



Groundwater Dependent Ecosystems and Drought Refuges

What is groundwater?

Groundwater is the water found below the ground's surface and is contained within the rocks and sediments under the ground. When it rains some water falls on land, some water evaporates, some flows into streams and rivers and some seeps into the soil and is absorbed by plant roots.

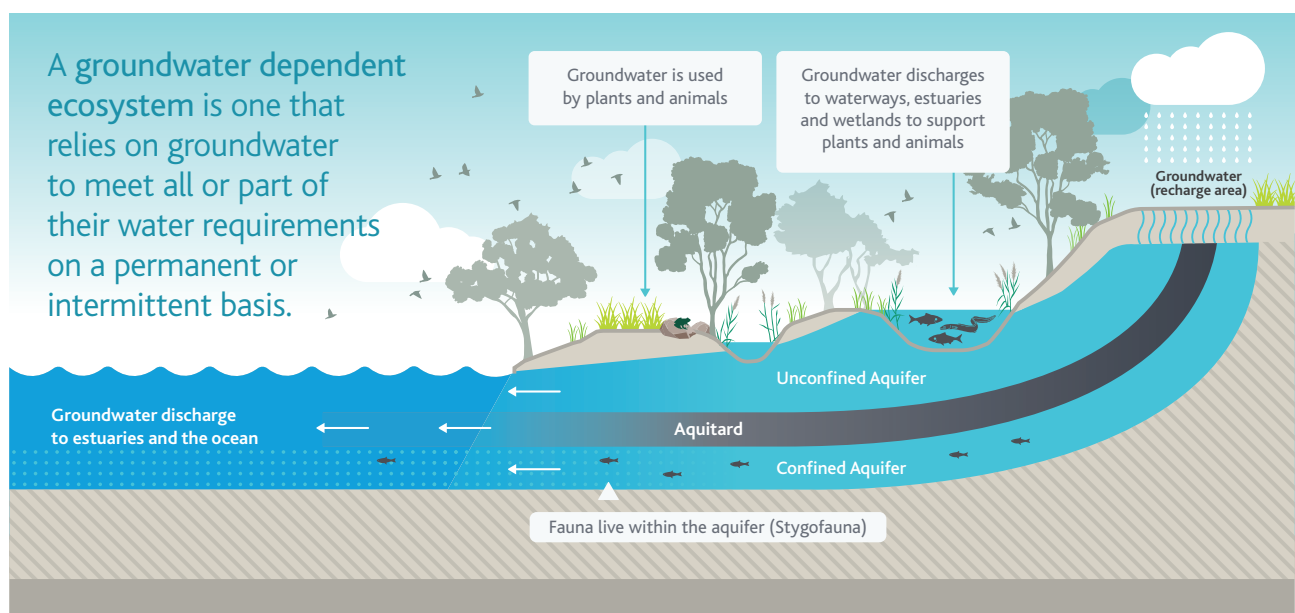
Excess water in the soil may percolate further down until it reaches a level known as the water table where all the openings in the soil or rock are saturated with water. Where usable amounts of groundwater can be pumped then it's called an aquifer.

Why is groundwater important?

Groundwater can be an important source of water for towns, businesses, irrigators and landholders that rely on it to support their activities and provide water for stock and domestic use.

Groundwater is also important for the environment. Just as surface water provides a source of water to rivers and wetlands, groundwater also makes its way to the surface and supports billabongs, wetlands, waterways and estuaries. These types of habitats are known as groundwater dependent ecosystems as they rely totally or partly on groundwater.

A groundwater dependent ecosystem is one that relies on groundwater to meet all or part of their water requirements on a permanent or intermittent basis.



To find out more about Water for the Environment visit:
melbournewater.com.au/environmentalwater

Drought refuges

Groundwater dependent ecosystems (GDEs) become critically important during dry periods for plants and animals. This is because these ecosystems become a refuge as they are the only permanent pool in a stream or an isolated wetland that retains water through long periods of dry weather.

During extended periods of dry weather such as in summer, these are the places where plants and animals retreat too, until more favourable conditions return and they can recolonise other areas again.

Melbourne Water has mapped the locations of our important drought refuges and is actively working to understand and monitor the interaction between ground water and surface water.

