

Report No:	REP11-08-05
File No:	C653
Date:	11 August 2011
Information Only - no decision required	

REPORT SUMMARY

Report to: Environment & Planning Committee
Meeting Date: 25 August 2011
Report Author: Daryl Page, Compliance Officer
Subject: **Water Metering Project Report 2011**

EXECUTIVE SUMMARY

This report presents an overview of the water metering project administration and compliance for the 2010 / 2011 summer irrigation season. The report also covers aspects of the larger water permit monitoring portfolio.

RECOMMENDATION/S

That the report be received.

DRAFT RESOLUTION

That the Environment & Planning Committee receives the End of Season Water Metering Report REP11-08-05

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1. Purpose of Report

- 1.1 This report presents an overview of the water metering project administration and compliance for the 2010 / 2011 summer irrigation season. The report also covers aspects of the larger water take monitoring portfolio.

2. Acknowledgement

- 2.2 Thank you to Council staff Vicky Thorn, Mandy Tomlinson, Neil Tyson, Joseph Thomas, and Bettina Koessler (summer student) for their input.

3. Main Points

- 3.1 The primary aim of water metering is the collection of accurate and timely water use data - an essential tool in managing the District's valuable and limited water resource.
- 3.2 Water rationing was introduced in the Waimea Plains in December 2010 and February 2011.
- 3.3 Rostering and trigger points were reached in the Riwaka zone, Takaka River, and Anatoki River.
- 3.4 The number of consents administered under the water metering project in the 2010 / 2011 season increased to 852 (834)
(NB and using the above (852 (834)) as an example, this is how previous year comparisons will be shown in the balance of this report)
- 3.5 75% of water meter readings are received electronically - either online or email.
- 3.6 The objectives set 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.

3.7 Enforcement action was required in the 2010 / 2011 season.

3.8 52% (38%) of meters were audited during the 2010 / 2011 season.

4. The Resource Management Act (RMA), Tasman Resource Management Plan (TRMP), and Measurement and Reporting of Water Takes Regulation 2010 (Regulations) Framework

4.1 The TRMP divides the Tasman district into water management zones and existing policy for the use (installation) 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

4.2 Report REP11-08-11 (included in this agenda) discusses the implementation options for Council in respect of the Regulations. For the water metering project, the main changes are requirements around the (staged) water meter requirement for all consented takes (> 5 l/s), the water meter specification, and a full year reporting period. The requirements will have a significant impact on existing resources.

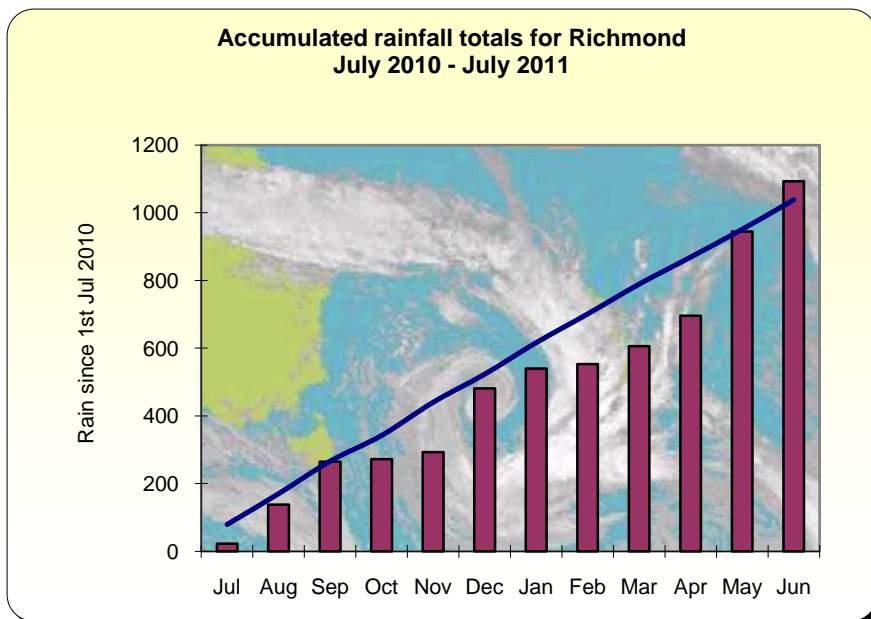
4.3 Accurate and timely water meter data is an essential tool in managing the District's valuable and limited water resource. The information is used for:

