



STAFF REPORT

TO: Environment & Planning Committee

FROM: Daryl Page, Compliance Officer

REFERENCE: C653

SUBJECT: **END OF SEASON WATER METERING REPORT 2009 / 2010 -
REPORT REP10-08-04** - Report prepared for meeting of 12 August
2010

1. ACKNOWLEDGEMENTS

Thank you to Council staff Vicky Thorn, Nikki Shepherd, Verity Simpson, Mandy Tomlinson, Neil Tyson, Joseph Thomas, Catherine Bryant (summer student), and Paul Milsom (contractor) for their input into the 2009 / 2010 water metering project.

2. INTRODUCTION

The purpose of this report is primarily to present an overview of the water metering project administration and compliance for the 2009 / 2010 summer irrigation season. The report also covers aspects of the larger water permit monitoring portfolio.

3. SUMMARY

- The primary aim of the water metering project is the collection of accurate and timely water use data - an essential tool in managing the District's valuable and limited water resource.
- Water rationing was introduced in the Waimea Plains late (March/April) during the 2009 / 2010 summer season.
- Rostering and trigger points were reached in the Riwaka zone, Takaka river, and Anatoki river.
- The number of consents administered under the water metering project in the 2009 / 2010 season increased to 834 (from 740).
- 77% of returns are now made electronically.
- The objectives for reliable water use data are not consistently achieved. Notwithstanding this, and for the purpose of closure, the water use data for the season is considered complete.

- Enforcement action was required in the 2009 / 2010 season.
- 38% of meters were audited during the 2009 / 2010 season.

3. THE RMA AND TRMP FRAMEWORK

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 in these areas for consent holders to install a water meter and supply meter readings to Council. Appendix 1 lists the TRMP Water Management Zones that are subject to either full or partial water metering.

The policy 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:

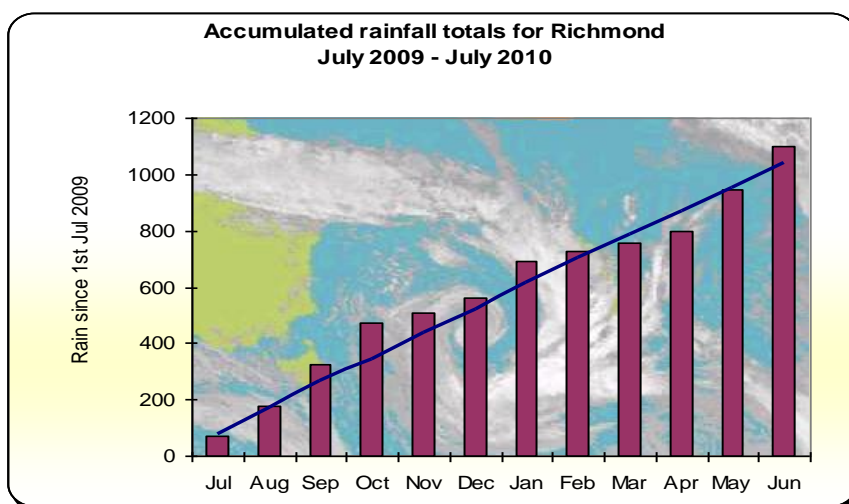
- Management of the districts water resources and improving/enhancing future understanding of the system;
- Monitor the effectiveness and suitability of the policy provisions within the TRMP and the exercise of resource consents;
- Bona fide review/renewal of existing consents; and
- Compliance with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

4. WEATHER PATTERNS 2009 / 2010 WATER METERING SEASON

While rainfall remained around average levels through summer until February, dry conditions through Christmas and early January brought with it the question of water rationing. However rain late January was sufficient to alleviate the need to introduce rationing during a peak of the irrigation time.

Notwithstanding this, there was a three month period of below average rainfall with most rivers and aquifers reaching a low point in late March. The Wairoa River dropped to 1.37 cumecs, the lowest since 2001, and a flow that could be expected once every 13 years on average. The Anatoki fell to 1.5 cumecs, again the lowest since 2001 and a level expected once in 15 years on average. Most other rivers around the district dropped to levels expected only once in five - seven years on average.

