

## TOP STORIES IN THIS NEWSLETTER



A citizen science project  
SA DoEW



2025 IAH Congress



2026 IAH Congress



Student Sponsorship

## PRESIDENT(S) REPORT(S)

### Outgoing President's Report

**Kelly-Jane Wallis**

After completing my fourth and final term as President of IAH Australia, I want to express my deep gratitude for the opportunity to be part of the Executive Committee alongside Ron Colman, Greg Hoxley and Graham Hawkes and contribute to the stewardship and growth of our groundwater community. It has been a privilege to work alongside such dedicated professionals, volunteers, and chapter leaders who continually elevate the standard of our organisation. In February, we welcomed Dr Richard Cresswell into the role of National President, and I am confident that his commitment to the sector will guide IAH Australia into an exciting new chapter. I look forward to supporting Richard and the Executive as we continue strengthening our collective impact across Australia and beyond.



From left to right – the signing of the Indigenous Groundwater Declaration (2022), the Exec team at AGC 2022 and a 2025 IAH Congress celebratory photo including the Three Cheeses.

### Incoming President's Report

**Richard Cresswell**

I've taken the liberty of qualifying these two President's Reports using words that describe both the process and perhaps a little of the personalities of the people involved! Thanks Kelly, for your kind words of encouragement, your energy and infectious enthusiasm for IAH. I am perhaps a little less out-going, though I am coming in with enthusiasm and excitement and the aim of building on our international presence and supporting all our hydrogeologists on both local and international stages. The last few years have seen a surge in our membership and to maintain that I'll be reaching out to ask how we as a committee can help you, as members, get the most out of the association. The increased numbers give us new opportunities, and the engagement of a dedicated administrative service means we can focus on what works for us and what brings us together as a groundwater community. I am relieved that the rest of the Executive will remain the same for the foreseeable future and with Kelly remaining in the wings I'm expecting a smooth and seamless journey into 2026, building to the next AGC in Adelaide in 2027! Please don't hesitate to throw ideas and queries our way and let us know how the association can help you in your personal groundwater journey.



## IAH Australia News

### 2026 IAH Australian Chapter Committee

The 2026 / 2027 Annual General Meeting was held on Thursday 5<sup>th</sup> February 2026. All Executive Committee positions were vacated and nominations called for. Kelly-Jane Wallis stepped down after four years and Richard Cresswell was elected as the National President.

The 2026 Executive Committee is:

- President: Richard Cresswell
- Vice President: Greg Hoxley
- Treasurer: Ron Colman
- Secretary: Graham Hawkes

The full IAH Australia Committee comprises the Executive, State and Territory Representatives and a small group of other highly relevant people, as listed below.

IAH Australia Executive		
President	Richard Cresswell	RichardC@ecoaus.com.au
Vice President	Greg Hoxley	Greg.Hoxley@jacobs.com
Secretary	Graham Hawkes	Graham.hawkes@ade.group
Treasurer	Ron Colman	rcolman@sovereignhydro.com
State Chapters		
SA	Craig Flavel	Cflavel@charlessturt.sa.gov.au
ACT	Tim Evans	timthegeo@internode.on.net
NSW	Richard Cresswell	RichardC@ecoaus.com.au
WA	Rob Swift	rswift@pentiumwater.com.au
NT	Dylan Irvine	Dylan.irvine@cdu.edu.au
QLD	Juan Berrio	juanberrio@gmail.com
VIC	Katy Kijek	katy.kijek@senversa.com.au
TAS	Robert Virtue	Robert.Virtue@ghd.com
Other		
Past President	Kelly-Jane Wallis	kwallis@slrconsulting.com
VP Australasia & Pacific	Sarah Bourke	sarah.bourke@uwa.edu.au
Communications	Dave Harris	David.harrisa1@gmail.com
NCGRT	Peter Cook	peter.cook@flinders.edu.au
ECHN coordinator	Vacant	

### TREASURERS REPORT

Our Treasurer (Ron Colman) released the 2025 National IAH Budget, providing an overview of the IAH financial position. Including the following key notes:

- IAH Australia remains in a strong financial position
- Cash balance as of 31 Dec 2025 sits at \$201,630
- Funds have increased by \$22,325 throughout the year
- National financially supported some delegates to the 2025 IAH congress from lower socio-economic countries
- Operating expenses for 2025 are estimated as \$50,000
- Majority of membership fees are sent to head IAH office in UK
- Funds are required to support various conferences.



## ADMINISTRATION

Association Executive Services (AES) have been appointed as a third-party provider to assist with the finances, audits, membership and general administration. AES are still going through a probationary period however to date the feedback from members and the committee has been positive. Cybersecurity is one of the main concerns of the committee and AES are working with us to tighten this up. The IAH website is still of concern and AES and their subcontractors are working on improving functionality. One purpose of appointing AES is because the governance of administering non-profit organisations is tightening up as the rules change and audits are required. Regulatory changes are expected to require additional reporting.

AES can be contacted through the IAH secretariat email address [secretariat@iah.org.au](mailto:secretariat@iah.org.au). We acknowledge Cathy Reidy's administration assistance over the past few years, who has done a magnificent job, however over that period the administrative tasks and requirements have continued to grow, beyond Cathy's part time assistance.

## MEMBERSHIP

Australian membership details as at November 2025 have been provided by AEC. In 2025 IAH Australia has a total membership of 796, a record membership level and partly attributed to hosting the IAH International Congress.