- Management of the district's water resources and improving/enhancing future understanding of the system;
- Monitoring 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. Weather Patterns

5.1 Low average rainfall in October and November meant a dry start to the irrigation season but substantial rainfall in late December relieved the pressure on rivers and aquifers. Rainfall through February and March was also lower than average.

5.2 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.



5.3 Most major rivers in the district reached their lowest levels in December and again were at similar levels in late February. These were in the range of expected levels that would occur once every 2 to 5 years on average.

6. Water Rationing

6.1 In consultation with the Dry Weather Taskforce, water rationing was introduced in the Waimea Plains and Motupiko as follows:

Effective Date	Delta	Reservoir	Upper Confined	Lower Confined	Hope	Waimea West	Golden Hills
6-Dec	Stage 1	Stage 1	Stage 1	Stage 1		Stage 1	Stage 1
17-Dec	Removed	Removed	Removed	Removed		Removed	Removed
21-Feb	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1	Stage 1
7-Mar	Removed	Removed	Removed	Removed	Removed	Removed	Removed

6.2 Stage 1 rationing in December included a signal that stage 2 and then consideration of stage 3 were imminent.

6.3 In February, Council also signalled to consent holders in the Motupiko and Moutere Eastern zones that stage 1 rationing was being considered. Stage 1 rationing was subsequently introduced in the Motupiko zone as at 28 February but removed soon after on 2 March.

6.4 Communication about rationing was through a mix of media statements, statutory water shortage directions and individual letters/emails to the affected consent holders.

6.5 In addition, rationing trigger flows in the Riwaka, Takaka, and Anatoki continued to be monitored by Joseph Thomas who communicated with the Riwaka Water User Group and consent holders as and when required.

7. Administration

7.1 Staffing

Daryl Page was the Compliance Officer responsible for the 2010 / 2011 water metering project. Bettina Koessler was employed (November - February) as a summer student and provided assistance with data entry and water meter audits. Vicky Thorn (Compliance Administrator) continues to provide day to day support.

7.2 Water Metering Project

The number of meters on the water metering database at the end of the 2010 / 2011 season is 852 (834) and includes 91 Moutere domestic (permitted activity) records.

While all consents on the database require monitoring at some point during the season, 622 (608) were "active" or in other words, required week by week monitoring during the season. 92 (101) were noted as "not irrigating" with the balance a combination of annual returns and future implementation.

Water metering involves the collection and monitoring of water use data during the summer season and the demands within this timeframe have continued to increase and extend over the full year. Over time, the Regulations will significantly add to these demands.

7.3 Return Method

75% (77%) of returns are received electronically. There was movement from email return to the (preferred) webpage return. Webpage returns are at 54% (46%) and email returns are at 21% (31%).

7.4 Other

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 for the upcoming season and an end of season report to consent holders
- Electronic records. A small number of surface take consents are required to also send their water use data electronically (data logger). Council processes to facilitate the receipt and analysis of this data have been improved this year. While currently an annual requirement, we can expect the supply of electronic data to increase (both in number and frequency) as a result of the new Regulations.

- Ongoing system improvements including:
 - 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,

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

In addition, water metering was introduced for Moutere domestic water takes (permitted activities) in 2009. It can be reported that 76 (60) users have installed the required meter. While it was identified last year that a more robust system would be required to capture water use data this year, very little monitoring of returns took place. Notwithstanding this and outside of some sporadic returns from owners and some Council readings provided some data. Both matters are an example of a resource and priority conflict within the water metering project.