The plot below shows rainfall for the Richmond area, with the vertical bars showing the actual rainfall as it accumulates each month, compared to the line showing average accumulated rainfall.



5. WATER RATIONING

Water rationing was introduced during 2009 / 2010 as follows:

Effective Date	Delta	Reservoir	Upper Confined	Lower Confined	Hope	Waimea West	Golden Hills
15-Mar	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1
26-Mar	Removed	Removed	Removed	Removed	Removed	Removed	Removed
12-Apr	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1
26-Apr	Stage 2	Stage 2	Stage 2	Stage 1	Stage 1	Stage 2	Stage 2
28-Apr	Removed	Removed	Removed	Removed	Removed	Removed	Removed

Communication was through media statements, water shortage directions in the Nelson Mail, and individual letters/emails to the affected consent holders.

While the introduction of water rationing has an impact on water users, in this case its introduction did not pose a significant problem to the majority as the peak demand period was over.

The Wai-iti Zone was not rationing as water was released from the Kainui Dam to augment flows and groundwater levels.

In addition to the rationing outlined in the above table, rostering was implemented in the Riwaka zone. This is reported as working effectively through Joseph Thomas communicating with the Riwaka Water User Committee on a regular basis.

Rationing trigger flows were also reached in the Takaka and Anatoki rivers. In respect to the Anatoki Joseph once again was in communication with the two Salmon farms on a regular basis. While we await final water use data to assess compliance, preliminary data indicates the conditions of consent were complied with.

6. ADMINISTRATION

6.1 Water Metering Project

The number of meters on the water metering database at the end of the 2009 / 2010 season is now 834 (740 in the 2008 / 2009 season) and includes 89 Moutere domestic (permitted activity) records.

While all consents on the database require monitoring at some point during the season, 608 were “active” or in other words, required week by week monitoring during the season. 101 were noted as “not irrigating” with the balance a combination of annual returns and future implementation.

Water metering provides for the collection and monitoring of water use data during the summer season and the demands within this timeframe continue to increase and extend over the full year. While a project on its own, water metering is a component within the larger water monitoring portfolio.

6.2 Return Method

77% of returns are received electronically and this represents an increase of 10% from last season. This is a pleasing outcome as the expectation was there would be little remaining movement from consent holders who continued with the traditional return by post card system. Notwithstanding this, movement continues to be encouraged. More realistic is future movement between returns received by email (31%) to returns made via a Council webpage (46%) which is the most efficient return method.

6.3 Staffing

Staff resources continue to be stretched to meet the demands of water metering and the larger water monitoring portfolio over summer. As such there are conflicting demands and priorities need to be established from time to time - for example, the monitoring of missing returns, overtakes, meter audits and general database requirements. Outside of water metering, the monitoring of resource consent conditions and resolution of complaints adds further conflict.

However, access to a summer student and assistance from other staff was valuable. As the number of meters monitored grows there is an increasing demand to meet administration and monitoring (field work) tasks within the water metering project, consent monitoring, and complaints.

6.4 Other Water Metering Project Components

In addition to the collection and monitoring of water use data during the summer season, other tasks include:

- Extensive pre-season and end of season requirements, for example, initiating all records (October) for the upcoming season and providing a summary report and graphical representation of water use (June). A greater “compliance monitoring” focus was introduced for the end of season reporting this year.
- Frost protection consents extend beyond the summer period,
- Dam storage consents where the release of water for downstream residual flow is a condition of consent,
- Procedures manual,

Unfortunately, the last three items remain “work in progress”.

In addition, water metering was introduced for 89 Moutere domestic water takes (permitted activities) in 2009 i.e. install a meter by 1 November 2009 and subsequently supply two meter readings so annual use can be recorded.

It can be reported that 60 users have installed the required meters. Of these, summer water use data was received for 46 records. A more robust system to ensure the desired data capture is achieved will be required in the future. More importantly, there remain 29 owners who have not yet installed a meter. The non-installation of a meter is discussed later in item 7.7 of this report.