## Darcy Lectures – 2025 & 2026

The 2025 Darcy lecturer was Grant Ferguson, IAH's Vice President for North America, and Professor of Hydrogeology in the Department of Civil, Geological and Environmental Engineering at the University of Saskatchewan. Grant was also a keynote speaker at the IAH International Congress 2025 and travelled around Australia before and after the Congress presenting a choice of the following talks:

- Lecture 1: Deep Groundwater and Deep Time
- Lecture 2: Living Fossils: Ancient Groundwaters in the Anthropocene

Grant presented the Darcy Lecture in person at the following venues:

- Brisbane 8 September
- Perth 10 September
- Adelaide 11 September
- Melbourne 19 September [IAH Congress]
- Hobart 22 September
- Sydney 23 September

Grant continues to interact with the Australian IAH and will be presenting remotely for the ACT Branch in the coming weeks.

The [2026 Darcy Lecturer](#) is Dr Steven Loheide. Dr Loheide is the Professor of Water Resources Engineering in Civil and Environmental Engineering, Geological Engineering, Freshwater and Marine Sciences and Water Resource Management at the University of Wisconsin – Madison. Unfortunately, Dr Loheide has indicated he will not be travelling to Australia to present the 2026 Darcy Lecture, though the presentations will be broadcast. Further details will be provided to members as they arise. The two topics he will be presenting are:

- Lecture 1: Trees are Groundwater Stakeholders Too
- Lecture 2: Groundwater Recharge Regimes are in Flux.



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## Australasian Groundwater Conference (AGC) 2027

The 2027 Australasian Groundwater Conference is to be held in Adelaide following strong expressions of interest from the South Australian and New South Wales State IAH Chapters. The proposed theme of the conference is: “Managing Groundwater for an Uncertain Future”.

Some of the attributes of hosting the conference in South Australia are:

- South Australia state is internationally recognised for its innovative approaches to groundwater management in some of the driest regions on earth
- **World-leading groundwater governance and policy frameworks**, including managed aquifer recharge, water allocation planning for complex areas with competing water interests, integrated environmental and salinity management of the River Murray and its floodplains, and cumulative impact assessment of the western Great Artesian Basin.
- **Cutting-edge research and technology**, driven by collaboration between government, industry, CSIRO, and universities, including headquarters of the National Centre for Groundwater Research and Training and Environmental Tracer Laboratory. Groundwater security under a changing climate and for a sustainable energy transition.
- **Diverse hydrogeological settings**, from arid inland basins, small and large sedimentary basins used for agriculture, wetlands and floodplains, fractured rock mining, to coastal aquifers, providing rich opportunities for field trips and technical discussions.
- **Strong community and industry engagement**, ensuring groundwater remains central to water security and environmental stewardship. Experience in the design and delivery of cost-effective and high-impact training that leverages local and visiting research expertise.

Hosting the conference in South Australia will showcase these achievements and foster knowledge exchange on managing groundwater under climate variability and increasing demand.

AGC 2027 is to be hosted by the South Australian IAH Chapter and managed by the conference committee:

- Kate Holland (CSIRO)
- Okke Batelaan (Flinders University / NCGRT)
- Sarah Marshall (AGE)
- Jim McCallum (Flinders University / NCGRT)

More on the development of the conference will be provided in future communications as conference organisation progresses.



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## IAH 2026 – BUDAPEST – 53<sup>rd</sup> World Groundwater Congress



The International Association of Hydrogeologists and its Hungarian National Chapter are delighted to invite the global groundwater community to the **53rd World Groundwater Congress (IAH 2026)**, to be held in **Budapest, Hungary, 14 to 18 September 2026**. Returning to Hungary after half a century, this prestigious event will provide a forum for scientists, practitioners, policymakers, industry professionals, and civil society stakeholders from around the world.

The congress theme, “**Groundwater: A Key Multi-Resource**”, reflects the essential role groundwater plays in environmental sustainability, societal well-being, and integrated resource management. IAH 2026 will highlight the multiple functions of groundwater within the water cycle, ecosystems, energy systems, and human societies, while addressing emerging scientific, technical, and governance challenges.

**Budapest** offers an inspiring setting for the congress. The Danube River flows through the heart of the city, supplying drinking water to nearly two million people through riverbank filtration. Renowned worldwide as the “City of Spas”, Budapest is uniquely shaped by naturally discharging thermal waters, hypogenic caves, and karst systems, making it also a key area for geothermal energy development.

The scientific programme will be organised around the following themes: interacting groundwater systems in the water cycle, groundwater in the green transition, conjunctive water management and governance, next-generation solutions, climate change adaptation and groundwater–society interactions.

Researchers and professionals are warmly encouraged to submit abstracts presenting new results, innovative methods, or inspiring case studies related to the congress themes.

### Important Dates

- Abstract notification of acceptance: 2 April 2026
- Early-bird registration deadline: 30 April 2026
- Late registration deadline: 31 August 2026

Details on abstract submission, registration fees, and the scientific programme are available at:

<https://iah2026budapest.com>

Join us in Budapest for **IAH 2026** and be part of an unforgettable event shaping the future of hydrogeology!



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## VALE ANGUS McFARLANE (1983 – 2026)



Angus passed away suddenly in Sydney on 28 January 2026. He was an active member of our hydrogeological community, a NSW IAH committee member and much loved and respected by all who were lucky enough to work with or alongside him. Many will remember Angus as an outstanding hydrogeologist with deep technical expertise and a strong technical reputation.

What truly set Angus apart was his character.

He was thoughtful and principled, never afraid to ask the hard questions. He cared deeply about doing things properly and supporting people around him. He led without ego, always made space for others to contribute and never sought recognition. As a mentor he was extremely generous with his time making the effort to explain an idea or concept, whether he had the time or not. Angus was not just a technical mentor but a life mentor.

