

Overview of the regulations	When do the regulations take effect	Working out your rate of take
<p>The regulations apply to holders of water permits (resource consents) which allow freshwater to be taken at a rate of 5 litres/second or more</p> <p><u>What is required</u> Installation of a water meter that is capable of measuring water use every 15 minutes This information must then be sent to the council that issued the consent.</p> <p>Table 1 sets out the specific water measuring device/system requirements</p>	<p>The regulations take effect on 3 September 2020</p> <p>However to make it easier for compliance</p> <ul style="list-style-type: none"> • Between five and 10L/s must comply with these requirements by 3 September 2026 • More than 10 and less than 20L/s must comply with these requirements by 3 September 2024 • 20L/s or more must comply with these requirements by 3 September 2022. 	<p><u>Where a consent does not specify any rate in litres/second</u> Some consents (usually consents for groundwater takes) do not include a maximum rate of take in litres/second, but rather they specify a maximum volume that may be taken over a longer period, such as a daily, weekly or even annual rate</p> <p>For these consents, each of the alternative rates needs to be converted into a litre/second rate – if there is more than one alternative rate, then after conversion, the greatest of those rates applies for the purposes of the regulations</p> <p>See table 2 to work out the rate per second</p> <p><u>Where a consent specifies a rate in litres/second</u> Some consents include more than one rate in litres/second – for example, a rate in summer and a different rate in winter. In these cases, the greatest of these rates applies for the purpose of these regulations</p>

Table 1: Water measuring device/system requirements

REQUIREMENT	EXPLANATION
Accurately measure water taken	<p>The maximum allowable error range depends on <i>how</i> water is taken.</p> <p>For water taken by a <i>full pipe</i>, the device or system must measure water taken to within +/- 5% of the actual volume taken (note: a full pipe is defined in Regulation 3 as a closed pipe or conduit that is full of water when it is conveying water).</p> <p>For water taken by <i>any other method</i> (for example, by an open channel or a partially full pipe), measurements must be within +/- 10% of the actual volume taken</p>
Be able to provide data in a form suitable for electronic storage	This is not a requirement to fit a an electronic storage device (ie, datalogger or telemetry unit). The requirement is that the water measuring device or system is <i>compatible with</i> such devices.
Be suited to the qualities of water it is measuring	Environmental conditions (such as the temperature, algae content, and sediment content of the water being taken) can affect the accuracy of water use records. Non-statutory guidance is now available to help consent holders and service providers decide which devices and systems are the best for their particular conditions.
Is sealed and is as tamper-proof as practicable	It is important that all practicable steps are taken to protect the integrity of water use records collected by a water measuring device or system (including any electronic devices used to keep and/or store records).
Is installed at the location from which water is taken	<p>Many consents detail the precise location from which water can be taken from a river, stream or groundwater aquifer. Locating the device or system at this point means all water taken under that consent is subject to measurement – removing the risk that some water is lost (eg, through leakage) between the point of take and where the device or system is taking measurements.</p> <p>There are circumstances where it is not practicable to locate the device exactly at the point of take (eg, where the point of take is located in the bed of a constantly shifting braided river, locating the device or system at that point would mean it was regularly destroyed by floods). The regulations provide regional councils with unlimited discretion to approve an alternative location that is <i>as near as practicable</i> to the point of take.</p>
Has been verified as accurate	See verification.

Verification means the checking of a water measuring device or system to make sure it is accurately measuring water taken. Verification must be also carried out by someone who, in the opinion of the regional council that granted the permit, is a suitably qualified person. An initial verification must be conducted, followed by subsequent verifications at least every five years. The initial verification must be conducted before the end of the permit's first water year

To provide an optional resource for regional councils to decide who is 'suitably qualified', and to encourage national consistency, nation-wide certification and accreditation programs are being developed for verification providers

Table 2: Working out your rate per second

ALTERNATIVE RATE	DIVIDE ALTERNATIVE RATE BY THIS FIGURE TO DETERMINE RATE IN LITRE/SECOND	CONVERSION FORMULA
Hourly (cubic metres per hour)	3.6	Litres/second rate = $m^3/\text{hour} / 3.6$
Daily (cubic metres per day)	86.4	Litres/second rate = $m^3/\text{day} / 86.4$
Weekly (cubic metres per week)	604.8	Litres/second rate = $m^3/\text{week} / 604.8$
Annual (cubic metres per year)	31536	Litres/second rate = $m^3/\text{year} / 31536$

Remember, if the consent includes an 'alternative rate' and also a rate in litres/second, no conversion is necessary – the stated litres/second rate always applies for the purposes of the regulations.

Other possible scenarios include permits:

- that do not specify any rate at all (unlimited takes): these permits are to be treated as if they specify a rate of 20 litres/second (for the purposes of the regulations)
- that specify only a rate that is not a fixed number (for example, a consent to take river water up to a specified percentage of total river flow): these permits are also to be treated as if they specify a rate of 20 litres/second (for the purposes of the regulations)
- to take a certain number of 'head' or 'sluice-head' (generally these are old mining privileges): the regulations direct that a "head" or "sluice-head" means 28.3 litres/second (eg, a mining privilege allowing 2 head of water to be taken means it allows 56.6 litres/second to be taken, for the purpose of the regulations).