



STAFF REPORT

TO: Environment & Planning Subcommittee

FROM: Daryl Page, Compliance Officer

REFERENCE: C653

SUBJECT: **WATER METERING PROJECT REPORT: COMPLIANCE SUMMARY FOR THE 2005 / 2006 SEASON – REPORT EP06/05/22**
- Report prepared for 30 May 2006 Meeting

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1. ACKNOWLEDGEMENTS

Thanks to Council staff Mandy Tomlinson, Neil Tyson, Joseph Thomas, Rose Smith, and Heather Stanton (on contract) for their input into the 2005 / 2006 water metering project.

2. INTRODUCTION

The purpose of this report is to present a summary of compliance monitoring during the 2005 / 2006 irrigation season. It is an interim report and a full report including project administration and any recommended changes for the 2006 / 2007 irrigation season will be presented at a subsequent meeting.

3. SUMMARY

- Accurate and timely water meter data is an essential tool in managing the District's valuable and limited water resource.
- Water Rationing in the Waimea Plains was introduced at the start of the 2005 / 2006 season and was in place for 16 out of 25 weeks. Rationing can create confusion and pressure for water users and project administration.
- An increased monitoring focus in place in the 2005 / 2006 season but was largely confined to the Waimea Plains during the season. In water management zones subject to full water metering, 36 water users were invoiced for monitoring costs relating to missing returns, 30 water users received warnings about overtakes, and 13 infringement fines were issued. There were 536 consents subject to monitoring within these zones.
- Return rates (albeit retrospective) met the objective for 'reliable' data on water usage. This was encouraging and indicates how responsive water users are to the water metering project.
- Generally, water use data (by zone) shows that usage only ever exceeded 40% of the full allocation in five of the 12 zones subject to full water metering. Only one zone ever exceeded 60% and recorded a high of 74%.
- An 'anytime, anywhere' water meter was introduced. The audit identified that a small number of water users provided fictitious water meter readings.

4. THE RMA AND TRMP FRAMEWORK

Section 14 of the RMA states (inter alia) that no person may take or use water in a manner which contravenes a rule in a regional plan or proposed regional plan unless expressly allowed by a resource consent.

The TRMP divides the Tasman district into water management zones. Some zones have been identified as traditional water short catchments and it is a requirement to install a water meter and supply meter readings to Council. Appendix 1 lists the TRMP water management zones and indicates the requirement for water metering.

The policy basis for the use of water meters is set out in 30.2.11 of the TRMP and states:

- a) to ensure compliance with permit allocations or allocation limits; or
- b) when there is full allocation of water in a zone; or
- c) when there is a need for water use data to assess effects of abstraction on a water resource or in relation to an allocation limit; or
- d) in any zone where there is a rationing trigger

Accurate and timely water meter data is an essential tool in managing the District's valuable and limited water resource. The information is used for:

- Management of the districts water resources and improving/enhancing future understanding of the system;
- Monitor the effectiveness and suitability of the policy provisions within the TRMP and the exercise of resource consents;
- Bona fide review/renewal of existing consents; and
- Compliance with drought restrictions

5. WATER RATIONING

Following a relatively dry winter and very little spring rain, water rationing in the Waimea Plains was introduced from 7 November 2005 which was concurrent with the start of the irrigation season and the requirement for water meter readings. In a press statement late October 2005, Council signalled that without significant rain, the situation did not bode well for the summer season.

What followed was a summer period that saw the Dry Weather Task Force (DWTF) meet on 18 occasions and water rationing in place for 16 weeks out of a season potential of 25 weeks. Appendix 2 presents the 2005 / 2006 water rationing pattern. This compares to no water rationing in the 2004 / 2005 season. Unfortunately comparable data for previous years where water rationing was in place is not available. In the full report later this year, comment on weather patterns and how this season's climatic conditions compared to previous years, will be included.

In addition to water rationing in the Waimea Plains, low (river) flow restrictions were in place from time to time in the Moutere (Powley Creek) and Golden Bay areas. Some compliance work was necessary in Golden Bay in respect to takes from the Takaka River which was subject to public complaints. Apart from reiterating consent conditions, final analysis and consideration of enforcement action has yet to be completed.