Angus was a people person making the work environment so much better when he was in the room or in the field with you. One of his many attributes was the ability to think on his feet in the field, so much so that with his bag of tricks some of his colleagues called him “MacGyver” for his uncanny ability to solve problems with a minimum amount of fuss.

Outside of work Angus gave generously to his community through many years of service with the Bondi Surf Life Saving Club and more recently as a volunteer with the NSW State Emergency Service.

Angus leaves behind a legacy of professionalism, decency, kindness and humanity that will stay with all of us. He is survived by his wife Kate and young daughters Hannah and Sophie.



## EDUCATIONAL ACTIVITIES

### STUDENT SPONSORSHIP

IAH National and the NSW IAH Chapter have jointly sponsored two Ethiopian MSc hydrogeology students over two years from the Earth Sciences School at Addis Ababa University, supervised by Professor Tenalem Ayenew. A progress report has been provided by Tomas Atalay and is outlined below. Unfortunately, the second student is undertaking his research in a war zone and cannot be contacted. He will provide a progress report when possible.

#### **GROUNDWATER POTENTIAL EVALUATION AND MODEL BASED HYDROGEOLOGICAL SYSTEM ANALYSIS OF THE CHACHA-BERESA CATCHMENTS, UPPER JEMMA RIVER BASIN (CENTRAL ETHIOPIA)**

**By Tomas Atalay**

The Chacha–Beresá Catchment, located in the Upper Jemma River Basin of Central Ethiopia, features complex topography (1,554 – 3,679 m.a.s.l.) dominated by Tertiary volcanic rocks (basalt, ignimbrite, rhyolite). Deep river gorges expose Mesozoic sandstone. The area's bimodal rainfall and agricultural land use critically influence groundwater recharge and demand, making its systematic study vital for water security.

The research objectives are to:

- Conduct field work to:
  - Undertake geological and hydrogeological mapping
  - Conduct an inventory of groundwater resources
  - Measure in-situ water quality parameters
  - Identify recharge/discharge zones
  - Observe structural controls on groundwater flow, all to gather data for conceptual and numerical model development
- Develop a conceptual hydrogeological model
- Develop a numerical groundwater flow model using MODFLOW
- Use the numerical model to:
  - Predict aquifer responses to abstraction and climate variability
  - Identify sustainable groundwater development zones
  - Inform water management policies to enhance community resilience

Field work was completed in November 2025 with support from local community members and district water office staff. Their local knowledge was instrumental in efficiently locating water points and understanding seasonal hydrological behaviours. The next phase of the research will be to develop the conceptual hydrogeological model; and active advancement of the MODFLOW model using the parameters monitored during field work.

Challenges overcome to date were security related fieldwork delays, terrain accessibility and data gaps. These challenges were in part resolved by community engagement and leveraging multiple data sources. This research is scheduled for completion in June 2026.

### **Vale Professor Tenalem Ayenew**

It is with sadness that we announce that Professor Ayenew passed away in February 2026 in a tragic car accident.



Fractured rhyolite in outskirts of Debre-Birhan Town [left] and Lithological logging to characterise hydrostratigraphic units [right]

## THE GROUNDWATER PROJECT

The Groundwater Project is a not-for-profit non-governmental organisation (NGO) committed to the advancement of groundwater understanding and awareness by producing high-quality groundwater learning materials in many languages, made available for download free of charge from its website: [The Groundwater Project](https://www.groundwaterproject.org/).

The Groundwater Project is a volunteer-based, charitable organisation initiated in 2017, registered in Canada and led by Dr John Cherry. The organisation relies on over 1000 volunteers in roles such as authors, reviewers, editors and translators. IAH Australia is a proud sponsor of the Groundwater Project.

A full list of books published by the groundwater project can be found and downloaded from the website: [The Groundwater Project](https://www.groundwaterproject.org/). As at 2025 59 original books and 29 preserved books have been published, with a further 175 books in the process of being published or in review. The Groundwater Project also publishes educational material aimed at all levels and ages and initiates partnerships and collaborations between groundwater practitioners. An insight to what's happening can be found in the latest Newsletter: [the-groundwater-project-spring-2025-newsletter-final.pdf](#).

IAH Australia is proud to be a financial supporter of the Groundwater Project.



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### ASIA PACIFIC ACTIVITIES

IAH International have developed a global calendar of events where upcoming events from all over the world can be viewed. All chapters/groups can publicise their events on this platform which can be viewed as a calendar or map via: <https://iah.org/submit-an-event> - [Events Map](#) | [IAH Activities](#)

Ian Davey is retiring as Executive Manager of IAH International after eight years. There is an electronic card for those who would like to acknowledge his tireless and dedicated work for the association: <https://groupleavingcards.com/share/WUypPzFT4yV>

There is a call for session proposals and abstracts for IAH Budapest Congress. Closing date for abstracts has just closed, but late submissions may be accepted.

[Call for Session Proposals](#) | [IAH 2026 Budapest Congress](#)

[Call for abstract](#) | [IAH 2026 Budapest Congress](#)

There has been a lot of activity around IAH Commissions and Networks. There are opportunities for anyone to get involved in global events or create a Commission to champion a groundwater issue close to your heart:

[Commissions and Networks - IAH - The International Association of Hydrogeologists](#)

Sarah Bourke

### IAH CONGRESS 2025

#### 52<sup>ND</sup> CONGRESS OF THE IAH – MELBOURNE | AUSTRALIA

The 52<sup>nd</sup> Congress of the International Association of Hydrogeologists was held between the 15<sup>th</sup> and 19<sup>th</sup> of September 2025 in Melbourne, Australia and was a huge success by all accounts.

