore for domestic water supply	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Is the discharge more than 10 meters from any adjoining property	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Is the discharge more than 50 meters from any dwelling on an adjoining property	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Are the effluent storage facilities sealed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Is the nitrogen loading rate less than 200kgN/ha/yr when considering with any other applied fertiliser	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Does the discharge area have more than 90% vegetative cover	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Does the discharge create an offence or objectionable odour beyond the property boundary	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Does the discharge resulting in ponding for more than one hour	<input type="checkbox"/>	<input type="checkbox"/>

Compliance issues

	YES	NO
Follow-up Inspection Required	<input type="checkbox"/>	<input type="checkbox"/>