This seasons water shortage highlighted some downstream (excuse the pun!) effects which Council should acknowledge (relating to the Waimea Plains):

- Confusion among users about when rationing applied, at what level, and the timeframe for meter returns (weekly returns were required instead of the traditional fortnightly period)

- The replacement return cards did not have any pre printed identification on them,
- Pressure on water users in complying with reduced allocation limits at a time when irrigation was crucial, and
- Pressure on Council's water metering project administration.

6. COMPLIANCE MONITORING

Council resolution EP05/08/27 adopted the Water Metering Compliance Flowchart (reproduced as Appendix 3) In summary, the flowchart confirms that the cost of monitoring will be recovered pursuant to section 36 RMA where Council has to make a site visit due to missing returns. It also confirmed that Council would take enforcement action when appropriate in respect of excessive takes.

The primary aim of compliance monitoring is to ensure accurate and timely information about water usage is received. While always an important component for water management within the Tasman district each summer, this was especially true in the 2005 / 2006 season. The information is obtained by water users providing water meter readings. The timeliness of these readings during the 2005 / 2006 season was essential so the data could be presented to the DWTF meetings alongside river flow and aquifer level information.

Daryl Page was the Compliance Officer responsible for the 2005 / 2006 water metering project. In the 2005 / 2006 season, an increased focus on monitoring was possible due to the assistance of Heather Stanton (on contract approx 2 days per week) and administrative support from Rose Smith (for the second season). A tougher line was applied in respect to late and missing meter readings in addition to the investigation of excessive takes. An 'any time, anywhere' water meter audit was also introduced.

However, and like the previous year, priorities in respect to non compliance had to be established. While the application of compliance monitoring (and any enforcement) procedure was consistent, the difficult season in terms of water rationing and ongoing system development meant that some inconsistency from a holistic application may have resulted. For clarity, most of the 'in season' monitoring was directed to the Waimea Plains. In addition and in respect of missing returns, it proved unrealistic to deal with every case especially on a timely basis. All excessive takes were however investigated.

7. METER READING RETURN RATES

There are two key objectives in respect to water meter return rates. The first relates to the end use of the data and the aim is to have a minimum return rate of 95%. The second relates to compliance monitoring and the aim must be a return rate of 100%.

Notwithstanding the need for timely returns, receiving the information so reliable data on water usage is obtained is the bottom line. With this in mind and in reviewing return rates for the season, the water use data for the majority of the season is complete. For example:

- In the Waimea water management zones from early November to late March, the minimum 95% rate was obtained. Many zones had a 100% data record during this period.
- In the Motueka/Moutere water management zones from late November to early March, the minimum 95% rate was obtained. Some zones had a 100% data record during this period but others were inconsistent in their return rates.

Both the results noted above were encouraging and indicates how responsive water users are to the water metering project. The results are also a reflection on the monitoring focus in the Waimea Plains over the season and in the Motueka/Moutere towards the latter part of the season.

Unfortunately, there is no data to show the 'timely' rate of returns however staff confirm that as an estimate, the number of returns received within one a week of due date averaged better than 85% across all water management zones. In the Waimea Plains zones where water rationing was in place, the number of returns received within one week of due date was between 90% and 100%. Once again, this was an encouraging statistic.

Return rates per zones within the Waimea Plains and Motueka/Moutere water management zones are shown with water usage data in Appendix 5.

Missing Reading Enforcement

As previously mentioned a tougher line was applied in respect to late and missing meter readings, however, resources meant that an across the board approach was not always possible.

Notwithstanding the adopted Water Metering Compliance Flowchart, the pressure on staff resources and the general need to reiterate to all water users the importance of timely water meter returns meant that personal contact was not made in all cases. In December, Council's policy on late or missing returns was advised to all water users by letter. Users in the Waimea Plains received this message many times through letters about water rationing and the water report in the Nelson Mail.