This Congress provided an invaluable platform to exchange insights and expertise, nurture our emerging professionals and researchers, and tackle the challenges ahead.

The event celebrated the expertise and innovation in groundwater science and sustainability from across the globe.



Highlights of the congress were:

- More than 800 attendees from over 60 countries
- A great opportunity to interact with many different cultures
- Six field trips and four pre-conference work shops
- Increasing acknowledgment of indigenous values of groundwater and, more importantly, direct indigenous participation in research, teaching and engagement was a popular theme. The first time an indigenous theme session was held at an international groundwater conference
- Many useful discussions were held around the proposed update of the Australian Groundwater Guidelines
- 12 invited speakers from Australia and internationally
- The congress was a financial success, bringing in a modest profit.



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Congratulations to our three **Australian IAH award winners** who were announced during the congress.

**Presidents' Award: Professor Wendy Timms** awarded for making outstanding international contributions to groundwater science and to furthering IAH's mission to promote understanding and management of groundwater resources for the benefit of humankind and the environment.

**Honorary Member: Professor Bradley Moggridge** awarded for having given exceptional services to the Association over a long period.

**Applied Hydrogeology Award: Associate Professor Rebecca Nelson** awarded for a groundwater professional who has made an outstanding contribution to the application of hydrogeology, preferably in developing countries or in support of international development.



## Congress Summary by Ben Hall, Congress Chair

Wow...what an IAH Congress! Thanks to all that participated. From a range of great workshops and fascinating fieldtrips to thought-provoking keynote addresses and many interesting presentations and posters. And, of course, a killer 'disco' gala dinner!

The groundwater community continued the work addressing critical issues related to drinking water, agricultural water and mining requirements in an increasing resource constrained world experiencing a changing climate. The increasing acknowledgment of indigenous values of groundwater and, more importantly, direct indigenous participation in research, teaching and engagement was a highlight. We continue to learn as western and indigenous scientists walk together on this journey.

Thank you to all attendees, our sponsors, workshop and field trip leads, session chairs and our professional conference organiser, ICMS, for creating such a positive event. Thank you to the Technical Committee (core and extended) for reviewing the huge number of abstracts.

And a massive thankyou to the Organising Committee: Kelly-Jane Wallis, Tara Taylor, Matthew Currell, Wendy Timms, Betty Carrara, Erin McIntosh, Heath Pawley, Ellen Kwantes and Riley Nicholason. This event was only possible because these wonderful people volunteered their time and energy to make it happen.

Good luck for the team from Budapest as they now start to prepare for IAH2026.



IAH 2026 52<sup>nd</sup> International Hydrogeological Congress Organising Committee

## EARLY CAREER HYDROGEOLOGISTS NETWORK (ECHN)

In 2025 Ben Print joined as the ECHN coordinator for IAH Australia nationally and is tasked with promoting hydrogeology for students and early career geoscientists.

The ECHN is an official network of the International Association of Hydrogeologists (IAH) providing a support forum for hydrogeologists at the start of their professional or academic careers. The aim of the network is to ensure effective participation with the broader IAH community and foster the interaction and growth of early career professionals. Within the framework of IAH's mission to further the understanding, wise use and protection of groundwater resources throughout the world, the goals or objectives of the ECHN are to:

- Connect early career professionals across Australia and serve as a platform for coordination, exchange of information and share professional developments.
- Facilitate the inclusion and influence of early career professionals by identifying or promoting opportunities for participation and industry related challenges.
- Facilitate connections and sharing of knowledge/skills between early career and other IAH members.
- Coordinate the ECHN activities around the interests of early career professionals, including but not limited to problem solving and or industry related roadblocks.
- Highlight the importance of networking and mentoring, and how these impact on career development.
- Facilitate sessions to improve or accelerate the early career professional to set them up for success in the industry.
- Encourage them to become a part of the IAH community.

ECHN is to primarily focus on:

- Universities (aiming for MSc, 3rd and 4th year students)
- Post Grads starting in the industry
- Professionals with 0-5 years' experience
- Arranging events at universities that promotes early career hydrogeologists (eg beer and pizza nights with some professional talks)
- Facilitating mentoring for individuals or groups when and where appropriate.



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For the ECHN we would like to encourage:

- Science students to take up hydrogeology and EC hydrogeologists to have a positive experience with their career as a hydrogeologist.
- Events that raise the profile of groundwater in our community (e.g. hydrogeoday)
- Events that bring together people from different earth sciences
- Local chapters to host technical and social events with an EC focus
- Understand where ECs are working and the current exposure within the industry
- Networking and mentoring opportunities between more experienced IAH professionals and ECHN professionals.
- Shine a spotlight on specific research of the ECH eg in the National newsletter/LinkedIn page
- Present their Honours/Masters/PhD theses at student nights organised by the local State IAH Chapter
- EC hydrogeologists present their project work at hydrogeological conferences such as the Australasian Groundwater Conference or other related groundwater conferences.

Ben Print has now stepped down in his role as the national ECHN coordinator, and we are looking for a candidate to continue his work.

## AUSTRALIAN GEOSCIENCE COUNCIL

IAH Australia is a member organisation of the Australian Geoscience Council (another AGC acronym). IAH members are eligible to apply for AGC grants and over the years these grants have been awarded to IAH members. Two grants are currently available:

- The 34th IGC Travel Grant Scheme supports geoscientists in the early stages of their career to have the opportunity to travel internationally to further their careers as geoscientists.
- The AGC Lee Parkin Australian Geoscience Information Association Grant supports research that explores the potential for the further development of geoscience information and data management in Australia.

