Australian Groundwater Technologies

'making water work'

Catchment Management

Hergott Springs, Marree

Australian Groundwater Technologies (AGT) is committed to providing the best technical advice for the management and sustainable development of Australia's groundwater resources.

Competing demands are placing intense pressure on available groundwater resources. Whether you are in the agricultural, industrial, urban, rural or environmental sphere, water is vital to us all. Ensuring all users receive an equitable share requires an understanding of the whole water cycle and extensive knowledge of the range of hydrogeological settings.

Sustainable management of groundwater resources requires an accurate understanding of catchment water balances derived from the ongoing monitoring of groundwater use, groundwater levels and groundwater quality. An accurate water balance also requires an understanding of the surface water contributions to groundwater and the requirements of dependent ecosystems and other users. AGT delivers a holistic approach to the sustainable use and management of the available groundwater resources. We work closely with all catchment stakeholders to achieve a successful outcome for the client and the community.

Services

AGT has a proven track record in the sustainable development, management and environmental protection of the available groundwater resources throughout Australia.

Our services include:

- Water resources planning, management strategies and advice;
- Regional groundwater assessments to determine sustainable yields;
- Groundwater numerical modelling including solute transport and hydrogeochemical modelling;

- Groundwater resource condition monitoring and reporting;
- Borefield design and construction supervision;
- Managed aquifer recharge;
- Geological mapping;
- Aquifer discharge (pumping) tests;
- Community consultation on groundwater resources;
- Data management and data mining;
- Independent reviews.

Water resources planning and management

Our key staff have held senior management positions within State regulatory agencies. As a result the AGT team has unrivalled experience in the development of policies to manage the competing demands for the available groundwater resources within a catchment. We are unmatched in our knowledge of the evolution of management policies for many of the prescribed groundwater resources throughout South Australia. AGT has developed a number of water allocation plans and the supporting technical investigations.

Sustainable yield assessments

An increased focus on the need to equitably distribute the available groundwater resources has prompted State agencies, water authorities and catchment management organisations to progressively embrace the concept of sustainable groundwater management. Regulatory changes to the way in which water is managed have identified there is a need to agree on an approach to define sustainable yield and better quantify the sustainable yield of different groundwater systems. They also recognise the need to identify systems that are stressed and seen to be over-allocated and/or overused and to develop best practice management plans. This is what we do best.

We will undertake the necessary assessments required to determine the sustainable yield of the available groundwater resources to maximise the available water for your region.

Proven Successes

State-wide monitoring review

AGT was commissioned by the Department for Water to review the current networks associated with surface water, ecological, groundwater and dryland salinity monitoring. The objective was to identify if the location and temporal frequency of monitoring is sufficient to reliably report on the state and condition of the available water resources and associated dependent ecosystems. The Natural Resources Management Board regions reviewed include: Northern and Yorke; Kangaroo Island; Alinytjara Wilurara; Eyre Peninsula; South East; and, South Australia Murray Darling Basin.

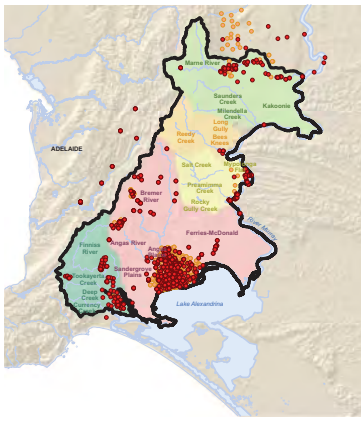
Evaluation of Groundwater in the Alinytjara Wilura Natural Resources Management Region

AGT was commissioned by the University of Adelaide to provide a monitoring and evaluation plan of the water resources in the AWNRM region to assist with the development of a Natural Resources Management Plan.

In evaluating the groundwater resources, AGT addressed the following topics:

- Literature review and collation of previous hydrogeological studies;
- Summary of the physical geography and geology of the study regions;
- Identification of major regional aquifers including their sustainability;
- Review the quality and quantity of these aquifers;
- Description of existing water supply sources at aboriginal communities;
- Identify any aquifers potentially susceptible to contamination;
- Description of current monitoring program; and,
- Recommendations for future monitoring.

In addition to water resource monitoring refinements, AGT recommended the implementation of Wellfield Protection Zones (WPZs) for each community included in the study. We recommended the adoption of WPZ is a typical approach to managing potential contamination risks associated with co-location of peri-urban, waste disposal systems and source aquifers.



AGT forms the nucleus of the Mecrus Group's water services business
Unit 5, London Road, Mile End South, Adelaide, South Australia, 5031. Tel 08 8352 4262
Unit 21, Business Park Drive, Notting Hill, Melbourne, Victoria, 3168. Tel 03 8545 8800

MECRUS
A member of the Mecrus Group