In total, 36 water users were invoiced the set \$150.00 monitoring fee where a meter was read by Council staff. Of these, 24 related to the Waimea Plains and 12 to the Motueka/Moutere area. It should be noted that are 536 consents within the zones mentioned and the cases where enforcement action was necessary represents a minority.

As can be expected, many of the 36 water users were upset at being invoiced. This negative aspect was balanced by some positive comments from other water users who congratulated Council on (finally) taking action.

Appendix 4 presents this information in relation to timeframes that the monitoring took place. For convenience, these timeframes relate to water rationing in the Waimea Plains.

Overtake Enforcement

Appendix 4 also presents information where enforcement action was necessary in respect of overtakes.

In total, 30 water users were issued with a warning letter for their first recorded overtake. The majority of these were also spoken to personally. Of the 30, 19 related to the Waimea Plains and 11 to the Motueka/Moutere area. Eight water users (of 30) had repeat overtakes and 13 infringement fines were issued. Again it should be noted that there are 536 consents within the zones mentioned and the cases where enforcement action was necessary represents a minority.

Water Take Data

Appendix 5 provides graphical representation for each water management zone in the Waimea Plains and Mouteka/Moutere area.

The graphs show that as a zone, water use only ever exceeded 40% of the full allocation for three zones (of seven) within the Waimea Plains and two zones (of five) within the Motueka/Moutere area.

In respect to zones in the Waimea Plains, the graphs also show the authorised allocation or in other words when water rationing was in place i.e. either the 20% (step 1) or 35% step 2) cuts were in place. The data shows the (positive) collective response by water users to these cuts and also to rain events during the season.

Water Meter Audit

In the 2005 / 2006 season, a change to the traditional 'pre season' meter reading was made. While a pre season reading was still made in some zones due to the potential water shortage situation, a meter audit was completed on an 'anytime, anywhere' basis. This year, the audit included obtaining a (digital) photographic record of the meter in addition to a meter reading and checking the meter.

The objective was to achieve an annual visit to all sites subject to water metering by shifting the task from a concentrated and difficult task in October each year to a more balanced work programme spread over the period October to May each year. This objective was not achieved in that all sites were not visited. Water rationing in the Waimea Plains from the start of the season and ongoing system development work created pressure on the resources available to complete the work.

As such the outcome was similar to last year with 70% of meters receiving an audit visit (380 of 542) within the zones subject to full water metering. No audit work was completed in the zones subject to partial metering. The audits will continue during the winter period with a view to improvement next year. Looking ahead to the 2006 / 2007 season and with further system development to free up staffing resources, it is expected the aim of a 100% audit will be achieved.

Fictitious Meter Readings

One finding from the anytime, anywhere water meter audit was that there were a small number of fictitious readings identified. These fictitious readings tended to reflect an inflated figure and suggested that some users may plan to hide usage during a time of rationing or that they do not actually read the meter but simply continue to increase the reading by the authorised allocation (or close to it). In these cases, the matter was brought to the attention of the water user and the need for accurate meter readings reinforced. In one case, the correction of the fictitious reading resulted in an overtake that lead to an infringement fine being issued.

13. RECOMMENDATIONS

1. That Council receive this report.
2. That a full report be tabled at the EPC meeting on 2 August 2006.

Daryl Page
Compliance Officer

APPENDIX 1 Water Management Zones

The TRMP currently identifies 29 water management zones. For the 2005 / 2006 season, there were 12 zones subject to full water metering. In addition, six zones are subject to some individual water metering for a variety of reasons. There are five zones where the implementation of water metering has been deferred and six sub zones where implementation is required prior to the 2006 / 2007 season.

The number of consents where a water meter should be installed, readings supplied, and subject to monitoring totalled 560 in the 2005 / 2006 season. The corresponding number was 554 for the 2005 / 2006 season.