Schedule 31.1B (represented as Appendix 2A) in the TRMP lists water management zones where Council has signalled a future water metering requirement. However the provisions of the National Regulations - Water Metering which are expected to be introduced soon will have an effect on the existing TRMP provisions. As such, compliance effort regarding implementation of the TRMP provisions will be deferred until Council knows the impact of the new Regulations. Notwithstanding implementation dates and as previously reported to the committee, the new Regulations will impact on future data management, monitoring, and resources.

6.5 Budget

Appendix 2B provides a summary of the 2009 / 2010 Compliance Monitoring Water costs for the 12 month period to 30 June 2010.

While there was a slight deficit between income and expenditure (after an annual charge appropriation), it confirms that the set \$92.00 meter charge remains appropriate for the 2010 / 2011 year.

6.6 End of Season Summary to Consent Holders

Appendix 3 is a copy of an end of season summary sent to consent holders together with graphical representation of their individual water use record and that of the water management zone they belong to.

An enhanced reporting process was introduced this year to communicate back to the consent holder any monitoring undertaking outside of basis database administration.

A three tier reporting structure was used and while the majority of consent holders continued to receive just the generic summary (Appendix 3), others either received that summary together with an informal copy of monitoring notes made (minor non compliance) or a formal monitoring report. The latter reflected moderate non compliance and/or detailing specific action required to be taken to correct non compliance.

7. COMPLIANCE MONITORING

The “new look” 2009 / 2010 reporting process had two main purposes - to cover the past but also looking to the future. While it is hoped that monitoring outcomes are educational and promote future compliance, they must also act as a deterrent.

7.1 Meter Reading Return Rates

There are two differing objectives in respect to the water meter return programme. The first relates to the end use of the data and the aim is to have a minimum return rate of 95% so the data analysis has integrity. The second is compliance with the consent condition and the aim must be a return rate of 100%.

Despite regular monitoring during the season, we did not consistently achieve the return rate objectives. The end of season representation of return rates reflects that a return was made rather than made on a timely basis.

This timing issue and/or in some cases, the absence of a return, undermines the reliability of water use data. Notwithstanding this and while a small number of records remain incomplete at the time of writing, for the purpose of season closure, the water use data for the season is considered complete.

7.2 Missing Returns Monitoring/Enforcement

There were 18 consent holders (five and fifteen the previous two years respectively) who were subject to formal enforcement action regarding missing returns and were invoiced the \$175.00 monitoring fee following a site visit to read the meter. These cases were representative of a situation where there was a failure to respond to reminders and/or many instances of missing returns rather than returns being a week or two late. No data is held to show the number of informal or verbal missing reading communications or the number of records which could have been subject to formal enforcement but were not. The capture of this information is being considered and is proposed for the next season.

However and despite the above comments, it is fair to say that the return rate has improved. To assist consent holders, an email reminder service was offered in 2009. Unfortunately, the uptake was slow and while we will promote this service again, thought will also be given to proactively adding names to the list - especially those with a missing reading history.

All but three invoices have been paid and are reflected in the recoveries total in Appendix 2B.

7.3 Overtake Monitoring/Enforcement

All overtake situations were investigated. A number of informal and verbal warnings were given and in general, future compliance was the result. Six written warnings were issued. Seven Infringement Notices (one and two the previous two years respectively) were issued.

In addition, a further two (three last year) water related infringements were issued where enforcement action followed issues outside the metering programme.

All infringements have been paid and are reflected in the recoveries total in Appendix 2B.

No specific data is held to show the number of informal verbal communication and/or warnings for overtakes. However, an analysis of monitoring notes indicates there were approximately 36.

In dealing with overtakes, the policy has been to issue a warning for the first overtake. The 2007 water metering report highlighted this and sought Council direction regarding a “clean slate” each season. That direction was to continue with a warning for the first overtake each year unless the overtake was deemed excessive and there is a history of overtakes in any previous season (EP07/02/46).

After three subsequent years, further direction is sought regarding this policy. Staff now feel that the reference to “excessive” could be removed.

7.4 Water Meter Audit

A total of 274 (38%) meter audits were undertaken during the 2009 / 2010 season up from 92 (12%) the previous year. Once again, audits were undertaken in a random manner. Staff discussion on future audits has been around completing a 100% audit over a three year period but with a proviso that meters where a reading discrepancy has been discovered is revisited the following year (and/or the same season).

