



Management and Monitoring



ASR headworks, Greenfields.

Australian Groundwater Technologies (AGT) is committed to the sustainable operation of Managed Aquifer Recharge (MAR) Schemes.

Stormwater harvesting and aquifer recharge represents a significant capital investment for the operator. Effective management requires thorough monitoring and documentation of performance and operational costs in order to maximise asset value and achieve a strong return on investment.

Australian Groundwater Technologies (AGT) provides a range of services for owners of reuse schemes incorporating Managed Aquifer Recovery (MAR), groundwater or surface waters:

- routine management
- operation services
- monitoring services

With regulatory changes and the development of national guidelines for stormwater, recycled water and MAR, our services enhance our commitment to being client-focussed, innovative and to promote the sustainable use of resources.

Services

AGT is at the forefront of groundwater research and technology development. Our approach is innovative, cost effective and pursues environmental good practice. AGT offer a range of in-house services to owners and operators of MAR and reuse schemes including:

- Management, operation and maintenance
- Water quality sampling and operational monitoring
- Data review and regulatory compliance reporting
- Establishment and review of management plans in accordance with national guidelines
- Drilling supervision and borefield establishment
- Aquifer characterisation studies and modelling
- Technology and product specification



- Commissioning and optimisation
- Optioneering and concept designs
- Establishment of business management systems to meet the requirements of national guidelines
- Training and support to operators and maintainers

Fostering excellence

AGT works closely with clients to foster excellence in operation and maintenance thereby:

- reducing risk in water supply
- achieving optimal performance and efficiency of supply
- increasing asset value and return
- enhancing asset longevity

Critical areas of focus for the optimisation and management of the schemes include:

- water quality sampling
- instrument reliability and maintenance
- instrument suitability and data collection
- understanding performance by integrating scheme operation with water quality 'grab sampling' and online monitoring
- monitoring and evaluation of all data for performance optimisation and compliance reporting
- data management and review
- efficient SCADA management
- operational verification and validation monitoring
- prevention of well clogging
- ensuring treatment technologies (screens, filters, membranes, UV, chemical dosing systems) are operated and maintained in accordance with specifications
- compliance reporting, incident response and troubleshooting to minimise future risk
- technology and product specification and selection
- commissioning and optimisation

Meeting client needs

AGT is continually evolving the capacity of its business management systems to meet each client's unique needs. For example:

Quality Assurance:

- AGT Operations Manual was established to ensure samples are collected, preserved, transported, analysed or measured consistently according to Australian Standards

OH&S:

- Establishment of fieldwork procedures: to excel in OH&S, risk management, environmental management and protection of asset
- Data management: Client registers of compliance criteria and operating criteria for risk minimisation and incident response in relation to routine grab sampling

Conformance Reports:

- Nonconforming product registers and incident management: Client registers of health or environmental incidents including details such as type and extent of non conformance, response to corrective actions, reporting details, future risk minimisation

Asset Management:

- Client registers of plant and equipment including specifications and maintenance requirements to ensure efficient and reliable performance. Site specific checklists to ensure the regular inspection of asset condition to promote preventative maintenance compared to breakdown maintenance
- Ongoing development of troubleshooting guides for specific reuse schemes to ensure optimal performance
- Ongoing development of operating procedures for specific reuse schemes to ensure consistent operation
- Water quality and operational monitoring: Client registers of monitoring programs to ensure water samples and or processes are operated in accordance with compliance conditions
- Environmental management programs: specific for each client and/or scheme to ensure continual improvement and commitment to sustainability as is required under ISO14001

Proven Successes

Morphettville Racecourse

AGT carried out the preliminary feasibility site investigations then designed and supervised the construction of this scheme. Stormwater harvesting, treatment and reuse provides irrigation quality water for the Morphettville Racecourse. In addition up to 600 ML/yr of urban runoff is harvested from an adjacent stormwater drain. AGT currently manages the operation of this scheme on behalf of the racecourse.

