



iah news

Newsletter of the Australian Chapter
International Association of Hydrogeologists

April to June 2015
Volume 31, No. 2



On the cover:

***Coleambally Irrigation Area in the Lower Murrumbidgee region of
NSW***

Photograph by Kyle Horner.

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International Association of Hydrogeologists Australian National Chapter

The International Association of Hydrogeologists is a professional association for those within disciplines related to groundwater, its occurrence, utilisation, testing and management. IAH is a scientific and educational organisation that is truly international, and was established to foster closer ties, cooperation and information exchange related to the study of groundwater. IAH is non-government and non-profit and has over 4000 members internationally from around 120 countries. The Association is affiliated with the International Union of Geological Sciences (IUGS), and was founded during the 20th International Geological Congress in 1956. By its statutes the IAH is an association of individuals and corporate members, and not a federation of national committees. National groups do, however, organise local meetings and other activities. A proportion of the national committee membership goes to the local organisation to support these activities, the remainder to the international body. The country of the international secretariat is changed every several years. The IAH publishes Hydrogeology Journal, various workshop and conference proceedings and an international newsletter.

The main objectives of the IAH are to promote international and national cooperation between involved scientists and engineers; sponsor international and national technical/management meetings and symposia on hydrogeology; publish hydrogeological reports, papers and maps; establish investigation commissions and working groups to report on special topics; encourage the international application of relevant approaches and techniques for the benefit of the hydrological and human environment.

Our national chapter was founded in 1983 and is one of the most active. Activities tend to be organised locally within each state and territory, but national activities also occur. Each state body has its own meetings, usually monthly. Conferences are held in Australia around every two to three years, and seminars on a more frequent basis.

Membership Requirements: IAH will accept as individual members anyone directly or indirectly engaged in study or research on, or management of water in its various forms related to hydrogeology, if sponsored by two members in good standing. Companies and research organisations can apply for corporate membership. The current membership categories and annual subscriptions for 2015 (see www.iah.org.au) are:

▪ Member	\$140
▪ Online member	\$120
▪ Student	\$55 (full time students)
▪ Online Student Member	\$35
▪ Corporate member	\$790
▪ Partial sponsor	\$155
▪ Full sponsor	\$190
▪ Retired	\$75

We are pleased to announce that the student membership fees have been reduced by \$20 in 2015 as an added incentive for full-time students to become IAH members. In addition, we have maintained the Member and Online Member fees at their current level, despite a rise in the IAH International fees for these membership categories for 2015.

Membership of this professional association is tax deductible in Australia, and individual members are entitled to use 'MIAH' (Member of the International Association of Hydrogeologists) after their name.

FROM THE PRESIDENT

Welcome to the IAH Newsletter!

IAH Australia and the state and territory branches are actively putting forward industry-best advice on groundwater issues across the country.

There are many things happening at a national, state and territory level that have groundwater at their core. It is important that IAH advocates science informed decision making to underpin sustainable groundwater management.

The Victorian, Tasmanian and Northern Territory branches have each made submissions concerning either fracking, or unconventional gas development more generally. A key focus on the submissions on fracking is the importance of well / bore integrity. The submissions have also highlighted the importance of sound, clear regulatory frameworks for managing unconventional gas.

IAH Australia has made submissions on the National Groundwater Strategic Framework and the Commonwealth Water Infrastructure Option Paper. A key theme of these submissions is the increased consideration of managed aquifer recharge as a longer term water management approach in a changing climate supporting strategic conjunctive use of groundwater. The submissions included a call for Commonwealth support for a national program to support conjunctive use planning and monitoring of groundwater. The NT Branch has also made a submission to the "Our Water Future" policy paper, supporting improved science, strategic planning and management of groundwater.

I would like to thank all the IAH staff who have put time into developing these submissions. All IAH submissions are published on our website under the "resources" tab.

I encourage members to get involved with your local branches, or in national responses on important groundwater issues. If you see something that you think warrants a contribution from the IAH, talk to your local branch chairperson. IAH Australia is keen to support us being the "voice" of groundwater.

The second half of 2015 also brings two key conference opportunities.

The 42nd IAH International Congress is being held in Rome from the 13 to the 18th of September. Under the title "Back to the future" seven main topic areas will be covered over the 4 days of the congress speaking sessions. The mid-congress tours provide opportunities to visit sites around Rome where groundwater and water management has been practiced for millennia. I hope to see you there!

Closer to home, the co-sponsored IAH / NCGRT Groundwater Congress is being held in Canberra from the 3 to 5 November 2015. There has been an excellent response to the call for abstracts, with over 200 received. It will be a great opportunity to hear what is happening in groundwater across Australia. As the main gathering of hydrogeologists in Australia, we will also hold our annual general meeting at the Congress. More details will be provided shortly.

There are other local symposia being conducted or supported by our local branches. Listen out for a range of local opportunities through your state or territory branch.

All the best for a busy second half of 2015.

Regards,

Chris McAuley

President, IAH Australia

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We gratefully acknowledge the support of our national corporate sponsors.



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www.rockwater.com.au

MEMBERSHIP

Any inquiries regarding the new membership system can be sent to membership@iah.org.au.

Current/Lapsed Membership Renewal Process

Membership renewal emails were sent to all members in January, with instructions for membership renewal using the new system. For anyone who may have missed the email, the renewal instructions from the email are provided on the following page.