General meter audits continue to include a reading of the meter, that the meter is sealed, and an updated (digital) photographic record of the meter.

7.5 Fictitious Meter Readings

Some accuracy inconsistencies continue to be identified as part of the meter audit and were brought to the consent holder’s attention. These situations remain a concern and repeat offenders will be a focus next season. Where an unexplained inaccuracy is found in future, the cost of the audit (normally no charge) will be recovered and depending on the circumstances, enforcement options will be considered.

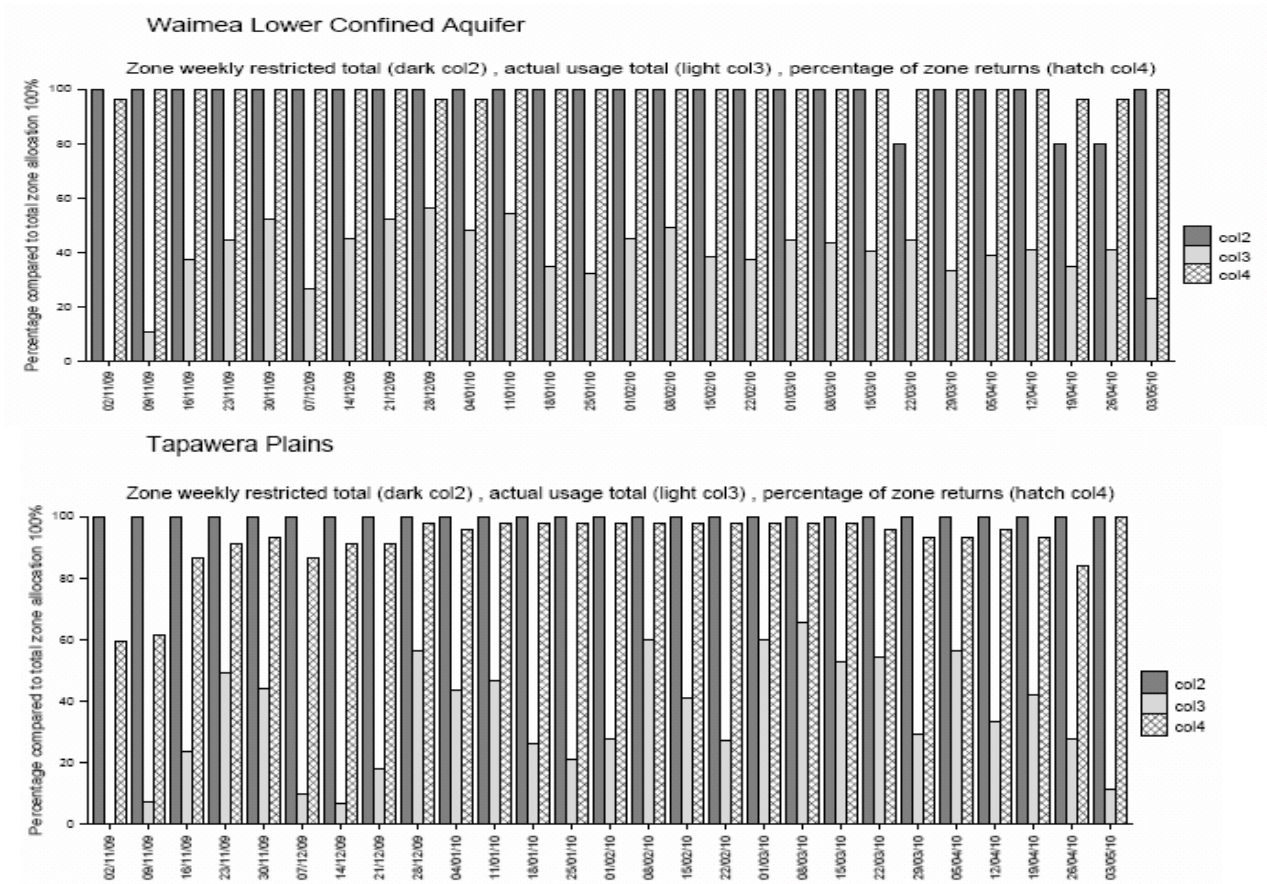
7.6 Water Consumption Data

Three zones (nine last year) being Tapawera Plains, Stanley Brook (only one record), and Takaka Surface registered a water use greater than 60% of the zone allocation at some point.