Zones subject to full water metering in the TRMP

Motueka/Riwaka Plains

	<u>No.</u>
MHAU Hau	(29)
MTRN Transition	(15)
MKEZ King Edward	(43)
MSZ Swamp (implementation deferred)	
MUMU Umukuri (implementation deferred)	
MRWS Riwaka Surface (implementation deferred)	

Moutere

OMEG Moutere Eastern Groundwater	(67)
OMWG Moutere Western Groundwater	(19)

Note: Metering of *permitted* activity users of deep Moutere bores in the Moutere is required but implementation has been deferred.

Waimea

WDEL Delta	(131)
WGHZ Golden Hills	(31)
WLCA Lower Confined Aquifer	(25)
WRES Reservoir	(40)
WUCA Upper Confined Aquifer	(29)
WWW Waimea West Aquifer	(23)
WWAI Wai-iti	(84)
WDSA Wai-iti Dam Service Zone (new for 2005 / 2006)	
WHAQ Hope Minor Aquifer (partly implemented)	(6)

Upper Motueka

MUMG Upper Motueka	proposed implementation 2006 / 2007
UMMS Motupiko	proposed implementation 2006 / 2007
UMTP Tapawera Plains	proposed implementation 2006 / 2007
UMTS Tadmor	proposed implementation 2006 / 2007
UMWS Wangapeka	proposed implementation 2006 / 2007

Zones containing individual water meters

(includes TDC water supplies)

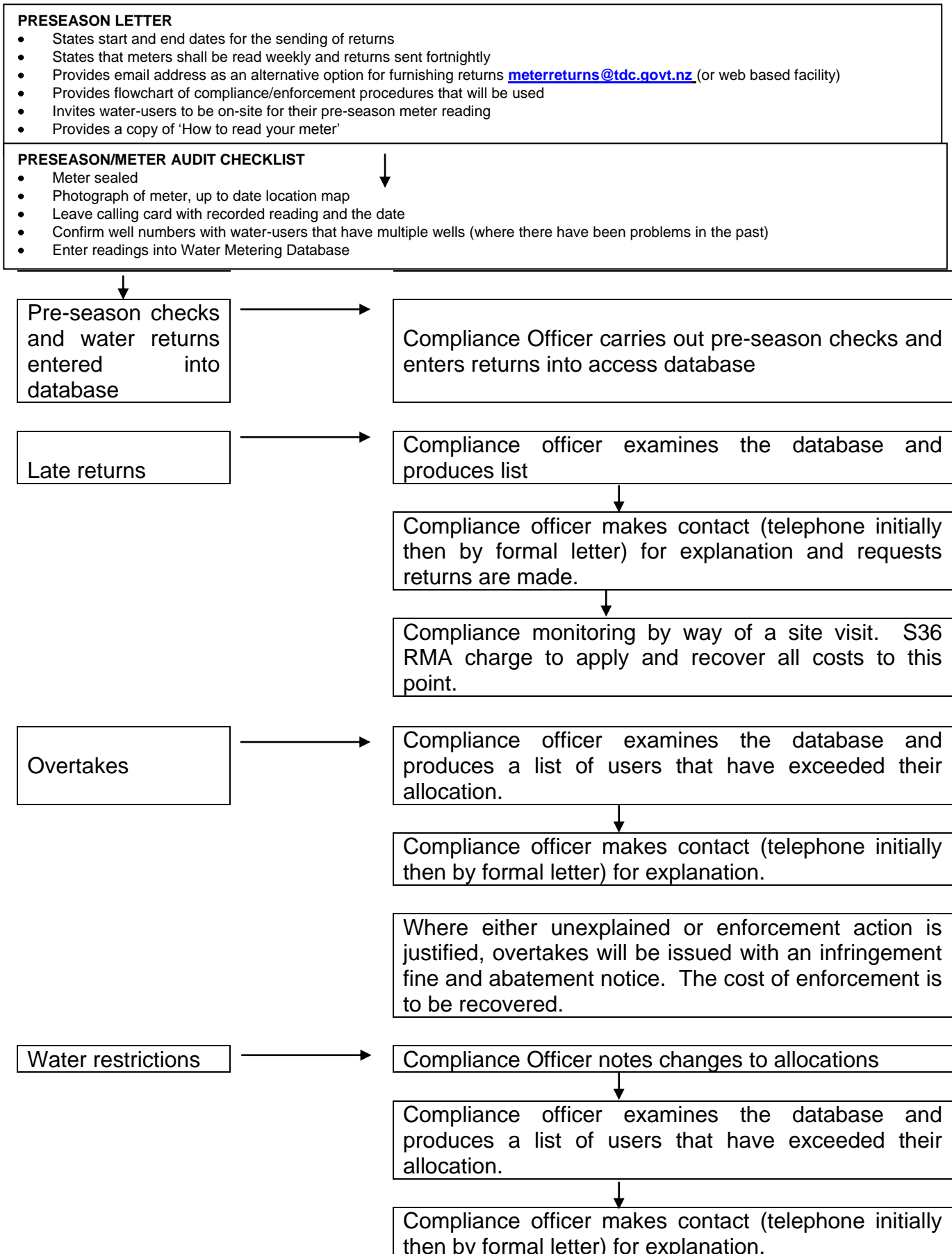
AA	Aorere/West Coast	(2)
BWLD	Buller/Westland	(2)
MCPZ	Motueka Central Plains	(6)
MLSZ	Motueka Little Sydney	(5)
MRWZ	Riwaka Groundwater – Motueka (implementation deferred)	
ODMG	Waimea – Moutere Gravels	
TTA	Takaka	(3)

