August 2023

Factsheet

Groundwater

Rous County Council

Rous's role is to deliver high-quality drinking water for the Northern Rivers that supports the region's health and prosperity. We are securing a sustainable and resilient water supply that will meet the community's needs to 2060 and beyond through water saving initiatives and an expanded range of water supply sources.

What is groundwater?

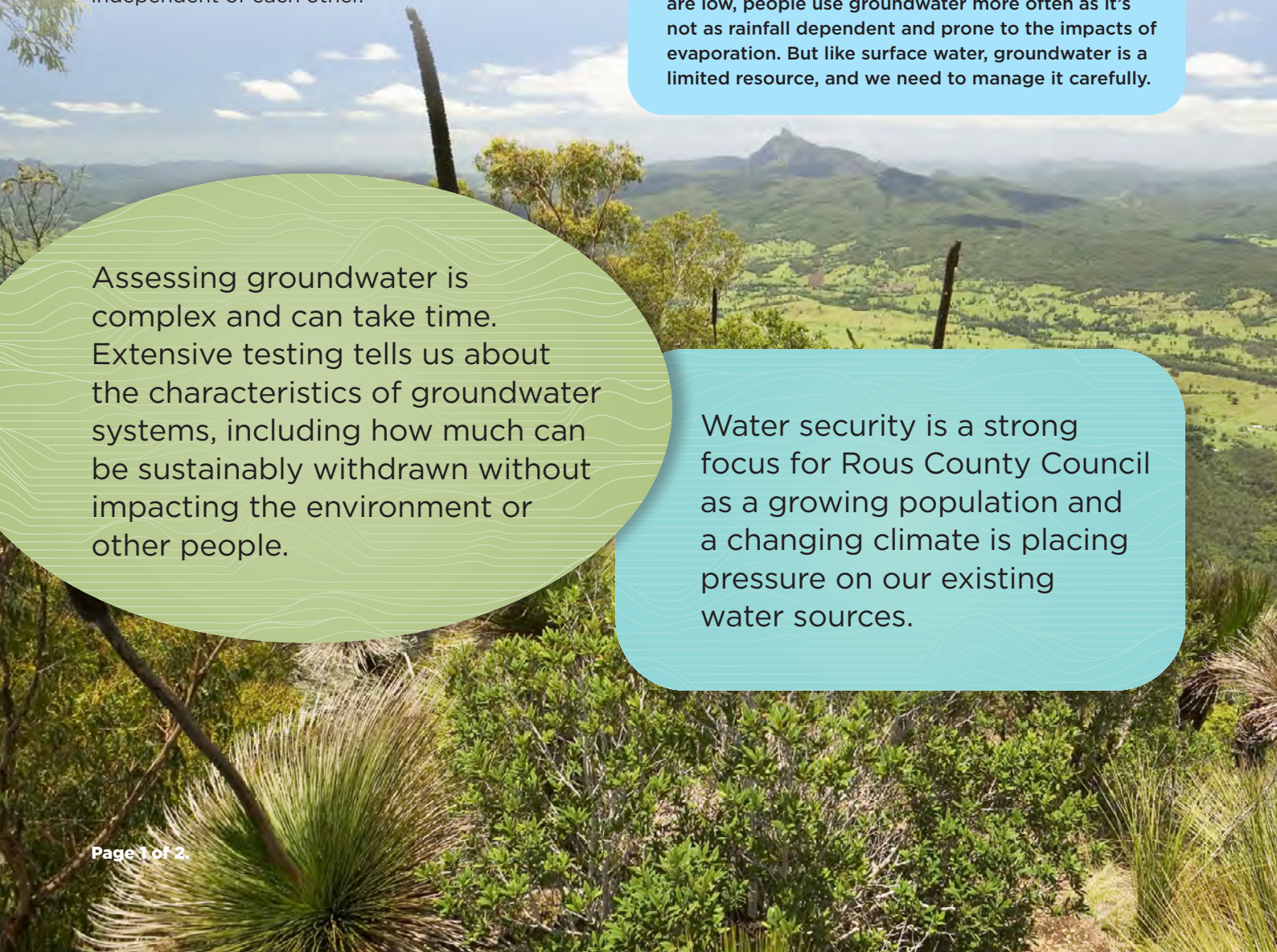
Groundwater is one of the most common water sources used around the world. Naturally occurring fresh groundwater originates from precipitation. Groundwater can be found in fractured rock or layers of sand and gravel called aquifers. The water is accessed through bores and is treated to drinking water standards. Aquifers can be found at various depths under the surface of the earth, sometimes there can be multiple aquifers in an area that are totally independent of each other.

Key points:

Groundwater can provide a reliable supply of high-quality water not only in times of drought but also during everyday operations.

The use of groundwater is regulated by the state to protect the environment, the community, and to ensure its use is sustainable in the long term.

During dry periods when rivers, lakes and dams are low, people use groundwater more often as it's not as rainfall dependent and prone to the impacts of evaporation. But like surface water, groundwater is a limited resource, and we need to manage it carefully.