7.5 Budget

Appendix A provides a summary of the 2010 / 2011 Compliance Monitoring Water costs for the 12 month period to 30 June 2011.

7.6 End of Season Summary to Consent Holders

Appendix B 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.

This “generic” reporting system was used for the majority of consent holders with a handwritten comment and/or a monitoring note printout regarding minor non compliance where appropriate.

8. Compliance Monitoring

8.1 A more formal reporting process deals with moderate and/or persistent non compliance where specific action is required in the future. While still in process at the time of writing this report, approximately 5 (32) consents will be subject to this more formal reporting this year. Designed to educate and act as a deterrent, a successful compliance monitoring environment is evident.

8.2 Meter Reading Return Rates

There are two differing objectives in respect to the water meter returns. 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%.

We do not consistently achieve the return rate objectives and the end of season representation of return rates reflects that a return was made rather than made on a timely basis. Notwithstanding this, regular monitoring has resulted in improvement.

This timing issue 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 may be incomplete at the time of writing this report, for the purpose of season closure, the water use data for the season is considered complete.

8.3 Missing Readings Monitoring/Enforcement

Seventeen consent holders (18) were subject to formal enforcement action regarding missing returns and were invoiced the set 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. Staff continue to issue many “friendly” reminders (with no direct recovery) throughout the season. This is a compliance area that will continue to receive a focus in the future.

8.4 Excessive Water Use Monitoring/Enforcement

All excessive water use situations were investigated. A number of informal warnings were given and in general, future compliance was the result. One (six) written warning was issued. Seven (seven) Infringement Notices were issued and all have been paid.

By resolution EP10-08-07, Council agreed a policy where a warning for the first overtake would continue unless there was a history of overtakes in any prior season. In implementing this policy, a proactive approach was taken and past offenders were given a “heads up” during the pre-season. Four of the seven Infringements issued were repeat offenders and one Abatement Notice has been issued.

Notwithstanding the policy and similar to missing readings compliance, Council continues to issue many informal warnings throughout the season.

8.5 Water Meter Audit

A total of 368 or 52% (274 - 38%) meter audits were undertaken during the 2010 / 2011 season. The objective with meter audits is to complete a 100% audit over a three year period but with a proviso that meters where a reading discrepancy has been discovered be revisited earlier.

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

8.6 Fictitious Meter Readings

Some accuracy inconsistencies continue to be identified and are brought to the consent holder’s attention. These situations remain a concern and any repeat will mean enforcement options will be considered.

