

AQUIFER STORAGE AND RECOVERY



Background

East Gippsland Water recently completed a five year, \$67 million dollar program of investment – the largest in its history – to ensure high quality, reliable and secure drinking water supplies for all its customers well into the future.

Key projects included a major new drinking water storage and water treatment plant at Woodglen near Bairnsdale, as well as upgrades to a number of open water storages and pipelines across the region.

These initiatives have formed part of an ongoing, concerted drive by the Corporation to protect customers' water supplies against changes in climate and extreme weather events.

A priority driver is minimising the environmental impact and maximising the efficiency of East Gippsland Water's operations. This is why the Corporation is now making use of an aquifer as a massive, natural underground storage for drinking water, in a first for Australia, using a process known as Aquifer Storage and Recovery (ASR).

What is ASR?

ASR is the process of injecting water - in this case untreated water from the Woodglen Storages - into an underground aquifer for storage and later extraction for use by customers.

Using an aquifer reduces the potential for water loss through evaporation and ensures the availability of high quality drinking water, free from risks of algal and airborne contamination, for supply to customers as required at a later date.

This internationally-proven technology represents a far more cost-effective water storage than traditional infrastructure such as open basins, dams and tanks.

How is East Gippsland Water using ASR?

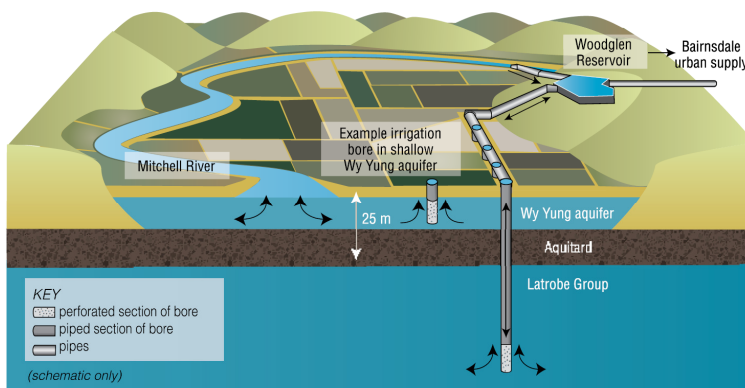
The Corporation is using ASR to help ensure drinking water supplies for tens-of-thousands of customers between Lindenow in the west and Nowa Nowa in the east are secure well into the future. Major centres like Bairnsdale, Paynesville and Lakes Entrance stand to benefit, as does the wider community reliant on the Mitchell River.

During 2009/10 the Corporation conducted a highly successful trial using its bore field into the deep Latrobe

Group of aquifers at Woodglen, north west of Bairnsdale, which demonstrated minimal impact on groundwater supplies accessed by surrounding groundwater users. East Gippsland Water injected 40ML to establish the aquifers' properties, developed a model of the local hydrogeology and proved that 500ML is a sustainable volume for injection and extraction.

The Corporation has approval from the groundwater regulator, Southern Rural Water, to store up to 500ML of water sourced from the Mitchell River in these aquifers.

Water is drawn from the Mitchell River only during periods of high river flow. It is pumped into one of the Woodglen water storage basins and then gravity-fed into the aquifers. That water stored in the aquifers is available to be extracted at a later date, as required, and fully treated at the adjacent water treatment plant, before being supplied to customers.



Picture courtesy of the Gippsland Region Sustainable Water Strategy

Essentially, use of the aquifers is providing East Gippsland Water with an efficient storage option for water taken under its Mitchell River Bulk Entitlement, with strict environmental conditions having to be met.

For more information –

Contact East Gippsland Water on 1800 671 841 or by emailing egw@egwater.vic.gov.au

Alternatively visit the Bairnsdale office at 133 Macleod Street, weekdays, during business hours.