**APPENDIX 2:
2005 / 2006 Water Rationing – Waimea Plains**

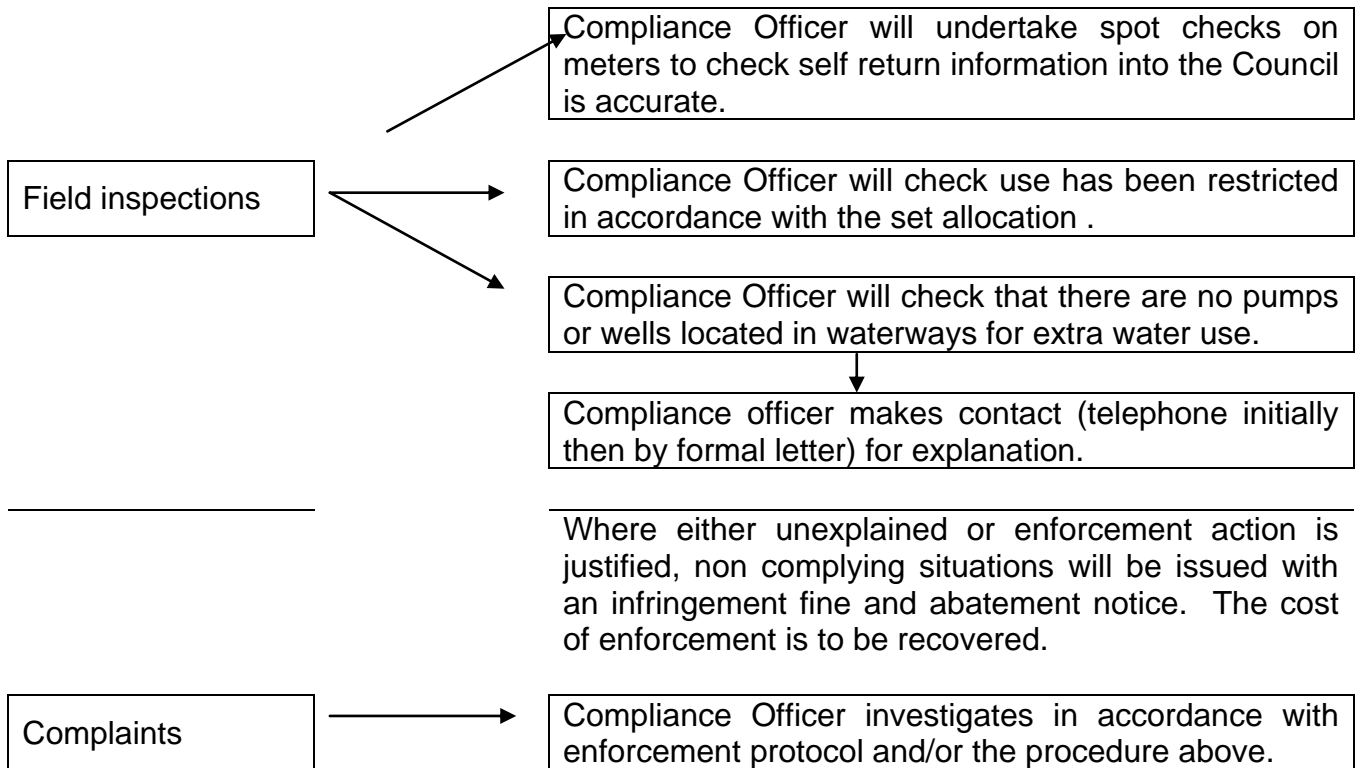
Blue = Step 1 Red = Step 2

Effective Date	Delta	Golden Hills	Reservoir	Upper Confined	Waimea West	Lower Confined	Wai-iti
7-Nov-05	1	1	1	1	1	0	0
14-Nov	2	2	2	2	2	1	0
21-Nov	1	1	1	1	1	1	0
28-Nov	1	1	1	1	1	1	0
5-Dec	2	2	2	2	2	1	0
12-Dec	2	2	2	2	2	1	1
19-Dec	2	2	2	2	2	1	1
26-Dec	0	0	0	0	0	0	0
2-Jan-06	0	0	0	0	0	0	0
9-Jan	0	0	0	0	0	0	0
16-Jan	2	2	2	2	2	1	1
23-Jan	2	2	2	2	2	1	1
30-Jan	2	2	2	2	2	1	1
6-Feb	2	2	2	2	2	1	0
13-Feb	1	1	1	1	1	1	0
20-Feb	0	0	0	0	0	0	0
27-Feb	0	0	0	0	0	0	0
06-Mar	0	0	0	0	0	0	0
13-Mar	1	1	1	1	1	1	0
20-Mar	1	1	1	1	1	1	0
27-Mar	1	1	1	1	1	1	0
3-Apr	2	2	2	2	2	2	0
10-Apr	0	0	0	0	0	0	0
17-Apr	0	0	0	0	0	0	0
24-Apr	0	0	0	0	0	0	0
1-May	0	0	0	0	0	0	0

APPENDIX 3: Metered Groundwater Compliance Monitoring Flowchart



Where either unexplained or enforcement action is justified, overtakes will be issued with an infringement fine and abatement notice. The cost of enforcement is to be recovered.