There were 11 zones (16 last year) being Lower Confined, Upper Confined, Hau, King Edward, Middle Motueka, Motupiko, and Tadmor (plus the three zones above) that registered a water use greater than 40% of the zone allocation at some point.

Graphical representation of each water management zone subject to full metering (23 zones) is viewable on Council website www.tasman.govt.nz

For the purposes of this report, two examples of these graphs are included to illustrate water use, times of water rationing, and return rates.



7.7 Moutere Domestic Metering - Compliance

As highlighted earlier, there are 29 owners who have not installed water meters and Council direction is sought in respect to future action. Priorities have meant that no follow up to Council's original advice to install a meter (by 1 October 2009) has taken place. While resources will continue to be a factor, a further request (letter) to install a meter can be made and this may be enough for some owners who have simply forgot.

However, there are some owners who in 2009 told Council they will not install a meter. To achieve the objective behind introducing water metering for Moutere domestic takes and in fairness to those who have complied with Council instruction, it will follow up non-compliance with appropriate enforcement action. It is a permitted activity rule that requires the installation of a meter for Moutere domestic takes (TRMP 31.1).

7.8 Section 126 RMA (S126) review

During the year and with particular reference to consent holders asking for a reversal of the \$90.00 water meter levy fee (because there is no meter and in some cases, no system), staff have discussed the cancellation of the consent under S126.

S126 provides the ability for Council to cancel the consent if the consent has been exercised in the past but not exercised during a preceding five year period. It is only recently that reporting on a nil use situation has been possible and while still not

entirely robust, there would appear to be approximately 19 consents that indicate no water use in the last four years.

While there are some procedural matters to comply with, staff discussion has been around the impact of initiating S126 reviews. For example, Council would not want a consent holder to simply turn the water on (as some have said they would do) in order to retain the consent. In this situation and if not already installed, the consent holder would have to weigh up the costs of system implementation but the bottom line is that Council may need to increase its monitoring and check that any water use was not wasteful.

In addition, any S126 consideration would need to reflect the circumstances of the particular water management zones for example, where consent holders have brought into a scheme and/or where there is a waiting list for a water allocation.

8. RECOMMENDATIONS

1. That Council receive Report REP10-08-04.
2. That Council agrees in respect to overtakes that staff will now issue a warning for the first overtake each year unless there is a history of overtakes in any previous season, in which case other remedies will be pursued.
3. That Council notes staff will initiate Section 126 cancellations to facilitate efficient water use in those cases where there is no compelling reason for a permit to be held and where the water could be relocated to the potential users.



Daryl Page
Compliance Officer

APPENDIX 1:
Water Management Zones subject to water metering in the TRMP

Zones subject to full metering

Motueka/Riwaka-Plains

Hau * (42)

King Edward

Consents

(43)

Moutere

Moutere Eastern Groundwater

(20) (plus 11 domestic)

Moutere Western Groundwater

(20) (plus 5 domestic)

Moutere Coastal Groundwater

(22) (plus 32 domestic)

Moutere Southern Groundwater

(27) (plus 41 domestic)

Waimea

Delta(131)

Golden Hills

(30)

Lower Confined Aquifer

(26)

Reservoir **

(44)

Upper Confined Aquifer

(31)

Waimea West Aquifer

(22)

Wai-iti

(18)

Wai-iti Dam Service Zone

(100)

Hope Minor Aquifer

(24)

Upper Motueka

Dovedale

(12)

Motupiko

(15)

Tapawera Plains

(44)

Tadmor

(2)

Stanley Brook

(1)

Baton

(2)

Wangapeka

(7)

Middle Motueka

(3)

Zones containing individual water meters

(includes TDC water supplies)

Aorere/West Coast

(3)

Buller/Westland

(11)

Motueka Central Plains *

(7)

Motueka Swamp

(6)

Marahau and Adjoining Aquifers

(1)

Riwaka Plains

(3)

Umukuri

(5)

Waimea - Moutere Gravels

(3)

Takaka Groundwater

(8)

Takaka Surface

(9)

Moutere Surface

(3)

* includes "private" Lower Moutere Water Scheme

** includes "private" Waimea East Irrigation Scheme

APPENDIX 2A
Water Meter Requirements

The following table is formed from Schedule 31.1B in the TRMP and represents future water metering implementation dates. The number on the left hand side represents the (approximate) number of consents involved and in some cases represents a “net” situation as some consents are already metered as a condition of consent.