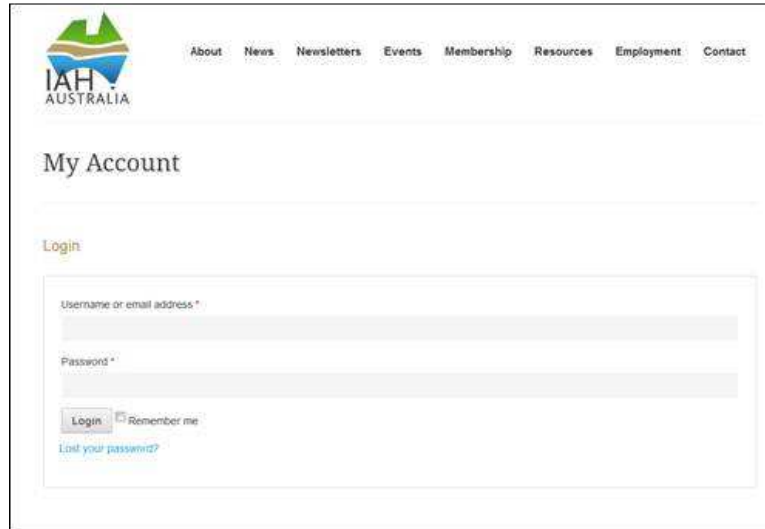
Note that if you were a member in 2014, and **did not receive** a membership renewal email in January 2015, some common issues are listed below:

- The email was intercepted by your **spam filter**. Check your spam folder or quarantine archive for IAH emails received on or about 15 January 2015, and consider adding the IAH sender details to your safe list.
- Your **email details changed** in the past year (for example, change of employment) and you have not yet updated your email address with IAH. You can update your details at any time through the iah.org.au website, by selecting “My Account” under “Membership”, and editing account details.
- **Corporate “firewalls”** at some companies block all suspected incoming spam emails (IAH emails may be classified as “marketing” emails by some systems). Speak with your IT administrator about adding IAH to your corporate safe list, or switch to a personal email account.
- Your membership has **lapsed for more than a year** without renewal, and your details have been removed from our database. You can still use the new membership system to renew your lapsed membership.

Contact membership@iah.org.au with any questions.

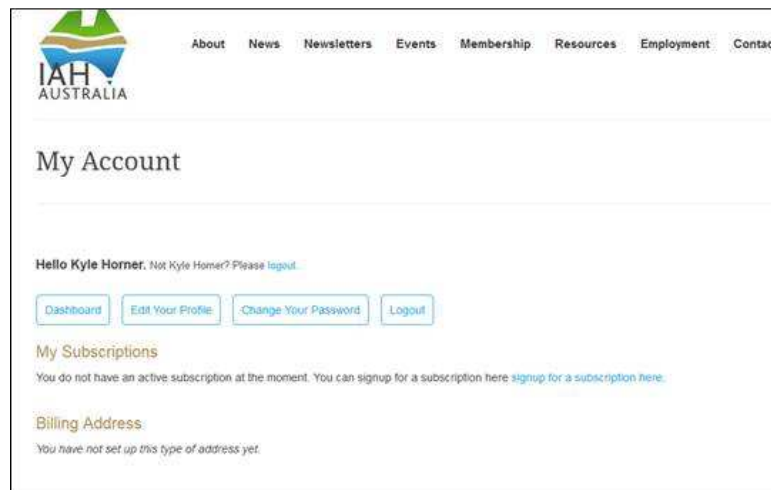
Log into your account page on the IAH website (<https://www.iah.org.au/membership/my-account/>).

Your username is the email address the email was sent to (which should be the email address you have registered with IAH). If you have forgotten your password, you can reset it using the “**Lost Your Password**” link at the bottom of the page **using the email address the email was sent to.**



Once logged in, you will see your account Dashboard.

Under the **My Memberships** section, click on the link to sign up for a new subscription. This will direct you to a new page where you can select your desired membership category from the options. Details of each membership type can be found at the bottom of the registration page. Once you have chosen your desired category, follow the prompts to finish your membership renewal.



If you have any questions, please do not hesitate to contact the membership team at membership@iah.org.au.

IAH AUSTRALIA EXECUTIVE

President	Chris McAuley	Chris.McAuley@delwp.vic.gov.au
Vice-President	Dr Lange Jorstad	ljorstad@geosyntec.com
Treasurer	Ron Colman	Ron.Colman@royhill.com.au
Secretary	Dr Kyle Horner	Kyle.Horner@epa.nsw.gov.au
Past President	Dr Rick Evans	Richard.Evans2@jacobs.com
Membership Secretary and Web Administration	Fiona Adamson	secretariat@iah.org.au
Newsletter Champion	Dr Ben Rotter	Ben.Rotter@coffey.com

Introducing Committee Members

In this issue we introduce Kyle Horner, IAH National Secretary.

Kyle Horner has over 15 years' experience in water resource management, contaminated sites consulting, and environmental regulation in Australia, Canada, and Europe, and has been an IAH member since 2009. His Ph.D. is from Australian National University, and he is a registered Professional Geoscientist (P.Geo.) with APEGBC (Canada). Prior to his election to the IAH Australia National Committee, Kyle was the ACT Branch Web Champion from 2012-2014, and oversaw the redevelopment of the IAH Australia website and membership registration system.

Kyle's interests include increasing public awareness of hydrogeology through educational outreach activities; raising the level of professional standards within the groundwater community; and taking any excuse he can find to get out and sample wells across the Australian countryside.



FINANCE UPDATE

IAH National Committee finances are summarised in the table below.

