

# 2024

## Annual Report

Leading Water Innovation  
Through Research and  
Collaboration



# Building a Stronger Future for WaterRA Through Strategic Investment and Innovation

As I reflect on this past year, I feel an immense sense of pride in what we have achieved at Water Research Australia (WaterRA). Our organisation continues to grow, adapt, and innovate, and I am honoured to be part of a team so committed to driving positive change for both the water industry and the broader community. Despite the challenges that inevitably arise, we have maintained a focus on building for the future, ensuring that WaterRA remains a leader in water research, capability development, and sustainability.

One of our key focus areas this year has been investing in the future of our business. Recognising the need to refresh and adapt our membership model to better meet the evolving needs of our members, we sought the expertise of leading associations consultancy, Strategic Membership Solutions. With their guidance, we began exploring new avenues to deliver even greater value to our members in a cost-effective way. Our goal has always been to ensure that WaterRA remains relevant, forward-thinking, and impactful, and this strategic investment in our membership model is a significant step towards that.

Simultaneously, we have made considerable efforts to deliver value services beyond research. A cornerstone of this initiative has been focusing on the growth of the Australian Water School (AWS), where we have embarked on the creation of a long-term strategy which will significantly enhance AWS' capacity to educate and train the next generation of water professionals. This focus has seen great outcomes this year and has helped support our mission to build capability across the water sector. By empowering individuals and organisations through education, we are helping to create a stronger, more resilient water industry. I am particularly proud of

how AWS has developed, not only in its reach but in the value it delivers to the sector at large.

While this planned, strategic investment in FY2023-24 resulted in a temporary deficit, it's a crucial step towards ensuring the long-term sustainability of our high-quality research and capability-building programs. We're confident that this investment will deliver significant benefits to our members and the broader water community for years to come.

I am also delighted to welcome two new members to our Board and its committees. Fiona Smith from WaterNSW brings a wealth of expertise to the Board, and we are fortunate to have her guiding our strategic decisions. In addition, Julie Mouka from Yarra Valley Water has joined as a non-board appointed member of our Human Resources Committee. Julie's experience in the water sector will be invaluable as we continue to shape and strengthen our organisational governance. Both Fiona and Julie embody the leadership and industry knowledge that are so crucial to WaterRA's future, and I look forward to their contributions as we move forward.

Throughout the year, our Board sub-committees have remained diligent in ensuring that WaterRA's governance reflects the highest standards of the sector. We strive to stay abreast of evolving trends across the broader business community, including the increased focus on environmental, social, and governance (ESG) commitments. I am proud that we have made significant progress in this area by formalising our ESG statement. This public commitment reflects our values and our role as leaders in the water industry, driving positive change for the environment, society, and governance practices.

Another important area of focus this year has been ensuring that First Nations perspectives are embedded in all aspects of our work. As part of our ongoing commitment to reconciliation, the Board has taken active steps to enhance our cultural competency, laying the groundwork for the development of WaterRA's first Reconciliation Action Plan (RAP) which will take place during FY2024-25. I want to extend a special thank you to Director Collene Castle for her guidance in this process. Her wisdom and leadership have been instrumental in ensuring that our actions are both meaningful and respectful.

As we look to the future, I am more confident than ever in WaterRA's ability to continue delivering impactful research and capacity-building programs that make a real difference to our members and the water sector. The investments we have made this year in refreshing our membership model, growing the Australian Water School, and strengthening our governance are laying a solid foundation for the years ahead. Our organisation is well-positioned to adapt to new challenges, explore emerging opportunities, and remain at the forefront of water research and innovation.

I am thankful for the dedication and hard work of our Board, staff, and members. Together, as one BIG Team, we are strengthening WaterRA and building a more resilient water industry. As we move forward, I look forward to continuing this vital work alongside all of you.



**Mark Gobbie** Chair  
Water Research Australia

# Driving Innovation and Collaboration

## A Year of Growth and Progress at WaterRA

Looking back over the past year, I am heartened to see all that Water Research Australia (WaterRA) has achieved. Despite the challenges we faced, we continued to grow, evolve, and deliver on our mission to support the water industry and the broader community. Our success is a testament to the dedication, talent, and passion of the WaterRA BIG Team, who have consistently gone above and beyond to advance our research and capability-building programs.

One of our key achievements this year has been the continued evolution of our comprehensive research program aligned with the National Urban Water Research Priorities which is now guided by WaterRA Research Roadmaps. Through this development we have made great strides in supporting the sector's journey towards net zero greenhouse gas emissions and advancing the circular economy, while also maintaining our historic focus on water quality and treatment. The projects we have led this year are not only addressing current challenges but also preparing the water sector to meet future demands, ensuring that we remain at the forefront of innovation and sustainability.