More information is available on the website: [HTTPS://WWW.AGC.ORG.AU/RESOURCES/GEOSCIENCE-GRANTS/](https://www.agc.org.au/resources/geoscience-grants/)

Other concerns for the AGC are the decline in geoscience courses within universities; refer to this article:

[Federation University scraps one of Australia's oldest geology courses as students turn away from mining - ABC News](#)

Unlike other geoscience industry groups IAH membership is increasing.

## RECOGNITION FOR DISTINGUISHED IAH MEMBERS

In recognition of a lifetime contribution to Australian hydrogeology, IAH Australia is presenting honorary lifetime membership to retired members who have provided an outstanding contribution to our profession, to IAH Australia and promotion of IAH Australia both nationally and internationally. Our first recipients are:

- Michael Knight
- Phil Commander
- Don Woolley
- Richard Evans

Please accept our sincere thanks for your exceptional service over the years.

## PROJECT HIGHLIGHT: CITIZEN SCIENCE AND GROUNDWATER

### YABBIES TO INDICATE THE HEALTH OF A REGENERATING GROUNDWATER DEPENDENT ECOSYSTEM IN WILLAWILLA / BROWNHILL CREEK, SA

Based on a poster presented at the IAH International Congress, 2025 by **Peter Dillon et al.**

A citizen science project of SA Department of Environment and Water 2024-2026

Undertaken by Friends of Brownhill Creek, Flinders University, Adelaide University and Water Data Services

#### Project Aims

The project aims were to establish two stream gauging stations with piezometers, a meteorological station and undertake water quality sampling and yabby surveys to determine:

- Groundwater dependence flow
- Relate this with water quality and yabby abundance
- Inform riparian revegetation practices

#### Project Activities

- In 2024 constructed two gauging stations and adjacent piezometers, and a basic weather station and associated monitoring
- Run of creek periodic water quality monitoring
- Yabby surveys including school children and members of community
- The baseline monitoring has encouraged Flinders U to adopt the creek as an experimental catchment, currently for student training in field methods, and hopefully soon for hydrological and ecological research.

#### Early Results

- Flow is perennial upstream due to groundwater discharge and downstream it is ephemeral, becoming hydraulically disconnected and having higher salinity, lower dissolved oxygen and fewer yabbies.
- In autumn the creek starts flowing before rain because deciduous riparian trees (willows) stop transpiring and intercepting groundwater discharge. Flow entering remnant pools turns water red as iron oxidizes, flocculates and later settles and water becomes clear.
- Transition from deciduous to pre-European riparian vegetation may increase summer flows, but shade and roots will be needed to sustain yabby habitat.
- Yabbies strongly prefer reaches that are groundwater discharge zones.



Yabbies are measured, weighed, sexed then marked prior to release in a sequence of surveys to attempt population estimates [left]. Flinders University students stream gauging and sampling for Radon-222 [right].

## STATE/TERRITORY ROUND UPS

### ACT

A new IAH committee has been appointed and is enthusiastically looking for local support and ideas for activities. Unfortunately, the Darcy Lecture in Canberra was cancelled but the committee has assurance from Grant Ferguson that an on-line presentation will occur soon and will be broadcast nationally. More to follow...

### NSW



Photo above: Richard Green (left) and Ian Acworth (right) flank the 2025 Darcy Lecturer: Grant Ferguson

The NSW Branch delivered a strong and varied program of events throughout the year, showcasing the diversity and breadth of contemporary hydrogeology. Our monthly sessions featured speakers from across NSW, interstate, and overseas, drawing contributions from government, academia, consulting, industry, and the student community. This mix of local expertise and external perspectives ensured discussions were both practically grounded and globally informed.

Topics covered a wide spectrum, including groundwater management and regulation, major infrastructure and resource projects, climate-driven challenges, modelling and monitoring advances, and emerging approaches to hydrogeological investigation and decision-making. Highlights included our Annual Student Night and a dedicated expert panel session that provided a valuable forum for cross-sector dialogue and debate.

The program reflected the strength of the IAH community in NSW and its commitment to knowledge sharing, professional development, and connection across disciplines and career stages. We look forward to building on this momentum and continuing to engage with colleagues across Australia through future Branch and national activities.



Right photo: Richard Cresswell (left) and John Bradd (right) bookend the 2025 NSW Student Speakers (l-r: Akhilesh Kumar, Nane Maria Weber, Danyang Sun, Yaggesh Kumar)

## QLD

Highlights of the QLD IAH chapter for 2025 included our monthly events where we came together in person and online. A standout talk was the Darcy Lecture by Dr Grant Ferguson, and the end of year party was well attended.

The “Wes Award” is presented by IAH Queensland and is named in memory of Wes Burrows, a respected hydrogeologist whose colleagues held him in very high regard. The award is sponsored by Klohn Crippen Berger (KCB), where Wes worked. It was created to honour his legacy by recognising emerging talent in the groundwater community. The 2026 recipients were Natasha Scally (UQ) and Belinda Kerr (QUT).

IAH Queensland want to thank Nick Coulson for his meaningful contributions to the hydrogeology community. Nick departed Australia with this family at the end of 2025 to return to Canada and continue the next stage of his professional and personal journey. Thanks Nick!



QLD End of Year Party at Victoria Park was well attended.