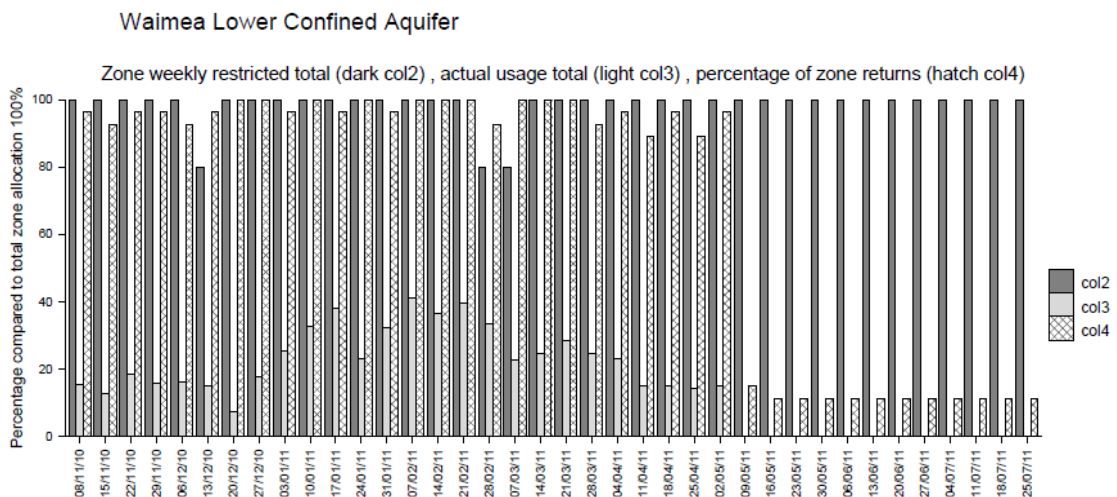
8.7 Water Consumption Data

Five zones (3) being Hau (Motueka), Tadmor, Stanley Brook, Tapawera, Wangapeka (Upper Motueka), and Takaka (surface) registered a water use greater than 60% of the zone allocation at some point.

Eight zones (11) being King Edward (Motueka), Moutere Western, Motupiko (Upper Motueka), Lower Confined Aquifer, Reservoir, Hope Aquifer (Waimea), and Waimea West (plus the five zones above) 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 (22 zones) is viewable on Council website www.tasman.govt.nz

For the purposes of this report, an example of these graphs is included to illustrate water use, times of water rationing, and return rates.



8.8 Moutere Domestic

As stated earlier, 15 (29) owners have not yet installed water meters following a further letter sent 30 September 2010. It will soon be two years after the original “install by” date. It is a permitted activity rule that requires the installation of a meter for Moutere domestic takes (TRMP 31.1). In receiving last year’s report, Council confirmed a preparedness to follow up non compliance with appropriate enforcement action. Unfortunately resources and priorities have meant no further follow up was made.

9. Section 126 (RMA) cancellations

9.1 By resolution EP10-08-07, Council noted that staff will initiate S126 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 reallocated to potential users. No S126 cancellations were auctioned during the year.

- 9.2 While the S126 cancellation process remains a tool for Council, the Regulations may in part achieve the same outcome. For example, the new meter, reporting, and verification requirements of the Regulations may result in some users deciding to surrender a consent that has a history (and future) of no water use.

10. RECOMMENDATION/S

That the report be received.

11. DRAFT RESOLUTION

THAT the Environment & Planning Committee receives the End of Season Water Metering Report REP11-08-05.

Daryl Page
Compliance Officer

Appendix A: Budget Summary
Appendix B: End of Season Summary to Consent Holders

**APPENDIX A
Budget Summary**

2010 / 2011 Compliance Monitoring - Water

Expenditure (predominately staff time)	2010 / 2011	2009 / 2010
Compliance monitoring of missing returns and overtakes under Water Metering Project plus general monitoring of consent conditions (all potentially recoverable) and complaint response	\$22,238	\$18,749
Preseason, Database Administration, Meter Audits, Permitted Activities, Drought Management under Water Metering Project, and Miscellaneous	\$98,038	\$87,608
Income		
Water Meter Charge	\$57,240	\$58,400
Section 36 Income	\$45,000	\$39,000
Recoveries		
Water meter reading fee, infringement related recoveries, and consent monitoring	\$9,194	\$7,542

APPENDIX B End of Season Summary to Consent Holders

Water Metering Monitoring 2010 - 2011 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.

As a way of reporting, everyone will receive this summary 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 matters you should be aware of.

For particular areas of non compliance or enforcement, you will receive an additional and formal monitoring report and possibly and invoice for monitoring costs (see below). With an eye on the future, please read the content carefully.

In summary of the 2010 - 2011 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; the second graph represents the aggregate water take for your water management zone.

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 and again read any monitoring comments carefully. As a general reminder you are required to **supply accurate and timely weekly water meter reading for the required period.**

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 \$195.00 applies.

Water Rationing Implemented in some zones during December 2010 and February 2011.

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

Heads up on new reporting requirements You will be aware that the Government has introduced the Measurement and Reporting of Water Takes Regulation 2010 and in time you will receive more detailed information from Council regarding the implications for you. However at this time, Council would like to signal that the Regulations require a full year reporting period rather than the traditional summer season of the start of November to the start of May each year. You will already see the start of this full year reporting by the dates in the water use graph.

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

Regards
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