

A large-scale irrigation system, likely a center pivot system, is shown in a vast green field under a clear blue sky. The system consists of a long metal truss structure supported by multiple vertical posts, with numerous nozzles extending downwards to spray water onto the crops. The field is lush and green, and the sky is bright with a few wispy clouds.

Water Meters

Information to help you comply with new government regulations

- How new government regulations for measuring and reporting water use affect water-take consent holders
- Advice on installing and verifying water meters
- How to report your water use information to Greater Wellington

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Background - the new government regulations

The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 came into force in November 2010. At a minimum, the regulations require all consent holders to:

- Have a water meter on any take greater than 5 litres/second
- Record daily water usage (in m³)
- Report water usage each year to regional councils (in the Wellington region – Greater Wellington Regional Council)
- Verify their water meter every 5 years

How does this affect my water take consent?

If you obtained your resource consent before November 2010, there is a transition period to assist you to comply with the new regulations:

Water takes	Compliance required by
Greater than 20 litres/second	November 2012
Between 10 and 20 litres/second	November 2014
Between 5 and 10 litres/second	November 2016

It is important to check your resource consent as in some cases there may be existing metering and reporting requirements that are more stringent than the new regulations. If this is the case, your conditions apply.

If your consent was granted after 10 November 2010, you simply need to check your resource consent as your consent conditions will already meet the minimum requirements of the government regulations.

Selecting your water meter

Consider the following when selecting a water meter:

Types of meters

There are three main types of water meters – electromagnetic meters, ultrasonic meters, and mechanical meters. Each of these water meter types has different specifications and advantages/disadvantages:

Specifications	Electromagnetic meter	Mechanical meter	Ultrasonic meter
Accuracy (laboratory)	+/- 0.15% - 2%	+/- 2% - 5% of rate	Better than +/- 2%
Reliability & tamper proof protection	Very high	Medium	High
Flow rate indication available	Yes	Yes – with datalogger attached	Yes
Remote reading capability	Optional	Optional	Optional
Average operating life before overhaul	20 years	4 years	15 years
Pressure loss (head loss)	Negligible	Medium	Negligible
Resistance to blockage	Very high	Medium	Very high
Resistance to weed	High	Medium	High
Relative installed cost	Medium	Medium	Medium
Power required	Yes or solar/battery	No	Yes or solar/battery
Water quality	Can cope with silty water	Prone to wear with continued exposure to silty water	Can cope with silty water

Note: The above table is a guide only, based on general information and manufacturer's literature where available.

Based on the information in the table above, Greater Wellington recommends that for most situations electromagnetic meters are installed.

Installation requirements

Your water meter should be installed by an accredited service provider with the Blue Tick water metering programme coordinated by Irrigation NZ.

See www.irrigationnz.co.nz/irrigation-industry/water-measurement for accredited service providers in the Wellington region.

It is important that a sufficient length of straight pipe with unobstructed flow is provided before and after the water meter. Best practice requires 10 x pipe diameter on the intake side of the meter and 5 x pipe diameter on the outlet side of the meter.

For example, if the pipework at your headworks is 150mm (0.15 metres) in diameter you will require a length of straight at least 1.5 metres on the intake side of the meter and 0.75 metres on the outlet side of the meter. A longer straight pipe may be required in some cases, eg, to ensure there is sufficient straight pipe to verify your water meter or when there are gate/butterfly valves located close to the meter.



Good installation

- Likely sufficient straight length pipe



Poor installation

- Inadequate straight length pipe
- Headworks upgrade required



Before headworks upgrade

- Butterfly valve on intake side of meter
- Likely insufficient straight length pipe



After headworks upgrade

- Butterfly valve now on discharge side of meter
- Sufficient straight length pipe

Tamper proof seals

Your water meter must also be as tamper proof as practicable. This is normally undertaken by installing appropriate tamper-proof seals. There are national guidelines for the installation of tamper-proof seals which accredited service providers are required to adhere to. Greater Wellington has provided all accredited service providers with tamper-proof seals to install with your water meter.

Water meter ID number

Your water meter will have a unique Greater Wellington water meter ID number. Labels (see below) will be progressively installed by Greater Wellington staff and/or accredited service providers on headworks adjacent to all water meters from 2012.

Water meter ID number

BP34/0013




greater
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Verifying your water meter

Your water meter needs to be verified every five years. There also may be instances where your consent conditions require your water meter to be verified more frequently than every five years (eg, for mechanical meters).

Verification is a one-off check to validate the accuracy of your water meter. To get your water meter verified, an appropriately qualified person tests your water meter for performance. There are two main ways to verify your water meter:

1. Undertake a volumetric test by timing how long it takes to fill a container of a known volume. This test can only be completed with smaller water takes
2. Clamp on a reference meter (usually an ultrasonic meter) and measure the flow volume

Unless special circumstances apply, Greater Wellington only accepts verification certificates/reports from accredited service providers with the Blue Tick water metering programme coordinated by Irrigation NZ.

See www.irrigationnz.co.nz/irrigation-industry/water-measurement for accredited service providers in the Wellington region.



Every verified water meter will be tagged with a label like that shown below:



Reporting your water usage information to Greater Wellington

You are required to provide records of daily water usage (in m³) unless records of weekly water usage are approved by Greater Wellington. These records are required to be submitted to Greater Wellington at least once a year.

Greater Wellington has developed a compliance monitoring strategy for water takes which identifies the level of reporting required in various catchments and aquifers across the Wellington region. The strategy outlines three levels of reporting:

1. Real-time telemetry to Greater Wellington's water use data management system or third-party provider
2. Daily water meter reading via datalogger and annual submission of data to Greater Wellington's water use data management system
3. Weekly water meter readings to be recorded and submitted online via Greater Wellington's water use data management system

This compliance monitoring strategy applies to the processing of all water take consents from July 2011. If your water take consent was issued before July 2011, you can check your likely future monitoring requirements at www.gw.govt.nz/water-take-measuring-and-reporting.



Key reminders

- Check your resource consent conditions for metering and reporting requirements
- Consider all your options when selecting a water meter
- Use an accredited Irrigation NZ installer or verifier



For more information, contact Greater Wellington's compliance monitoring staff:

Wellington Masterton
04 830 4255 06 378 2484

www.gw.govt.nz/water-take-measuring-and-reporting



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