Where either unexplained or enforcement action is justified, non complying situations will be issued with an infringement fine and abatement notice. The cost of enforcement is to be recovered.

**APPENDIX 4:
Enforcement Summary**

Waimea Plains

Effective Date	Water Rationing	Missing Monitoring costs	Reading	Excessive Takes
7 Nov 05 to 19 Dec 05	Y	General warning to all re Council policy 2 invoices		11 warnings 4 Infringements*
26 Dec 05 to 9 Jan-06	N	Nil		Nil
16 Jan 06 to 13 Feb 06	Y	20 invoices		6 warnings 5 Infringements**
20 Feb 06 to 6 Mar 06	N	Nil		1 Infringement
13 Mar 06 to 3 Apr 06	Y	2 invoices		2 warnings
10 Apr 06 to 1 May 06	N	Nil		Nil

* two consent holders

** three consent holders

Motueka/Moutere

Effective Date	Missing Monitoring costs	Reading	Excessive Takes
7 Nov 05 to 19 Dec 05	General warning to all re Council policy		3 warnings
26 Dec 05 to 9 Jan-06	Nil		Nil
16 Jan 06 to 13 Feb 06	Nil		6 warnings
20 Feb 06 to 6 Mar 06	2 invoices		2 warnings
13 Mar 06 to 3 Apr 06	1 invoice		3 Infringements
10 Apr 06 to 1 May 06	9 invoices***		Nil

*** four of these were multiple consent holders where all readings were missing (only one monitoring charge applied)