Saying farewell to Nick at the End of Year Party

l-r: Claire Stephenson, Kelly-Jane Wallis, Lisa Gurieff, Nick Coulson and Lucy Reading

## SA

**New Facilities opened at Waite Campus**

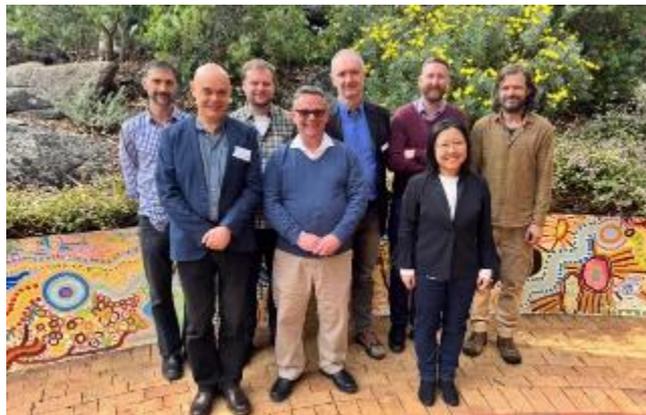
On 21 August 2025, a \$6.5 million investment in new research infrastructure that will deliver unprecedented analytical capability used in environmental and groundwater assessment and management was unveiled at Waite Campus. The new facilities include two analytical labs that will support Australia's critical water needs and help manage pollution and waste in the environment:

- The Ion Cyclotron Resonance (ICR) facility provides the gold standard for chemical analysis, capable of detecting up to tens of thousands of chemicals in a sample to manage contamination.
- The Tritium Facility via INgrowth (TRIFIN) can determine how quickly groundwater is replenished to help manage water resources and prevent communities running out of water.

Dr Dan Metcalfe, CSIRO Environment Research Director, said the technologies were the first of their kind in the Southern Hemisphere, focused on environmental research.



Dr Dan Metcalfe, CSIRO Environment Research Unit Director, speaking at the official launch of the new facilities at Waite Campus, Adelaide



CSIRO scientists celebrate official launch



Grant Ferguson Presenting Darcy Lecture 2:  
Living Fossils – Ancient Groundwaters in the Anthropocene

## TAS

The main activities held by IAH Tasmania were:

- The Darcy Lecture was held in Hobart in September and attracted around 20 attendees
- End of year function held jointly with AUSIMM
- A 1953 Southern Cross percussion drilling rig has been identified in an antique shop in New Norfolk that is for sale (\$5,500) that could be suitable for the national rock garden.



## VIC

The Victorian committee was very busy organising the IAH 2025 International Congress. Other highlights for 2025 were:

- The role of Water and Landscape in the Occupation of Qatar – a lived experience of climatic change: Dr Phil Macumber
- An Overview of Hydrogeology in Indonesia’s Mining Environment: Mr Alexis Valenza
- Assessing the impact of groundwater and salinity: Mark Hocking [IAH Vic and Hydraterra]

## WA

The Western Australian committee has been busy organising technical presentations almost monthly throughout 2025 with a variety of topics. Student night was held in November 2025 and are proposing a day event with students in combination with the ECHN. An educational day was held onsite with students with a drilling rig showing hydrogeological applications which was held jointly with the University of WA. Similar opportunities are proposed next year.



**Summary Listing of States' Events:**

State	Date	Type	Title	Presenter	Online	Location
VIC	10-Apr-25	In person presentation	The Role of Water and Landscape in the Occupation of Qatar – a lived experience of climatic change	Dr Phil Macumber	No	Senversa, Melbourne
VIC	28-Nov-25	Online – collaboration with Hydroterra	Salinity and Groundwater impact assessment – 30 years on and what have we learnt?	Mark Hocking	Yes	Melbourne
VIC	25-Nov-25	In person	An Overview of Hydrogeology in Indonesia's Mining Environment	Alexis Valenza	no	Valenza Engineering offices, Melbourne
VIC	September	In person	Darcy Lecture	Grant Ferguson	No	Melbourne Convention Centre
WA	February	AGM	AGM / Sundowner	Committee		Perth
WA	March	Talk	Evaluating the risks from nitrogen loads on mine sites	Julie Palich (Geocontam Risk Management)		Perth
WA	May	Talk	Integrating hydrogeological insights with water licencing and trading	Barkley Day (BD Water)		Perth
WA	June	Talk	Stochastic facies modelling of the Lower Burdekin Delta aquifer based on lithological interpretation from legacy boreholes	Guillaume Pirot		Perth
WA	July	Talk	Innovation in Open Pit Mine Water Management Using Inground Barriers	Ron Colman (Sovereign Hydroseal)	yes	Perth
WA	August	Talk	Summary of the IAH's 12 international symposium on MAR	Kes Murray (WGA)		Perth
WA	August	Talk	Deep Groundwater and Deep Time	Grant Ferguson (Darcy Lecture)	yes	Perth
WA	October	Site visit (ECHN)	Visit to an active hydrogeological drill site	Rockwater		Perth
WA	November	Sundowner		Sponsored by MDP		Perth
WA	November	Student night		Various		Perth
QLD	Feb-25	Tech talk	When the Test Influences the Result: Rethinking Hydraulic Conductivity Measurements	Dr Ali Shokri (AGE).	Live + online	Brisbane
QLD	Apr-25	Tech talk, AGM	Economic brines and how to apply hydrogeological principles and parameters to mineral reporting codes	Ian Unsworth (Umwelt).	Live + online	Brisbane



