

Aquifers, aquitards & mining

Workshop on Aquifers, Aquitards & Mining

27-28 March 2014 - UNSW Australia



Water Research
Laboratory
School of Civil and
Environmental Engineering

National Centre for Groundwater Research & Training



*Funded by Australian government
July 2009 – June 2014*

*Flinders Uni + UNSW + ANU + UQ + many partners including NSW
Dept. Industry and Investment, Geoscience Australia*

Five Research Programs:

- 1. Innovative Characterisation of Aquifers and Aquitards**
2. Hydrodynamics and Modelling of Complex Groundwater Systems
3. Surface Water - Groundwater Interactions
4. Groundwater-Vegetation-Atmosphere Interactions (GVI)
5. Integrating Socioeconomics, Policy and Decision Support



NCGRT Program 1: Innovative Characterisation of Aquifers and Aquitards

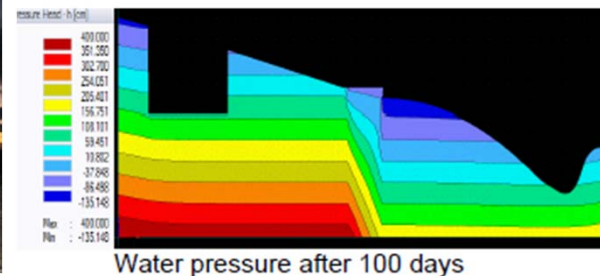
Subprogram 1A: Linking Geological and Hydrogeological Processes.

Subprogram 1B: Characterising Aquitards.

8 staff trained, 16 Honours students, 7 summer scholars

Subprogram 1C: Heat as a groundwater tracer.

Subprogram 1D: Characterising Fractured Rock Aquifer Systems





The Australian Centre for Sustainable Mining Practices (ACSMP)

Never Stand Still

Faculty of Engineering



ACSMP aspires to be recognised by both government and industry in Australia and internationally as:

- *A leading authority on sustainable mining practices*
- *A provider and developer of innovative educational resources*
- *An active research organisation focused on sustainable mining initiatives*



Contact Us

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ACSMP activities.....



- Carry out mining-related **research** to benefit the environment and society
- Deliver mining-related **education** of benefit to the environment and society
- **Work with stakeholders** including mining companies, governments, agricultural sector, the green movement, Indigenous organisations, union movement
- **Provide scientific, technical and policy advice** to stakeholders

A NCGRT commissioned report* from Deloitte Access Economics shows the value of groundwater in Australia:

- Our **cities use 303,000 ML** (megalitres) of groundwater a year
- **Mining uses 410,000 ML**, and groundwater underpins mining production of **\$24.5 billion each year**
- **Agriculture typically uses about 2,000,000 ML** (or 2 gigalitres, GL) of groundwater each year, mainly for irrigation and livestock, and groundwater underpins **\$4.7 billion of production.**

[*http://www.groundwater.com.au/news_items/media-release-future-mining-dining-booms-depend-on-water](http://www.groundwater.com.au/news_items/media-release-future-mining-dining-booms-depend-on-water)