Term Deposit No.1 as of 15/07/2015	\$46,322.93
Term Deposit No.2 as of 15/07/2015	\$50,000.00
Cash Account as of 15/07/2015	\$125,786.09
Total Cash Balance as of 15/07/2015	\$222,109.02

Major near future Outgoings include :

- UK IAH Head Office 2015 subscription ~\$65,000 on current numbers and exchange rate
- Financial support for 2015 Australian groundwater Conference TBC
- State Capitation `6500

Signature:



Ron Colman, IAH National Treasurer

Date: 15/07/2015

FEATURE NEWS

Draft National Groundwater Strategic Framework

IAH, with input from other members of the Australian Geoscience Council, submitted a response to the Department of the Environment's Draft National Groundwater Strategic Framework 2015-2025 on 12 June 2015.

The submission can be viewed on the IAH website at <https://www.iah.org.au/correspondence/>.

Member/Supporter Survey 2015

What are your opinions of IAH? The services and opportunities it provides? Participate in our easy and short survey - your feedback will help us plan and prioritise future activities.

<https://www.surveymonkey.com/r/IAH2015survey>

Hydrogeology Journal - Impact Factor Increase

We are delighted to report the continuing rise in impact for our Hydrogeology Journal. For 2014, the Impact Factor is 1.966 (Thomson Reuters Journal Citation Reports 2015).

For more information:

<http://www.springer.com/earth+sciences+and+geography/hydrogeology/journal/10040>

FROM THE BRANCHES

NEW SOUTH WALES

IAH NEW SOUTH WALES BRANCH

2015 Committee:

Chair	Katarina David	(UNSW)
Presentations Secretary and External Communications	Graham Hawkes	(AECOM)
Treasurer	Tingting Liu	(Hydrosimulations)
Secretary	Sean Cassidy	(EMM)
Sponsorship Champion	Mark Peterson	(ANSTO)
Meeting Facilitator and Internal Communications	Sean Daykin	(Parsons Brinkerhoff)
Newsletter Champion	Dr Ben Rotter	(Coffey)
Web Champion	Doug Anderson	(Water Research Laboratory, UNSW)
International Sponsorship Champion	Dr Jay Punthakey	(Ecoseal)
University Liaison	Dr Bill Milne-Home	(UTS)
Members Champion	Andrew McCallum	(Office of the NSW Chief Scientist and Engineer)
National Vice President	Dr Lange Jorstad	(Geosyntec)
International Vice President - Australasia	Dr Wendy Timms	(UNSW)

Local News

Our regular branch meetings continue to be held at the office of Parsons Brinckerhoff (PB) located in the Sydney CBD. Thank you to PB for supplying the convenient central venue, first class facilities, and food and drinks. Thank you in advance to AECOM who will be hosting this year's Darcy Lecture in August in their central Sydney CBD office and providing food and drinks.

IAH NSW branch provides events that span all stages of a career in hydrogeology. Our Student Night event provides a platform for students, and our Young Professional Award recognises young professionals. For mid to late career hydrogeologists, a forum is provided for technical presentations. Highly experienced professionals join our panel during Elders Night, with esteemed NSW hydrogeologists recognised by the receiving of the Woolley Award at or near retirement.

NSW Sponsors

IAH NSW gratefully acknowledges the contributions of its 2014/15 sponsors. Details of sponsors can be found on the website at <http://www.iah.org.au/about/new-south-wales/nsw/-branch-sponsors>.

Our Gold Sponsors include AECOM, ALS Laboratory Group, Coffey, Douglas and Partners, Earth Science Information Systems, Environmental Strategies, EMM, Geosyntec, Hydrosimulations, NSW Department of Environment Climate Change and Water, and RPS Aquaterra.

Our Silver Sponsors include Frans Kalf and Associates, EcoSeal and C. M. Jewell & Associates.

Recent Events

June 2015, Dr Peter Dillon – Progress in Managed Aquifer Recharge and the Water Banking Frontier

The June presentation was the 2015 NCGRT Distinguished Lecture. Dr Peter Dillon of the CSIRO presented entitled “Progress in managed aquifer recharge and the water banking frontier”

This was followed by an interactive session entitled “Listening to local MAR progress, plans and implementation issues.”

The presentation provided a retrospective on some key findings from twenty two years of CSIRO and partners’ scientific research on managed aquifer recharge with urban stormwater and recycled water. Australia has an international head-start on the practice of MAR with urban stormwater and on MAR guidelines and policy. Myths that have deferred uptake and remaining research gaps were also discussed.

May 2015, Elders Night

The annual Elders Night saw John Ross and Dan McKibbin, senior members from our local groundwater profession, offer their collective wisdom. These senior professionals shared memorable experiences from their careers with the audience, provide insight into lessons learnt and challenges overcome, and discuss the changes they have seen in the industry, and the future of hydrogeology and groundwater engineering. John provided excellent advice for during the lean times in a hydrogeologist’s career to expanding one’s knowledge by learning more skills. Additional skills suggested that complement hydrogeology were geotechnical engineering, contaminated land investigations, hydrogeochemical and groundwater modelling. Dan suggested that young professionals should take the opportunity to publish papers early in their career to gain exposure and confidence.

Ian Acworth was announced as the recipient of this years Woolley Award but couldn’t make the event as immediately after retirement from UNSW he jetted overseas Wendy Timms provided a brief summary of Ian’s career and he will be presented with his award at an upcoming meeting.



Dan McKibbin and John Ross



John and Dan fielding questions

April 2015, Fabienne dHautefeuille - GDE management - GAB springs

Fabienne dHautefeuille of Cardno discussed the management plan known as the Joint Industry Plan for the Monitoring and Protection of EPBC Springs in the Surat/Bowen Basin and was approved in late 2013.