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State	Date	Type	Title	Presenter	Online	Location
QLD	May-25	Tech talk	Developments in Monitoring and Modelling Saline Intrusion in Coastal Aquifers	Professor Adrian Butler (Imperial College, UK)	Live	Brisbane
QLD	Jul-25	Social event	Trivia night at Hellcat Maggies	-	Live	Brisbane
QLD	Aug-25	Tech talk	Integrating remote sensing, climate data and machine learning to quantify irrigation water use at field to regional scale	Dr. Sayantan Majumdar (Desert Research Institute, USA)	Live + online	Brisbane
QLD	Sep-25	Darcy Lecture	Deep groundwater and deep time	Dr Grant Ferguson (USA)	Live + broadcast to Townsville	Brisbane
QLD	Oct-25	Social event	Student-Industry mixer night	-	Live	Brisbane
QLD	Dec-25	Social event	Christmas party	-	Live	Brisbane
SA	Feb-25	Tech Talk	The Invisible Process: Estimating Recharge to the Groundwater to inform water resources managers in a changing climate	Simone Gelsinari	No	Adelaide
SA	Apr-25	Tech Talk	From State to Commonwealth to State again – some reflections on groundwater	Peter Baker	No	Adelaide
SA	Apr-25	Tech Talk	Achieving Sustainable and Prosperous Futures for Self-Supplied Remote Communities	Simone Stewart	No	Adelaide
SA	Jul-25	Tech Talk	Novel instrumentation technologies for streambed / groundwater interaction	Eddie Banks	No	Adelaide
SA	Aug-25	Tech Talk	Linking aquifer depressurisation to mound spring wetland ecological community persistence	Jarrah Muller	No	Adelaide
SA	Sep-25	Darcy Lecture	Groundwater and the Anthropocene	Grant Ferguson	Live	Adelaide
SA	Dec-25	Social event	End of year networking function	various	No	Adelaide
NSW	Feb-25	Tech Talk	Hydrogeochemical Interactions and Dynamics of Fluoride and Arsenic Transport from Groundwater Aquifers to Streams	Elys Mwigamba (Tanzania)	Live	Sydney
NSW	Mar-25	Tech Talk	Linking climate to groundwater recharge - the view from underground	Prof Andy Baker, (UNSW)	Live	Sydney
NSW	Apr-25	Tech Talk – Presidential Address	Characterising groundwater discharge using drone imagery	Dr Richard Cresswell, (ELA)	Live	Sydney
NSW	May-25	Tech Talk	Inground groundwater barriers	Ron Colman (Sovereign Hydro)	Live	Sydney



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NSW	Jun-25	Tech Talk	Unmasking groundwater signals in an urban estuary	David Harris (Hydroview Consulting)	Live	Sydney
NSW	Jul-25	Tech Talk	Case Study 1: Analysis of tricky pump test data. Case study 2: Groundwater level monitoring beneath a surface water body	James Dommissie (GHD)	Live	Sydney
NSW	Aug-25	Panel Discussion	Hydrogeology issues in NSW	Fabienne d'Hautefeuille (DCCEEW), Graham Hawkes (ADE), Tingting Liu (WSP) and Prof Andy Baker (UNSW). Hosted by Angus McFarlane (BMT)	Live	Sydney
NSW	Sep-25	Darcy Lecture	Deep Groundwater and Deep Time	Prof Grant Ferguson (University of Saskatchewan)		Sydney
NSW	Oct-25	Student Night	1. Classifying drip water responses in karst vadose zone: Insights from Yarrangobilly, Australia	1. Danyang Sun (PhD, UNSW)	Live	Sydney
			2. Soil Moisture and Vegetation Are Key Predictors of Precipitation-driven Groundwater Recharge at Australia's National Groundwater Recharge Observing System (NGROS) Sites	2. Akhilesh Kumar (PhD, UNSW)		
			3. Integrating karstification in large-scale hydrological simulations	3. Nane Maria Weber Carpentier (PhD Dresden University of Technology/UNSW)		
			4. Evaluating pond recharge potential in the Ramganga Basin with data-driven modelling approaches	4. Yaggesh Kumar (PhD, Flinders University/UNSW)		
NSW	Nov-25	Tech Talk	The role of evidence and groundwater expertise to support decisions of the Land and Environment Court of NSW	Sarah Bish (Commissioner of Land and Environment Court)	Live	Sydney
NSW	Dec-25	Tech Talk	A Hobby that Grew Legs - the role of groundwater in carbon fluxes	Associate Prof Martin Andersen (UNSW)	Live	Sydney
NSW	Dec-25	Social event	Festive Season Dinner	various	No	Sydney

## Interview with Distinguished Hydrogeologist – Lindsay Furness: – 50 Years in Hydrogeology

Many of you will know or know of Lindsay Furness who has just celebrated a 50-year career in hydrogeology. We recently interviewed Lindsay about aspects of his career including inspirations, highlights and challenges throughout his career.



### Biography: Lindsay Furness

Lindsay graduated from Flinders University of South Australia with a BSc (Hons) in Earth Sciences in 1975 and with a Master of Applied Science (Hydrogeology-Engineering Geology) from the University of New South Wales 1976. He was previously a Member of the Association of Groundwater Scientists and Engineers, International Association of Hydrogeologists, a Fellow of the Australian Institute of Geoscientists, and a Registered Professional Geoscientist.

He undertook further training in Three-Dimensional Modelling of Contaminant Transport and Remediation Designs using MODFLOW and MT3D at the School of Mines, Colorado, 1995. Practical Karst Hydrogeology with Emphasis on Groundwater Monitoring, Protem Missouri, 1999.

