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Committee **Rural Services and Wairarapa**
Author **Steve Blakemore, Manager, Planning & Resources**

Water Metering

1. Purpose

To obtain Committee consideration and approval of a policy extending the requirement for water meters for takes of surface and underground water in the Wairarapa.

2. Background

With the extended dry conditions this year, staff have worked hard to check compliance of irrigation takes with consent conditions.

Compliance checks where water meters are installed are a very efficient and straightforward process comparable to looking at the odometer on a car. Flow rate is easily calculated from volume over time.

Where water meters are not installed, compliance checks require the use of hired electronic equipment that is clamped to pipes. This provides the flow rate in most cases, but is costly, often difficult to use and sometimes unreliable. Furthermore it does not provide total volume extracted. It also requires concentrated compliance checks to be actioned within the hire period, when rainfall may result in temporary cessation of irrigation, or there may be cessations in place.

Currently all new underground and surface water takes have the following consent condition under which installation of a water meter can be required:

If so requested by the Manager, Planning and Resources, the consent holder shall install measuring equipment (i.e. water meter) to ensure compliance with consent conditions. The installation of measuring equipment, may be required if:

- *The cumulative effects of abstraction in the catchment are significant.*

- *There are instances of non-compliance with conditions in the resource consent.*

Following on from the approval of moratorium areas and targeted metering in December 2001, 33 meters have been installed in four underground water moratorium areas. One meter has not been installed and an abatement notice has been issued.

The approval also provided for installation of meters for all large takes, greater than 40 litres per second. To date this has been limited to underground water takes with 8 meters installed. Four abatement notices have been issued.

Additional to the above, 9 meters have been installed either voluntarily or as required by previous consent conditions.

This gives a total of 50 meters currently in place. There are 462 water permits in the Wairarapa.

2. Discussion

2.1 New Water Takes

There are several points in favour in requiring water meters to be installed for all new water takes above a specified flow rate. These are:

- The best time for a meter to be installed is when a pump is being fitted to a bore. This is the most convenient and efficient time in terms of both ease of installation and cost.
- Meters provide both flow rate and total extracted volume. Extracted volume is otherwise unavailable and can only be estimated. It will considerably assist management of surface water and is essential knowledge for proper management of groundwater zones.
- Meters allow for users to become better water managers in terms of efficiency of application and pump performance.
- Compliance checks are quick and efficient. If irrigation is not occurring at the time of inspection the extraction figure is still obtained.
- The information obtained will provide increased, accurate knowledge of each resource that is ultimately to the benefit of each consent holder.
- Compliance with hours of take can also be checked by metering, whilst at present only instantaneous flow rates can be checked.

The main disadvantage in installing a meter from a consent holders perspective is the cost of a meter and its installation. The installation costs to existing pumps have been around \$1000. This is a one off cost.

2.2 Extraction Threshold

If meters are to be required for all new takes, an extraction rate needs to be set at which they are required. As the effect on an aquifer is a product of both extraction rate and pumping duration, quite low takes can have a significant effect when they occur over long periods. With extensive rural subdivision and intensification of land use, many small takes can place a significant stress on water resources.

Recognising this effect, a case can be made for meters to be required for all consented takes, and for groundwater in particular. That is for all takes greater than the “2.5 l/sec consent but no greater than 20,000 litre per day” volume permitted by the Regional Freshwater Plan.

However, as the benefits of metering apply both to resource management and compliance, consideration needs to be given to the current compliance charging procedures. Council approved the current Resource Management Charging Policy in July 2001. Compliance requirements under this policy are:

- Takes exceeding 40 l/sec are monitored for compliance annually.
- Takes of 20 to 40 l/sec are monitored initially and on a subsequent three year basis.
- Takes less than 20 l/sec receive only one inspection in the first year, unless they are classified as non standard.

A requirement for water meters must align with the compliance policy. In alignment with this current policy, staff recommend a threshold for metering set at 20 l/sec or greater averaged over 24 hours.

2.3 Existing Water Takes

Discussion is also required as to whether meters should be progressively required on existing takes that are outside present moratorium areas and are between 20 and 40 l/sec.

There will be a considerable advantage in water resource management in having accurate water use information available on an ongoing basis for all consented takes in each Wairarapa catchment/aquifer. This will be increasingly so, as pressure on our finite water resources has rapidly increased, along with the size of takes.

A common expiry date is set for each consent within an individual aquifer or catchment. This allows for a whole catchment/aquifer approach to be taken, based on water allocation plans. Installation of meters would be best co-ordinated with these renewals with individual consent conditions requiring installation by a given date.

There are currently 84 consents of 20 to 40 l/sec. (A further 46 consents of 40 l/sec or greater are covered by the previous metering decision.)

3. Communication

It is proposed that the requirements be publicised in an Ecofile article and included in next year's consent newsletter.

Metering requirements will be conveyed directly to clients as they apply for new consents or renewals.

4. Recommendation

(1) *That additional to Decision RW10 of 4 December 2001, the Committee approve a policy to be applied in the Wairarapa constituency requiring:*

(i) *Meters to be installed for all new underground and surface water takes of 20 litres per second or greater, averaged over a 24 hour period.*

(ii) *Meters to be installed for all existing consented underground and surface water takes of 20 litres per second or greater, averaged over a 24 hour period, upon renewal of each current consent.*

(2) *That the Committee request staff to review the requirement for water meters for consented water takes of less than 20 litres per second averaged over a 24 hour period, before the next review of the Resource Management Charging Policy*

Report prepared by:

Report approved by:

Steve Blakemore
Manager, Planning & Resources

Colin Wright
Divisional Manager, Wairarapa