Under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) many coal seam gas (CSG) projects within the Surat Basin are required to carry out a survey to identify EPBC springs over a geographical area extending beyond 100 km of the furthest predicted impact, a baseline of the springs and, a management system to identify the impact and respond to it.

The Surat Basin CSG Industry undertook a number of projects collectively to address the regulatory requirements. Most importantly, the CSG Industry developed an early warning system, to understand impact propagation to the EPBC springs, and an impact management and response plan. Both the early warning system and management plan are based on the monitoring of water pressures in the springs source aquifers between the zones of CSG production and the springs.



Fabienne dHautefeuille with IAH NSW Presentations Secretary Graham Hawkes

Upcoming Events

Darcy Lecture 2015 – 10 August

This year's Darcy Lecturer is Dr Rainer H. Helmig head of the Department of Hydromechanics and Modelling of Hydrosystems at the University of Stuttgart. His lecture is titled "Evaluating the Competitive Use of the Subsurface: The Influence of Energy Storage and Production in Groundwater". The lecture will be given at AECOM, 420 George St, Sydney on 10 August, 5:30 for a 6pm start.

Regional IAH NSW meeting, Newcastle, 25th August

Venue and speaker to be confirmed.

Student Night, 22nd September

Student night will be given by students presenting their research representing UNSW, Macquarie University and University of Sydney.

Monika Markowska (UNSW) will present her work on cave monitoring to constrain the paleoclimat , Rory Williams (Macquarie University) has investigated the geomorphic and hydrogeological structure and function of a Chain-of-Ponds river system and Danielle Griffani (University of Sydney) has researched contaminant and heat transfer in fractured porous materials.

McElhiney Lecture 2015, 12th October

The 2015 McElhiney Lecture is entitled Drilling Fluids: A Common Sense Approach and is presented by Ronald B. Peterson, senior account executive at Baroid Industrial Drilling Products, Utah, USA.

The lecture will discuss how use of appropriate drilling fluids is paramount to a successful project. Peterson's presentation will briefly cover the evolution of the water well industry with emphasis on drilling fluids and grouts, and the progress that has been made over time as technology and the understanding of drilling fluids has improved.

Topics to be covered include the evolution of the water well industry, the importance of proper project planning and follow-through, the functions of a drilling fluid, the uses of bentonite focusing on its use as a basis for drilling fluids, the development of other drilling fluid additives and their use to enhance the fluid properties, the proper selection of a grout, and the development of grouts, and the issues and limitations in placement and in attaining a competent well seal.

Peterson's lecture will provide the basics for the proper planning, implementation, and follow-through of a well-designed drilling program with the goal of providing the best seal possible during the final well construction.

Australian Geomechanics Society/IAH Syposium on Recent Developments and Experiences with Groundwater and Excavations, 13 November

NSW IAH is co-organising a one day Symposium with the Australian Geomechanics Society. The theme of the Symposium is "Recent Developments and Experiences in Excavations and Groundwater," and will be held in Sydney in November. IAH will be providing keynote speakers and will be opening for registration to the event soon. Further details are to follow.

AUSTRALIAN CAPITAL TERRITORY

IAH AUSTRALIAN CAPITAL TERRITORY BRANCH

2015 Committee:

Chair	Lucy Lytton	(Geoscience Australia)
Vice-Chair / Secretary	Scott Lawson	(Office of Water Science)
Treasurer	Peter Hyde	(Murray-Darling Basin Authority)
Events Committee	Sarah Marshall Gabby Yates Tim Ransley Tim Evans Chris Harris-Pascal	(Geoscience Australia)
Communications Champion	Stephen Hostetler	(Hostetler Hydrogeology)
Membership Champion	Hashim Carey	(Geoscience Australia)
Student Coordinator	Michael Short	

Local News

Australian Groundwater Conference 2015

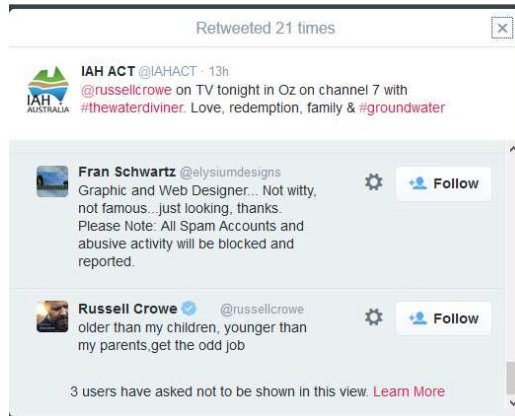
Don't forget to set your calendars for 3-5 November for the [Australian Groundwater Conference](#) in beautiful Canberra. Abstracts have been submitted and we are busily shining our shines and brushing off our good clothes in preparation for the hydrogeology event of the year. So be sure to come along.

Thanks to our Sponsors

IAH in the ACT continues its strong relationship with the professional groundwater community. Thanks to the generosity of our Gold Sponsors: [HydroAlgorithms](#) and our Silver Sponsors: [GHD](#) we can continue to provide members and non-members alike with free access to world-class speakers.

IAH ACT Twitter Account continues to soar

The IAH ACT branch's Twitter account provides up-to-date groundwater information to members and non-members in and around Canberra and the world. Follow us [@IAHACT](#) to keep informed about upcoming groundwater talks in the Capital Region, news, important scientific papers, hydrogeology job postings, conferences, workshops, and other events. In other words, we love groundwater.



