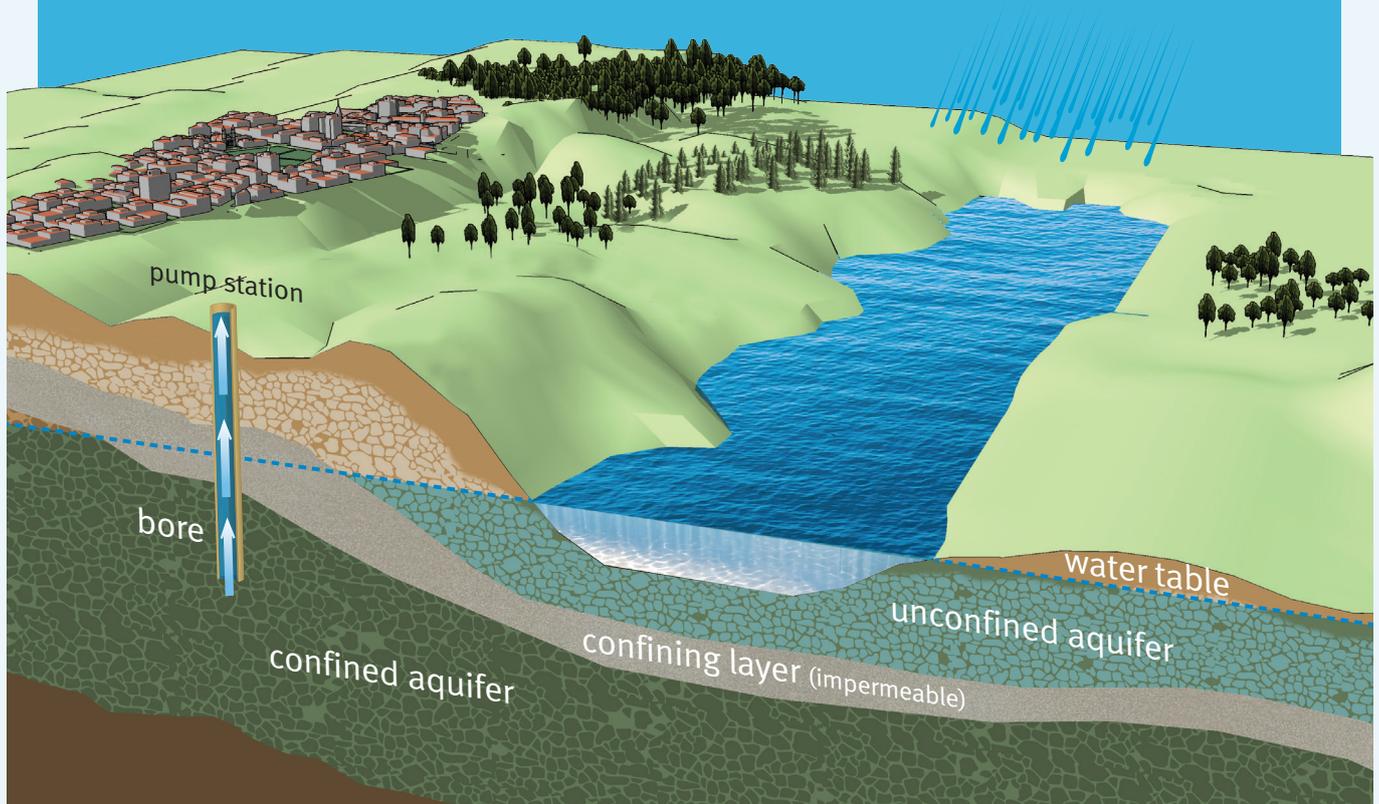


Groundwater: all you need to know

What is groundwater?

Groundwater is water that fills up in underground aquifers. Rain seeps down through the soil and fills up in rock fractures and the spaces between grains of sand and soil, in the same way as a sponge holds water. The water picks up minerals as it moves through the rocks.

Groundwater supplies are replenished by rain or melting snow.



About a third of the water used in New Zealand comes from groundwater sources. Auckland communities who receive treated water sourced from bores or springs are Onehunga, Waiuku, Bombay, Muriwai, Warkworth and Snells Beach-Algies Bay. Some of the water we drink may have entered the aquifer hundreds of years ago.

At Watercare the abstraction of groundwater is strictly controlled to ensure supplies are protected for future generations.

How does groundwater differ from other water sources like dams and rivers?

Groundwater contains naturally-elevated levels of minerals that have dissolved from surrounding rocks. These include sodium, calcium, magnesium, potassium, chloride and bicarbonate.

While our groundwater sources are usually very high quality, we treat it with chlorine to kill any harmful micro-organisms, ensuring it's safe to drink. At some plants we have additional treatment to reduce iron and manganese content.

The minerals in the treated water can give the water a distinctive taste, quite different to that of rainwater. It is absolutely safe to drink. All of our treated water supplies undergo rigorous and regular testing to ensure we maintain an Aa-grading from the Auckland Regional Public Health Service across all supply zones.

Water hardness

The higher calcium, magnesium – and sometimes sodium – content also means groundwater is often considered 'harder' than other raw water sources.

At Watercare, our groundwater sources fall in the 'soft' or 'moderately hard' category. The Drinking Water Standards of New Zealand recommend a total hardness level below 200mg/L.

Water source	* Hardness description	Bore depth
Waiuku	Moderately hard (100-120)	98 metres
Bombay (springwater)	Moderately hard (77-93)	n/a
Onehunga (springwater)	Soft (45-61)	n/a
Muriwai (springwater)	Soft (32-43)	n/a
Warkworth	Moderately hard (50-95)	220m, 176m
Snells-Algies	Soft (9.9-10)	185m, 208m
Helensville (Sandhills spring)	Moderately hard (41-110)	n/a

* The DWSNZ guideline value is 200mg/L

Struggling to get a lather from soap or shampoo can be one sign of hard water. Hard water can affect domestic appliances like dishwashers, kettles and washing machines with a build-up of limescale.

We recommend checking your hot water cylinders and kettles regularly for signs of scaling. Please check with your dishwasher or washing machine manufacturer before adding any products to remove scaling.

Tips for descaling your kettle

One way to descale your kettle is by half-filling it with a solution of equal parts water and white vinegar. Boil the mixture and then let it sit in the kettle for about 15 minutes. Pour it out and then rinse it thoroughly.

You can also clean your showerhead by filling a snaplock bag with vinegar and tying it over the showerhead so it is submerged, and leaving it overnight.



Did you know?



Groundwater provides almost **half** of all drinking water worldwide.



Groundwater supply is less susceptible to the seasons or drought than dam and river water sources.