Assessing groundwater is complex and can take time. Extensive testing tells us about the characteristics of groundwater systems, including how much can be sustainably withdrawn without impacting the environment or other people.

Water security is a strong focus for Rous County Council as a growing population and a changing climate is placing pressure on our existing water sources.

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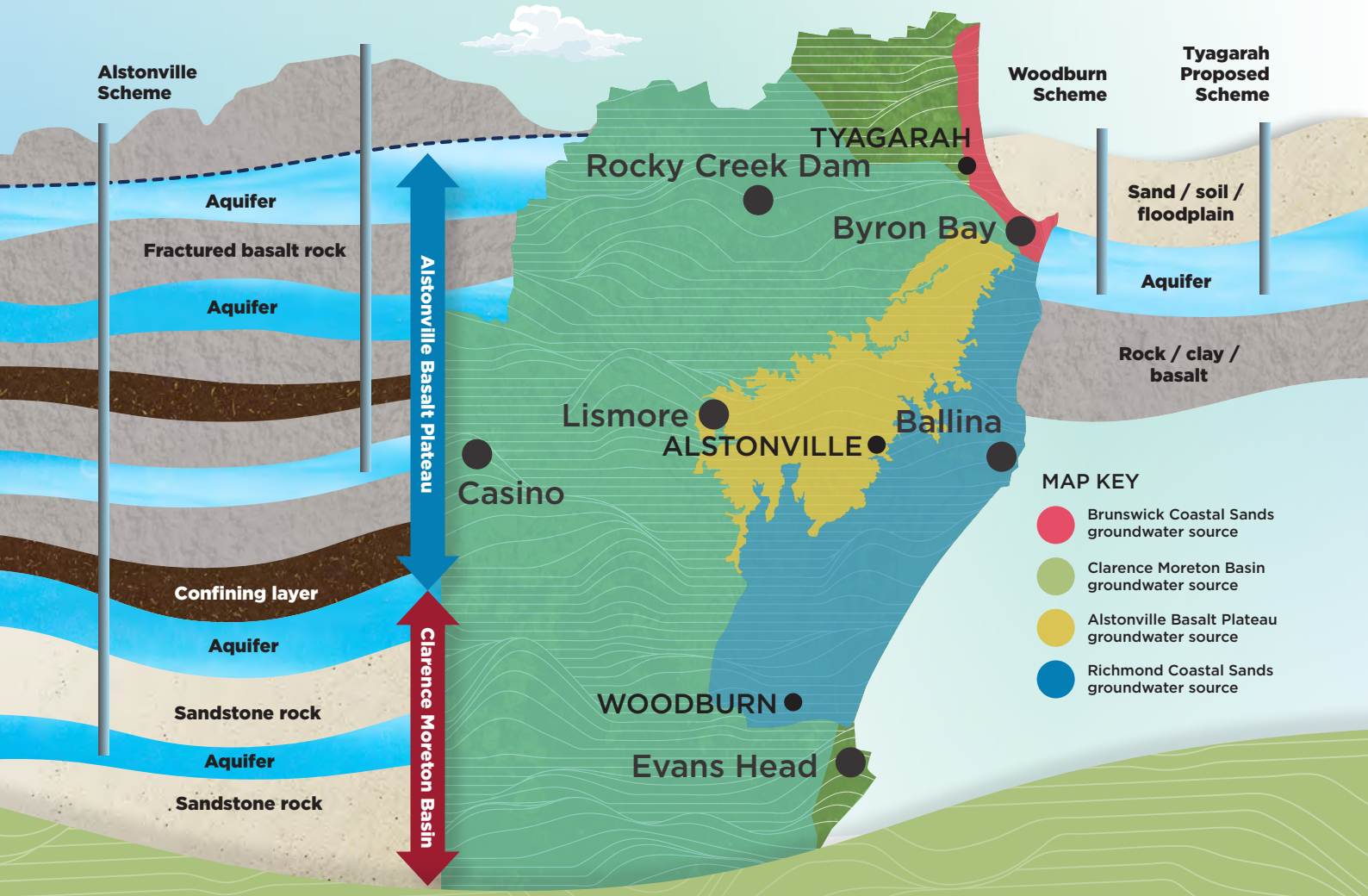
Groundwater use in the Northern Rivers

Groundwater has formed part of Rous County Council's strategic drought response for decades. During extended periods of dry weather, groundwater operations are utilised at Woodburn to access the Richmond Coastal Sands aquifer and a scheme at Alstonville accesses the Alstonville Basalt Plateau. We are currently upgrading these existing schemes to meet the community's needs. A new supply scheme at Alstonville will access both the Basalt Plateau aquifer and the deeper Clarence Moreton Basin sub-aquifer.

At the same time, we are exploring new groundwater sources, such as the Brunswick Coastal Sands source source near Tyagarah, with the potential to contribute to a safe and secure water supply that meets our needs now and into the future.

Our investigations assess the environmental, cultural, social and economic impacts of using groundwater, and balance these with the proposed benefits.



Key point:

New groundwater is one of a range of water source options being investigated. An adaptable supply of water may involve one or a combination of different options including groundwater, purified recycled water, desalination and surface water.