Even Russell Crowe has retweeted us!

Progress in managed aquifer recharge and the water banking frontier – Dr Peter Dillon NCGRT Distinguished Lecture Series, June 2015

Dr Peter Dillon gave the NCGRT Distinguished Lecture Series at the Fenner School at the ANU. Peter gave us an update on the world of Managed Aquifer Recharge.



This free lecture covered a retrospective on some key research findings that together with our national treasures have given Australia an international head-start on the practice of MAR with urban stormwater and on MAR guidelines and policy. Myths that have deferred uptake and remaining research gaps will be exposed.

Future Events

Scott Lawson on Sydney Basin Peat Swamps, July 2015

Darcy Lecture by Dr Rainer H. Helmig, 11 August 2015

3-4 PM at the Harold Raggat Theatre Geoscience Australia

Evaluating the Competitive Use of the Subsurface: The Influence of Energy Storage and Production in Groundwater.

Geological Society Trivia, Spanish Club, 19 August 2015

Join IAH ACT and the other geological societies in Canberra for our annual trivia night.

VICTORIA

IAH VICTORIA BRANCH

2015 Committee (as of 14th April 2015):

Chair	Alan Wade	(Aquade)
Vice-Chair	Ben Hall	(Eartheon)
Secretary	Tara Smith	(Jacobs)
Treasurer	Anthony Brinkley	(Jacobs)
Events Committee	Katy Kijek	(Port of Melbourne Authority)
Communications Champion	Heath Pawley	(Golder Associates)
Membership Champion	Alexis Valenza	(Valenza Engineering)
	Matt Currell	RMIT
	Anne Northway	EPA
General Committee	Riki Gresswell	CDM Smith
	Ben Moore	AECOM
	Lynton Bourne	Noel Arnold & Associates
	Mike Hoban	DEPI

Local News

Our regular branch meetings continue to be held alternatively at the Melbourne RMIT City Campus. Thank you to RMIT for supplying the convenient central venue and first class facilities.

New committee members

The Victorian IAH Branch Annual General Meeting took place at RMIT on the 14th April. A number of committee positions were voted, including the Chair and Vice-Chairperson, Secretary, Treasurer, General Committee Member and Student member.

We welcome the new starters Ben Moore, Lynton Bourne and Mike Hoban and thank the outgoing members Malcolm Graham, Chris McAuley and Tim Robson for their fantastic support since 2011.

Victorian IAH Branch submission - Parliamentary Inquiry into Unconventional Gas

The Victorian IAH Branch has submitted comments from Victorian and Committee members to the Victorian Government Inquiry into Unconventional Gas in Victoria.

The submission aims to provide IAH's position with regards to Unconventional Gas developments in Australia and in Victoria (click [here](#) for the Parliament of Victoria Research Paper). Victorian IAH Branch submission will be uploaded on the Website shortly.

VIC Committee member Alan Wade has also been involved in the preparation of the joint response with AGC to the National Groundwater Strategic Framework (available [here](#)).

Recent Events

23 June 2015, Jacobs, Melbourne - NCGRT Distinguished Lecturer, Dr Peter Dillon, Progress in Managed Aquifer Recharge and the Water Banking Frontier followed by an interactive session: Listening to local MAR progress, plans and implementation issues

Twenty two years of CSIRO and partners' scientific research on managed aquifer recharge with urban stormwater and recycled water, has involved a combination of monitoring of first of breed demonstration projects, synthesis across projects, laboratory studies and modelling.

This free lecture covered a retrospective on some key research findings that together with our national treasures have given Australia an international head-start on the practice of MAR with urban stormwater and on MAR guidelines and policy. Myths that have deferred uptake and remaining research gaps will be exposed.

The talk which had a great success revealed new technical, policy and institutional considerations for implementing water banking for drought security. The talk included feedback on the status of every state and current MAR operations (and prospects) in Victoria, and covered approval and legislative framework.

IAH Presentation - 14th July 2015, Damien Finlayson (URS), Hydrogeology on the Western Front

Damien has 26 years' experience in the field of hydrogeology and has worked in both the public and private sectors. He has 25 years consulting experience working widely throughout Australia having been based in Sydney, Adelaide, Melbourne and regional Victoria. He worked briefly in the UK, based in URS' Manchester office assisting in the development of the company's UK Water Resource Management business line. He currently lives and works in Tatura, Victoria.

Damien is also the author of a book entitled: "Crumps & Camouflets – Australian Tunnelling Companies on the Western Front" (available through Big Sky Publishing) and has completed a manuscript relating to the work of the Australian Electrical and Mechanical Mining and Boring Company on the Western Front, which is likely to be published in 2016.

When we think of World War One and the infamous trench warfare on the Western Front of France & Belgium, groundwater does not generally spring to mind. As is the case everywhere, groundwater was and still is present across the landscape where the great battles were fought between 1914 and 1918. The presentation is aimed at looking at the "British" experience of hydrogeology on the Western Front and how and why that knowledge was used, and more importantly, who was responsible for using the knowledge to best advantage – Australians of course!

Future Events

VIC IAH is hosting the NGWA Henry Darcy Lecture Series on the 13 August 2015, at Golder Associates, Level 4, Building 7, Botannica Corporate Park, 570 – 588 Swan Street, Richmond

The talk will be presented by Dr. Rainer H. Helmig, Ph.D., who is head of the Department of Hydromechanics and Modelling of Hydrosystems at the Institute for Modelling Hydraulic and Environmental Systems, University of Stuttgart, Germany. His research covers fundamental research and applied science in the field of porous-media flow. A major focus is on developing methods for coupling hydrosystem compartments and

complex flow and transport processes. This is based on simulation methods and techniques for describing single- and multiphase, multicomponent flow and transport processes in the subsurface, i.e., in porous and fractured-porous media.