In particular, our WaterVal initiative gathered significant momentum during FY2023-24. As Australia faces increasing water demands due to population growth and the impacts of climate change, it is essential that all water supply options are explored. WaterVal has been critical in this effort, providing a platform for validating alternative water sources and ensuring they meet the highest standards of safety and quality. I'm particularly proud of our collaboration with researchers in the United States, which has enabled us to share expertise, benefit from international developments in validation techniques, and bring Australian experience to a global audience. This initiative is a prime example of how WaterRA is positioning itself as a leader not just locally but on the world stage.

Another area where we have made significant progress is in addressing emerging contaminants of concern. These contaminants, such as microplastics and pharmaceuticals, pose a growing threat to water quality, and our research and knowledge transfer activities have remained sharply focused on finding solutions. As well as leading our own research programs, we have supported our water industry members in maximising their return on investment through participation in other Commonwealth-funded centres. This collaboration has allowed us to leverage external funding while ensuring that our members benefit from cutting-edge research and the latest innovations in the field.

In 2023-24 I continued to facilitate the Wastewater-based Epidemiology Community of Practice (CoP) which began as part of our Collaboration on Sewage Surveillance of SARS-CoV-2 ('ColoSSoS') program during the COVID-19 pandemic. This important initiative is well supported by practitioners across Australia and New Zealand and increasingly beyond, and plays a key role in ensuring that knowledge and capability built during the pandemic is not lost and can be applied to emerging threats from different pathogens and anti-microbial resistance. The enduring nature of WaterRA not only enables us to provide such a key service to the water and health sectors but also demonstrates our ability to achieve our vision of being a leading source of water wisdom that enables healthy communities.

As in previous years our BIG Team contributed strongly to delivery of our initiatives, but in FY2023-24 we called on them to play a greater role in shaping WaterRA's strategic direction. We were not disappointed, and have been able to establish eminent Health Stream Editorial Advisory and Next Water Program committees, which in return provide members with new opportunities to engage in knowledge-sharing and goal-setting within the water sector. This internal collaboration has not only

enhanced our ability to deliver value to our members but also fostered a greater sense of shared purpose and responsibility among our team. Furthermore, this financial year we welcomed three new members to the BIG Team: Beca Hunter H2O, Mount Barker District Council, and Port Macquarie Hastings Council. We are excited by this growth of our research ecosystem and look forward to collaborating with them as we continue to expand and strengthen our collective expertise.

In addition to our research delivery and formal knowledge transfer activities, we have worked hard to expand the Know Your Neighbour (KYN) program, which facilitates state-based opportunities for members from industry and research to meet face-to-face and informally discuss research outcomes and opportunities. These events have been invaluable in cultivating collaboration, sharing ideas, and building relationships across the water sector. The KYN program has become a cornerstone of our member engagement strategy, and I'm delighted with the positive feedback we've received from participants. By bringing people together, we are helping to break down silos and create a more connected and collaborative industry.

FY2023-24 was yet another action-packed year for WaterRA, filled with both successes and challenges. Throughout it all, we maintained a strong focus on the wellbeing and development of our staff – our greatest asset. To ensure we were supporting our team in the best possible way, we undertook surveys and an external audit to assess our workplace culture and identify areas for improvement. I'm pleased to report that our staff team is in excellent shape and ready for the year ahead. The findings of these assessments have reinforced our belief that a healthy, motivated team is key to achieving our goals, and we are committed to ensuring that WaterRA remains a place where people feel valued, supported, and empowered to do their best work.

Looking to the future, I am confident that WaterRA is well-positioned to continue delivering innovative research and capability-building programs that will shape the water sector for years to come. Our investments in business growth, member engagement, and staff development have laid a strong foundation for the challenges and opportunities that lie ahead. We will continue to push the boundaries of water research, collaborate with our global peers, and deliver value to our members.

As always, I am deeply grateful for the support of our Board, our staff, and our members. Together, we are building a brighter future for the water industry, and I am excited for what we will achieve in the coming year.



*KL Rouse*

**Karen Rouse** CEO  
Water Research Australia



# Catalysing Value from Research

This year, our research portfolio continued its alignment with the National Research Priorities Agenda and our targeted focus areas, providing our members with a strategic platform to benefit from research synergies. This alignment allowed us to take a comprehensive view of the Australian water sector's challenges, developing practical, tailored solutions at every level.