Water Meter Requirements	
Water Management Zone	Zones where Water Meters are Required
Motueka/Riwaka Plains	
30	<i>Riwaka Plains Zone - by 30 November 2010</i>
149	<i>Central Plains Zone - by 30 November 2010</i>
20	<i>Swamp Zone - by 30 November 2011</i>
41	<i>Umukuri Zone - by 30 November 2011</i>
1	<i>Dove Zone - by May 2012</i>
2	<i>Baton Zone - by 2013</i>
64	<i>Middle Motueka Zone - by 30 November 2014</i>

Staff have previously estimated that there are potentially and another 700 consents (includes those listed above) that will be subject to future metering under the National Regulations.

2009 / 2010 Compliance Monitoring - Water

Expenditure (predominately staff time)	2009 / 2010	2008 / 2009
Compliance monitoring of missing returns and overtakes under Water Metering Project plus general monitoring of consent conditions (all potentially recoverable) and complaint response	\$18,749	\$17,733
Preseason, Database Administration, Meter Audits, Permitted Activities, Drought Management under Water Metering Project, and Miscellaneous	\$87,608 **	\$68,438

Income	2009 / 2010	2008 / 2009
Water Meter Charge	\$58,400	\$58,480
Section 36 Income	\$35,000	\$25,000

Recoveries	2009 / 2010	2008 / 2009
Water meter reading fee and infringement related recoveries	\$7,542	\$5,066

** Represents additional resources (student and contractor), increased meter audit activity and enhanced preseason/end of season work.

APPENDIX 3 End of Season Summary to Consent Holders

Water Metering Monitoring 2009 - 2010 Summer Season

Thank you to the consent holders who have consistently met their consent conditions. Your co-operation and contribution to the water use database is appreciated.

Water metering is an essential tool in managing the District's valuable and limited water resource. As a condition of your water permit, you have a responsibility to:

- **Supply accurate and timely water meter reading for the whole summer season i.e. the start of November to the end of April each year, and**
- **Not to exceed the authorised water allocation.**

This year our end of season reporting is done in two ways:

Everyone will receive this communication together with a water use graph on the reverse side. If this is all you receive, it is an indication of general compliance during the season although there may be a handwritten note or a copy of a monitoring note if there are any minor matters you should be aware of.

For particular areas of or persistent non compliance during the season, you will receive a specific monitoring report. In this case, and with a view to future summer seasons, please read the content carefully.

In summary of the 2009 - 2010 summer water metering season:

Water Consumption is shown as a % of the allowable take on a weekly basis. The first graph represents your individual water take during the season; the second graph represents the aggregate water take for the water management zone from which you draw your water.

Water Meter Returns No data (i.e. no dark line above the date) on your individual water take graph indicates a missing return unless you had told Council you were not using water during the season. The extensive drop off of returns occurring in late March and April continues to be a disappointment and impacts on the success of the water management project. The solution is simple, if you have an early finish to the irrigation season; all you need to do is tell Council to avoid monitoring and additional costs. Please keep this in mind for next season!

Excessive Takes If any; they can be seen on your individual graph where the lighter (usage) line extends beyond the dark line.

Monitoring Costs A portion of annual charges on your consent is allocated to the water metering project and covers the basic administration costs of processing water use data and audit work. For any additional monitoring you will be invoiced for the costs. For example, where Council read your meter in response to missing readings, a fee of \$175.00 applies.

Water Rationing Implemented in some Waimea Plains zones during March/April.

Water Meter Audit The "anytime, anywhere" water meter audit continued.

If you wish to discuss any matter about the water meter monitoring project, please contact us anytime.

Regards,

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