Lecture 1: "Evaluating the Competitive Use of the Subsurface: The Influence of Energy Storage and Production in Groundwater."

Lecture 2: "Modelling and Analysis of Soil-Moisture Processes in the Subsurface: The Influence of Evaporation and Salt Precipitation in Groundwater."

So stay tuned!

WESTERN AUSTRALIA

IAH WESTERN AUSTRALIA BRANCH

2015 Committee:

Chairperson	Ian Brandes de Roos
Vice – Chairperson	Mariajose Romero-Segura
Secretary	Carsten Kraut
Treasurer	Peter de Broekert
Meetings Secretary	Todd Hodgkin
Ministerial Liaison	Keith Brown
Education Representative	Ryan Vogwill
Media Liaison	Ryan Vogwill
Membership Champion	Mal McGivern
State Liaison	Grant Bolton
Presenter Coordinator	Pauline Amez-Droz
Seminar Coordinator/Sponsorship Champion	Geoff Pettifer
Newsletter Champion	Keith Brown
Newsletter Assistant	Melissa Nyga
Web Champion	Eduardo de Sousa
Web Assistants	John Enkelmann Lynn Reid
Student Champion	Gemma Bloomfield
ECHN Champion	Rachel Wroe Philip Commander

2015 Local News

Half way through the year; and half to go...

Key achievements in WA for the last quarter were:

- Committee members met with DoW representatives
- Jon Hanna presented talk on the **Hydrogeology of the Canning Basin**
- Membership drive by the Committee
- And last, and by no means least, the successful holding of the **Water Management for Shale and Tight Gas Resources** seminar on the 8th to 9th of June.

Recent Meetings

20th May 2015: Hydrogeology of the West Canning Basin – Jon Hanna

Jon gave an excellent and well received, presentation at the Fortescue Training Centre on recent work undertaken at the West Canning Basin. The talk provoked significant discussion especially from the 'older' members of the audience. Thanks to Jon and FMG for their hospitality.

8-9 June 2015: 2015 Seminar – Water Management for Shale and Tight Gas Resources

On the 8th and 9th of June the IAH, along with co-hosts SPE and ASEG, successfully held the **Water Management for Shale and Tight Gas Resources** seminar. The seminar was well attended and returned a tidy profit. Congratulations, and special thanks to all the organisers for what turned out to be a difficult exercise in a challenging economic climate.

Upcoming Events

28th July 2015: Progress in Managed Aquifer Recharge and the Water Banking Frontier, 2015 NCGRT Distinguished Lecturer – Dr Peter Dillon

When Tuesday 28 July 2015, 4 to 5.30 pm

Where The Department of Water auditorium, The Atrium, 168 St Georges Terrace

The technical presentation will be followed by the annual Social Night generously sponsored by [Connector Drilling](#).

IAH Western Australia is pleased to host Peter Dillon, the 2015 NCGRT distinguished lecturer

Dr Dillon's talk will cover a retrospective on some key research findings that together with our national treasures have given Australia an international head-start on the practice of managed aquifer recharge (MAR) with urban stormwater and on MAR guidelines and policy. Myths that have deferred uptake and remaining research gaps will be exposed.

The talk will also project forward to reveal new technical, policy and institutional considerations for implementing water banking. It will conclude with a concise summary of current activities of the IAH Commission on MAR.

This talk is presented by Dr Dillon, a research with over 25 years' experience in surface water-groundwater interaction, groundwater quality protection from diffuse and point sources and agricultural water reuse. For over a decade Dr Dillon has led research on managed aquifer recharge with stormwater and reclaimed water. Dr Dillon has undertaken research projects in all Australian states and led international research projects on management of aquifer recharge. He is the founding Chairman of the International Association of Hydrogeologists (IAH) Commission on Management of Aquifer Recharge.

Event partners



28th July 2015: IAH WA Branch – Annual Social Meeting

Sponsored by Connector Drilling – Free for IAH members

When: Tuesday 28 July 2015, 5:30 to 8:00pm (following the NCGRT lecture).

Where: The Moon and Sixpence, 300 Murray St, Perth.

The drought breaker. The one to recharge your glass. The reason to ensure your IAH membership is up to date.

Members are invited to join us for an informal night of drinks and finger food, generously provided by Connector Drilling.

Following the NCGRT lecture these drinks are an opportunity to meet with WA's finest Hydrogeologists in a fun atmosphere.

Generously sponsored by



**19th August 2015: Evaluating the Competitive Use of the Subsurface:
The Influence of Energy Storage and Production in Groundwater, 2015
Henry Darcy Distinguished Lecturer – Dr Rainer H. Helmig**

When: Wednesday 19 August 2015, 4 to 5.30 pm

Venue: The Department of Water Auditorium, The Atrium, 168 St Georges Terrace, Perth

RSVP: Ian Brandes de Roos E: ibrandes@rockwater.com.au

IAH Western Australia is pleased to host Dr Rainer H. Helmig, the 2015 Darcy lecturer

Dr Helmig will outline the use of advanced numerical models to assess the mutual influence of subsurface projects and their impact on groundwater reservoirs. He will also outline the increased demand for these assessments as the subsurface is increasingly being used both as a resource and as an energy and waste repository. Resource conflicts are becoming more common and complex, such as thermal energy storage and the effects surrounding hydraulic fracturing in both geothermal and shale gas production. Dr Helmig will discuss:

Possible utilisation conflicts in subsurface systems and how the groundwater is affected;

Fundamental properties and functions of a compositional multiphase system in a porous medium;

Large-scale simulation that shows the general applicability of the modelling concepts of such complicated natural systems, especially the impact on the groundwater of simultaneously using geothermal energy and storing chemical and thermal energy; and

Insights into how such real large-scale systems provide a good environment for balancing the efficiency potential and possible weaknesses of the approaches.

