

Water in the Lower Hunter



Planning our water future

Hunter Water is planning for our future now to ensure our region has a sustainable and resilient water system that can adapt and respond to change. We need to consider new sources of water (supply) and find new ways to reduce the water we all use (demand). This series of information sheets provide an overview of the potential water supply and demand option types we're discussing with our community as we plan our water future together.

Supply option: Groundwater

What is it and how does it work?

Fresh groundwater is one of the most common water sources used throughout the world. Groundwater can be found in fractured rock or layers of sand and gravel called aquifers.

Aquifers provide natural underground reservoirs that can offer a reliable supply of water, even in times of drought.

Water is pumped out of the ground through wells and treated for drinking water supply.

All naturally occurring fresh groundwater originally came from rainfall, though this may have occurred a very long time ago.

What is currently in place in the Lower Hunter?

Hunter Water currently sources groundwater from the Tomago and Tomaree Sandbeds.

The amount of water that can be stored in the Tomago Sandbeds is around 54 billion litres. The Sandbeds are typically used during drought, supplying up to 75 million litres of water per day.

The smaller Tomaree Sandbeds, located near Anna Bay, can hold 16 billion litres of water and provide about 7 million litres per day as an ongoing water supply to the Port Stephens area.

Things we need to consider

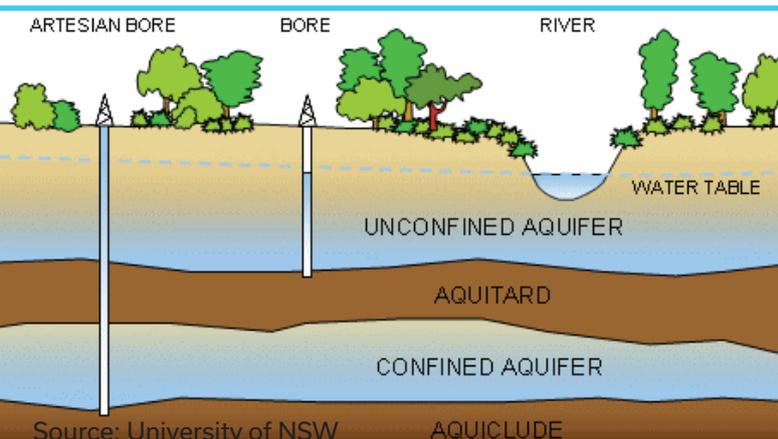
Harvesting groundwater can have relatively low environmental impacts provided it is carefully managed to protect surrounding flora and fauna.

The infrastructure required to harvest the water is generally limited to extraction wells and pipes. Therefore this option has relatively low social impacts and low cost to construct and operate.

There is also potential to use a saline water aquifer as an underground reservoir by pumping fresh water into it when surplus water is available. This process is known as aquifer storage and recovery.

Rating of considerations

We've developed a matrix to rate all option types against key considerations based on current industry knowledge. We've considered both positive and negative impacts to come up with a rating out of five for each category. The greater the number of dots, the greater the impact. Reliability has been rated using stars. The greater the number of stars, the more reliability the option type adds to our water system.



Consideration	Rating				
Cost to build	●	●			
Cost to operate	●				
Environmental impact	●				
Social impact					
Reliability	★	★	★	★	