We aim to build resilience through the wetter times by planting native vegetation to provide shading and cooling. In the extreme dry we may undertake direct actions to support these communities of plants and animals until wetter times return.



What is Melbourne Water's role in managing GDE's and drought refuges?

Melbourne Water has a role in ensuring that the use of groundwater does not detrimentally impact on these important ecosystems. As the caretaker of river health, Melbourne Water works with other authorities, such as Southern Rural Water, to build up an awareness and understanding of the ecosystems that rely on groundwater so that any decisions relating to its use, does not detrimentally impact on these important sites.

Melbourne Water is also involved in decisions where there could be changes to groundwater levels from licensing decisions such as new bores and extractive industry where interception of groundwater can lower the water table. Melbourne Water's role is to assess the likely risks to GDE's these ecosystems and refuges by the use of water from these applications.

For more information on groundwater in your area visit:

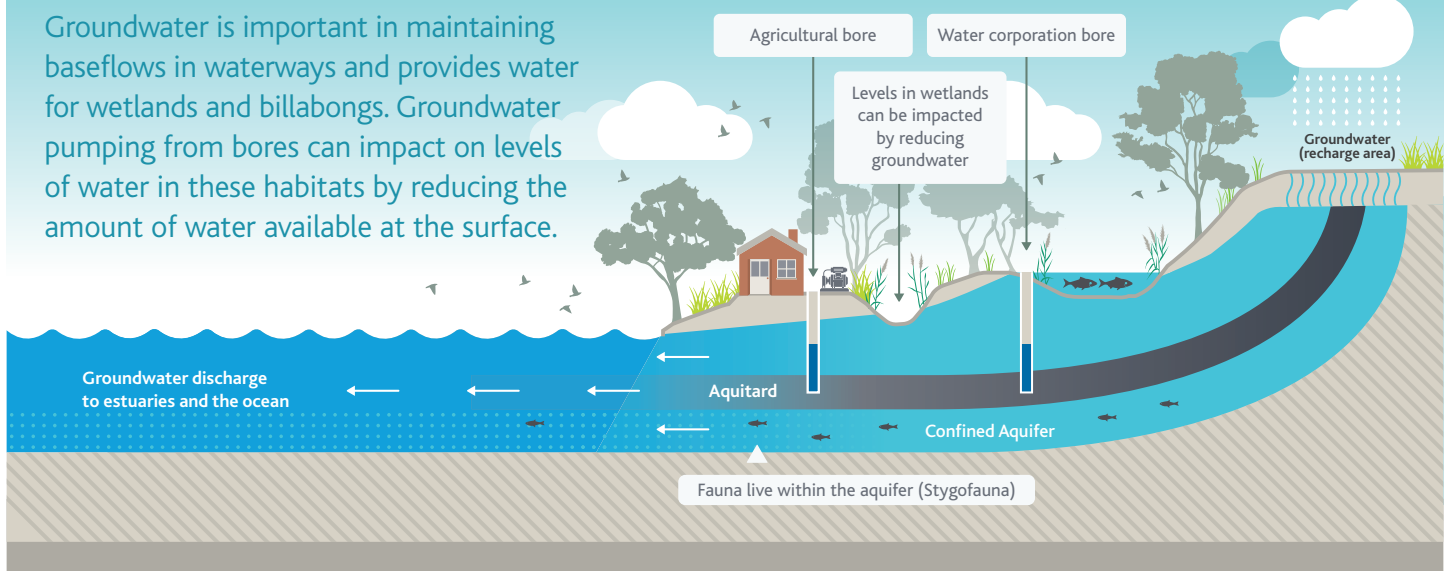
Visualising Victoria's Groundwater: www.vvg.org.au

For more information on GDEs - Bureau of Meteorology GDE

Workspace: www.bom.gov.au/water/groundwater/gde/map.shtml



Groundwater is important in maintaining baseflows in waterways and provides water for wetlands and billabongs. Groundwater pumping from bores can impact on levels of water in these habitats by reducing the amount of water available at the surface.



More Information

Everyone benefits from a healthy river. For more information visit Melbourne Water's Environmental Water website: www.melbournwater.com.au/EnvironmentalWater
Email environmentalwater@melbournwater.com.au or call 131 722