This talk is presented by Dr Rainer H. Helmig, head of the Department of Hydromechanics and Modelling of Hydrosystems at the Institute for Modelling Hydraulic and Environmental Systems, University of Stuttgart, Germany. His research covers fundamental research and applied science in the field of porous-media flow. A major focus is on developing methods for coupling hydrosystem compartments and complex flow and transport processes.

Event partners



NATIONAL CENTRE FOR
GROUNDWATER
RESEARCH AND TRAINING



Catch up with further events at <http://www.iah.org.au/events/western-australia> or on [Facebook](#)

SOUTH AUSTRALIA

IAH SOUTH AUSTRALIA BRANCH

2015 Committee:

President	Steve Barnett
Vice President	Neil Power
Membership champion	Tavis Kleinig
Committee member	Russel Martin
Web master/mistress	Fiona Adamson
Modelling Forum	Juliet Wood

Upcoming Events

SA Groundwater Forum 2015, 22 July 2015

The focus of this inaugural one day Groundwater Forum on July 22nd is to showcase the current status of South Australia's groundwater resources, profile the latest developments and research on various aspects of our groundwater resources, as well as discussing future opportunities for groundwater development within South Australia. About 100 attendees are expected from agencies, research bodies and consultants.

Topics include:

- Results from the first comprehensive audit of groundwater use in South Australia from over 9,000 wells – how much, where from, for what purpose
- Trends in groundwater levels, salinity and extraction
- Water well drilling activity – where, how deep, for what purpose
- Latest DEWNR information products
- MAR – storm-water and waste-water schemes, volumes recharged, operational issues
- Research groups- progress report on current projects
- Mining – current use, case studies, potential demand
- Monitoring – network rationalisation progress
- Contaminated sites,
- River Murray issues
- Climate change impacts

For further information, go to <https://www.iah.org.au/events/south-australia/>.

NORTHERN TERRITORY

IAH NORTHERN TERRITORY BRANCH

2015 Committee:

Chair	Joanna Ellis
Vice-Chair	Lee Evans
Secretary	Steve Tickell
Treasurer	Mel Woltmann

Local News

Sybil Springs field trip

Whilst the rest of the country struggles with a cold snap, IAH members in the NT have been enjoying the relief from the heat and humidity that the fabulous Dry season brings. Members went on a day trip from Darwin to Sybil Springs in mid June. Sybil Springs is a small hot spring sourced from a fractured sandstone aquifer. Despite the relative cool weather, the 41C water meant only a quick dip for most.

After a leisurely picnic, members went in search of the sinkhole into which a good portion of the spring discharge disappears.



NT Government Water Policy discussion

NT Branch members put their heads together to contribute to the public discussion on water policy for the NT. The NT Government has been inviting submissions on its paper Our Water Future (<http://www.lrm.nt.gov.au/water/our-water-future>).

The NT Branch's submission will soon be up on the Our Water Future website, and on the IAH Australia website.

Farewell

We are a small but friendly branch, up in the NT. So we do notice the coming and going of our members. The NT branch waved goodbye to Lucy Lytton (Geoscience Australia) as she headed back to Canberra (why? ☺) after 6 months in the heat. We also said goodbye to Lee Evans (GHD), Vice-Chair, as he headed back all the way south to Tasmania with his young family.

Upcoming Events

Peter Dillon will be giving a presentation on "Listening to local MAR progress, plans and implementation issues". 4:30pm, 30th July at PWC Ben Hammond Complex, Iliffe Street, Darwin. There will also be opportunity to view the presentation from PWC's Alice Springs office via video conferencing. <http://www.groundwater.com.au/events/82>

Dr Rainer H Helmig will be presenting the 2015 Henry Darcy Distinguished Lecture. He will be talking on "Evaluating the Competitive Use of the Subsurface: The Influence of Energy Storage and Production in Groundwater.". Date: 20th August, location Darwin, TBC.

TASMANIA

No update available in this edition.

QUEENSLAND

No update available in this edition.

NATIONAL CONFERENCES AND EVENTS



EVENT ANNOUNCEMENT

NGWA Henry Darcy Australian Lecture Tour



NGWA Henry Darcy Lecture Series: 2015 Dr Rainer H. Helmig

Proudly supported by NGWA, IAH Australia, State IAH Chapters and the National Centre for Groundwater Research and Training (NCGRT)

Lecture 1: Evaluating the Competitive Use of the Subsurface: The Influence of Energy Storage and Production in Groundwater

Lecture 2: Modelling and Analysis of Soil-Moisture Processes in the Subsurface: The Influence of Evaporation and Salt Precipitation in Groundwater

