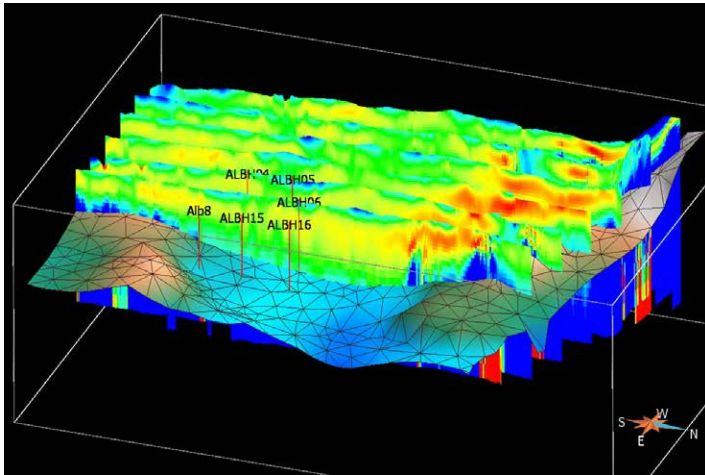


Mapping water availability in the palaeochannels of the Albany Hinterland



3D Image of AEM survey results.



Department of Water hydrogeologist collecting groundwater samples.

In 2012 the Department of Water commenced a \$1.6 million four-year regional water availability investigation along the South Coast, funded by Royalties for Regions. A major component of the investigation was to look at potential groundwater supplies stored in palaeochannels of the Albany Hinterland.

Palaeochannel aquifers are ancient river beds that have long been buried in alluvial sands. They are often sources of good quality groundwater as they store and transmit water as it moves underground.

In early 2013 an airborne electromagnetic (AEM) survey was flown across an area extending from the coast north to Napier, east to Manypeaks and west to Redmond. This revealed a better picture of the Albany Hinterland palaeochannels, and directed a targeted drilling and sampling program to determine potential groundwater volumes and quality.

These investigations are now complete, and have identified prospective new groundwater sources and the potential for increased use from existing sources.

What did we find?

There is an estimated volume of up to 5 gigalitres per year (GL/year) of water with potential for use across the investigation area. Most of the groundwater quality ranges up to 1000 mg/l TDS (milligrams per litre total dissolved solids) which is suitable for multiple uses. There is also potentially another 5 GL/year of lesser quality water that may be available as fit-for-purpose supply.

The Department of Water has produced a detailed map outlining: prospective zones; depth to water; expected quality; potential quantity of these water resources.

This map is being made available through the Great Southern Development Commission and the department to interested users of this water.

Why do we need this information?

Water demand in the Great Southern region is projected to increase by more than 20 GL/year by 2043 under a medium-growth scenario. Over the same projection, agricultural water demand is forecast to increase from 24 GL/year to 31 GL/year, and water demand for industry could increase from 1 GL/year to 3 GL/year.

Water availability is a key interest of investors in new or expanded agriculture and other business. These investigations provide detailed information on the quality and quantity of groundwater resources in several areas across the Albany hinterland. This water will provide medium to long term options for agriculture, industry and also potentially the regional water supply scheme, and supports the demand scenarios modelled by the Department of Water as part of the Great Southern Regional Water Supply Strategy, supporting the Great Southern Regional Investment Blueprint.

Fast facts

Water quality samples from over 60 locations were used and over 1000 metres of investigation drilling was undertaken as part of the project.

Airborne electromagnetic (AEM) data covering 8,810 line kms was used to gather information and to target exploratory drilling for water.

Can I access this water now?

Potential users of this water are encouraged to contact the Department of Water as, depending on the area of interest, different conditions may apply in conducting further groundwater availability investigations and in making applications for use.

The Albany hinterland prospective groundwater resource map can be downloaded from the department's website at www.water.wa.gov.au