After starting as a Hydrogeologist at the Western Australian Geological Survey he moved on to dewatering mines in Australia and then on to rural water supply and sanitation in developing countries. He had a strong interest in coral island hydrology and karst hydrology. He worked in 16 countries, mainly in the Pacific and South East Asia. In order to communicate, he studied seven languages and helped translate 3D-Groundwater Modelling with PMWIM into Chinese to teach groundwater modelling in Hebei, China.

His best achievements would be the Hydrogeology and Water Supply of the Kingdom of Tonga, the Hydrogeology map of Timor Leste, the Karst Water Supply of Baucau Military Camp, Timor, the Groundwater Model of Dili aquifer, Timor, the Certificate of Yanzhao Friendship from the People's Government of Hebei Province P.R. China. Also, the 1997 Awards for Excellence, Stabilisation of the Watawala Landslide Sri Lanka and the construction of additional Dolphin Ponds at Seaworld.

### Q1: What inspired you to pursue a career in hydrogeology, and what kept you passionate for five decades?

I completed my Bachelor's Degree in Earth Sciences at Flinders University in 1975 and there were no jobs in geology due to the Poseidon Nickel boom and bust so I was talked into doing Honours in Hydrogeology by Professor Holmes with a small project in the Hindmarsh Tiers, a Tertiary Basin south of Adelaide. This led to a master's degree in Hydrogeology at UNSW. I applied for a job in the Mines Department of Western Australia and my career followed from there. The one common factor that kept me passionate in the traditional field of Hydrogeology was the capacity to provide water supplies to people who had previously struggled to eke out an existence from poor or contaminated supply. This was a common achievement across 14 countries, particularly on small islands and atolls throughout the Pacific.

### Q2: How has the field of hydrogeology evolved since you first started, and what changes have surprised you the most?

The early days of Hydrogeology were marked by the exploration phase, discovering aquifers, testing and mapping, pumping tests and chemical analysis. This was followed by modelling, initially using the Prickett Lonquist model and then Modflow and finite element. The major surprises came to me in the use of Geophysics, initially in a love-hate relationship, and then in serious widespread surveys by ground surveys, and helicopter electromagnetics and magnetometer. The field of Hydrogeology started to diverge into environmental, groundwater modelling, mine dewatering and regulatory compliance, contaminated land and groundwater.



**Q3: What was the most challenging project and how did you overcome the obstacles?**

One of the most challenging projects was the construction of additional dolphin ponds at Seaworld. A tender was put out for the dredging of new ponds next to the existing ones. However, the company bidding put in an alternative methodology using dewatering and excavation instead as a dredge was too long to navigate the tight corners. The company came to us and asked if it was possible to use dewatering. I made a simple model of the coastal sand aquifer using dewatering and re-injection to maintain the water levels in the existing ponds. The model was sent to Warner Bros. in California, owners of Seaworld over the weekend and approval was returned on the Monday. If the existing water levels in the dolphin ponds fell Greenpeace would shut down the whole Seaworld operation, or if the monorail shifted by more than 1 mm. We monitored water levels day and night while the excavation took place and water levels remained within tidal range. Within the excavation dewatering spear points lowered the level and outside re-injection spears maintained water levels.

**Q4: Can you share a breakthrough moment that stands out in your career?**

A highlight in my career was the use of geophysical methods to locate karst water supplies on the island of Timor Leste. Over ten years I battled with attempts to locate hidden cave water supplies first using dye tracing to connect caves with spring discharges, then helicopter electromagnetics to map the bottom of the aquifer, then using micro-gravity to map the caves. I was eventually rewarded by two boreholes producing over 30 L/s with almost no drawdown at predicted cave locations.

**Q5: What technological advancements have had the biggest impact on groundwater science during your career?**

The computer, groundwater models, geophysical methods, test pumping, sonic drilling, data loggers.

**Q6: How have environmental and regulatory changes influenced hydrogeological practices over the years?**

I have been fortunate to work in small overseas countries where environmental and regulations have little or no impact. Perhaps the greatest requirements are in the discharge of water during pumping tests, especially when testing salty water and the minimization of noise when drilling close to villages.

**Q7: What advice would you give to young hydrogeologists entering the profession today?**

This advice comes from the Birdsville Track: "Choose your rut carefully, you may be in it for a long time." If you wish to work overseas it is not easy to get started. You can't get a job in a country you do not have experience (catch 22). So, you have to find a back door, do some volunteering, take over from a hydrogeologist completing a contract. Send your CV to engineering and overseas aid companies, get connect to the Asian Development Bank and the World Bank, WHO, UNESCO.

Try to learn some languages, but, above all, put your family first.

**Q8: Looking back, is there a project or decision you're particularly proud of?**

The publication of the document "The Hydrogeology and Water Supply of the Kingdom of Tonga" During his assignment Mr Furness travelled extensively throughout the country - to every island in the Tongan group. For many parts of Tonga his work represented the first time that such a thorough and scientific investigation of local water resources has ever been carried out. The following study by Mr Furness is his summation of these labours of three years. It is a valuable document for future water management in Tonga and testimony to his professional dedication and his commitment to the Tongan people. – H C Brown Australian High Commissioner Nuku'alofa 26 January 1993.

**Q9: What do you see as the biggest challenges and opportunities for hydrogeology in the next 20 years?**

The biggest challenges will come with climate change and micro-plastics.

**Q10: If you could go back and start your career again, is there anything you would do differently or choose a different career?**

My career chose me, not the other way round, I was happy to go along with the jobs that came along and many of my decisions were made grasping at adventures. I did not have a long-term plan for my career. I often got work on reputation and what a thrill it is to have someone call you and say, “I heard you are the expert on groundwater in this country are you available for this project”.



Lindsay assisted with water supply augmentation in China