For abstracts, see <https://www.iah.org.au/events/darcy-lecture-2015>

Locations

Sydney	Mon 10 August, 6pm; AECOM offices, Level 21, 420 George Street, Sydney Tue 11 August, TBC
Canberra	Thu 13 August, 5:30pm; Golder Associates, Wurundjeri Room, Level 4, Bldg 7, Botanica Corporate Park, 570-588 Swan Street, Richmond
Melbourne	Mon 10 August, 6pm; AECOM offices, Level 21, 420 George Street, Sydney Tue 11 August, TBC
Hobart	TBC
Adelaide	Tue 8 August, 4pm; The Department of Water Auditorium, The Atrium, 168 St Georges Terrace
Darwin	Thu 20 August, 5:30pm; Charles Darwin University, Room TBC:
Brisbane	Tue 8 August, 4pm; The Department of Water Auditorium, The Atrium, 168 St Georges Terrace



The National Centre for Groundwater Research and Training and the Australian Chapter of the International Association of Hydrogeologists are joining forces to deliver the Australian Groundwater Conference in Canberra in 3-5 November 2015. We are looking forward to welcoming groundwater researchers, industry professionals and policy development specialists to this exciting event.

We are strongly committed to delivering a conference that enables delegates to examine the multi-dimensional challenges affecting the sustainable management of Australia's groundwater resources in an innovative and engaging manner. We also want to create opportunities for delegates to share their experiences, inform best practice, and identify the steps they can take to bring about lasting improvements in the management of Australia's vital groundwater resources.

Conference will include but is not limited to

1. State of the art modelling and data management
2. Emerging measurement technologies
3. Urban groundwater issues
4. Climate change, land use and groundwater
5. MDB Plan: Progress and future work
6. Groundwater, Energy & Mineral Resources
7. Groundwater science-policy nexus: Socioeconomic/Governance challenges and opportunities

Call for abstract submissions will be confirmed and open in early 2015.

Further details are available from the conference website:

<http://www.groundwater.com.au/pages/australian-groundwater-conference-2015>



National Centre for
Groundwater
Research and Training

For upcoming courses, see <http://www.groundwater.com.au/events/training>



The Council of the **International Association of Hydrogeologists (IAH)** has awarded the IAH Italian Committee the honour of organizing in **Rome, 13-18 September 2015** the **Annual Congress for 2015**.



The **Congress, AQUA2015**, will be held in Rome, at the prestigious **Angelicum Congress Centre**, located in the heart of the city.



REGISTRATION IS NOW OPEN

Registration for AQUA 2015 Congress is now open. Discounted rates are available for IAH members, students (including PhD students) and ABAS members. Early bird registration is possible until June 2015. During the registration process you can also book your hotel and reserve pre-congress courses and post-congress tours, in addition to the mid-week field trip included in the registration fee. Please go to www.iah2015.org/registration and follow the procedure to register.



PROGRAMME: LIST OF SESSIONS ONLINE

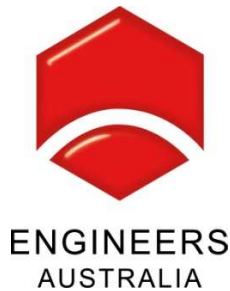
The main theme of the AQUA2015 Congress is summed up by the motto "**Back to the Future**", linking the past use of water over 2000 years with the most advanced techniques of modern hydrogeological research.

The participation of scientists and experts from all over the world, together with key-note presentations by leading international scientists, will guarantee the high level of the event and provide a unique opportunity for networking and upgrading scientific and technological awareness.

The **Scientific Programme** includes **8 main topics** and more than **65 sessions**, attempting to answer challenging questions posed by the future: the **management** of water resources in relation to food, health and the **environment**, the development of sustainable governance and policy and of new frontiers and new tools.

The draft program of the sessions, with descriptions and the list of convenors, is now available at www.iah2015.org/sessions .

AGS/IAH Symposium



2015 AGS/IAH Joint Symposium

Recent Developments and Experiences with Groundwater and Excavations

Friday 13 Nov 2015

*Australian National Maritime Museum, Darling Harbour,
Sydney*

The Sydney Chapter of the Australian Geomechanics Society (AGS) and the International Association of Hydrogeologists, Australia are proud to present the 19th annual joint Symposium to be held on **Friday 13th November 2015**, entitled 'Recent Developments and Experiences with Groundwater and Excavation'.

The Symposium forms part of the continuing program of events by the Sydney Chapter of the AGS, joined this year by IAH NSW and is designed to keep the engineering and groundwater profession aware of recent developments in particular the groundwater aspects of geotechnical engineering practice.

Overview of the 2015 Symposium

The 2015 AGS Symposium will present the state-of-the-art practices, innovative technologies, new research results and case histories in construction and design towards safer excavations, importance of groundwater in design, more cost effective shoring practices, accurate groundwater modelling and better management systems for urban groundwater issues.

The goal of this symposium is to provide professional engineers, hydrogeologists, researchers, specialist contractors, regulators, educators and students the opportunity to meet and share their knowledge and experiences in this area.

This symposium will bring together engineers, engineering geologists, hydrogeologists and researchers who are interested on new advances in excavation techniques, groundwater control, lessons learnt from excavation collapse and experiences in geotechnical aspects of groundwater and excavation.

For more information, see <https://www.iah.org.au/events/agsiah-symposium/>

IAH PUBLICATIONS

Discounted IAH publications in the 'International Contributions to Hydrogeology' and the 'Selected Papers' series can be ordered by Australian IAH members directly from Macmillan Publishers Australia in Victoria.

customer.service@macmillan.com.au or orders@macmillan.com.au

Remember to quote your IAH Membership Number, which entitles you to a substantial discount. If you don't know your IAH membership number contact the Secretariat at:

secretariat@iah.org.au