In FY2023-24 we published 7 final reports and commenced work on 29 new projects. There are currently 76 research initiatives in progress in our research portfolio totalling \$3.98 million dollars of cash value in FY2023-24.

The impact of WaterRA's research relies on effective integration with key stakeholders in regulation, finance, innovation, and industry. In FY2023-24, we have once again delivered research that leverages the expertise of our BIG Team, offering a holistic 360-degree view from research conception to implementation and beyond.

Throughout the year we have created research programs that address the most complex challenges in the sector. We've grouped our research around central questions and linked them together, creating a comprehensive understanding of each issue and developing clear pathways to practical solutions.

While we have continued to advance fundamental research in critical areas such as water quality and cyanobacteria, we have also responded to the demand for rapid innovation in emerging fields. This year, we have expanded our research activities and partnerships in the circular economy space. A water industry hydrogen research roadmap has been produced to guide WaterRA members in understanding and identifying risks, developing sustainable solutions, overcoming roadblocks and enable decarbonisation in a way that can support industry while ensuring sustainable water management.

Roadmaps to Research workshops were also conducted with industry members to initiate '1 to 3-year' research programs tailored to the National Research Priorities Agenda areas (Service Delivery, Supply Optimisation, Circular Economy, Liveability, and Workforce). This resulted in the launch of Water Research Australia's National Priorities Research Prospectus in February 2024. The prospectus embraces the key concerns and opportunities that affect industry right across Australia. These research programs are designed to complement but not replace WaterRA's existing portfolio of research, allowing our members to see how individual research projects link together to form solutions to the national priority challenges.

We also continued to broaden our reach by partnering with like-minded associations nationally and internationally, enhancing the services we offer to our members. Our support for Cooperative Research Centres (CRCs) is a notable example of this expanded collaboration.

We have worked diligently to refine our research management processes, improving timeliness of project delivery, increasing interactions with project participants, and enhancing communication across organisations. This approach ensures that research outputs are not only accessible but also practical, relevant, and widely utilised.

As always, we are committed to delivering research that makes a tangible impact on the water sector. By working closely with our members and the broader industry, we focus on addressing the most pressing challenges and developing actionable solutions, maximising our impact through effective knowledge transfer and application.

In FY2023-24 we continued to give our members a voice in guiding some ground-breaking research initiatives.

The Research Team has expanded its remit to support the commercialisation of existing Company Intellectual Property (CIP) owned collectively by our members. Work is currently underway to increase water industry buy-in for progressing new nanoparticle technology that supports barrier testing of membranes used in purified water recycling processes. Going forward, a CIP transfer and commercialisation strategy is to be developed to ensure benefits for WaterRA members.

The influence of WaterRA on the national research agenda has been demonstrated with 32 national initiatives being pursued over the last financial year which has included support to 2 successful CRCs (OneBasin, SAAFE) plus 13 ARC projects and hubs including ITTC Transforming Biosolids. At the end of June, the team were awaiting the outcomes of 3 CRC/ARC Hub bids (Nature Positive, Climate Resilience, and Energy Storage) and 7 ARC project proposals.

In addition, a Community of Interest for 'Transforming Water Catchments', Disaster Ready Fund for Bushfire Resilience Modelling, ARENA funding for piloting of a novel wastewater treatment process, and two GWRC partnerships for Nitrous Oxide monitoring and the global expansion of our ECHIDNA project, were being pursued.

## Global Collaboration and Innovation through the Global Water Research Coalition (GWRC)

One of WaterRA's fundamental principles is to ground our research in the best available science while serving our members by staying at the forefront of global water innovation and trends. As a proud member of the Global Water Research Coalition (GWRC), we gain access to a wealth of international knowledge and collaboration opportunities that enrich both our research efforts and the services we offer to our members. The GWRC brings together leading water research organisations from around the world, including Singapore's PUB, UKWIR (UK), Veolia (France), Suez (France), TZW (Germany), WRF (USA), CWN (Canada), KWR and STOWA (Netherlands), WSAA (Australia), and WRC (South Africa).

Our membership in the GWRC has once again provided opportunities for WaterRA to actively engage with global water resource and supply challenges, giving us unique access to cutting-edge research and innovative solutions. This has allowed us to offer our members direct pathways to the latest advancements and insights, helping them navigate the complexities of the water industry and maintain their leadership in the sector.

Throughout FY2023-24 WaterRA has been an active participant in a range of GWRC initiatives, particularly through our involvement in various working groups. These groups address some of the most pressing "wicked problems" in the water industry. Our Research Managers have played pivotal roles in the Greenhouse Gas Emissions and Resilient Infrastructure working groups, and we have proudly co-chaired the Water Quality & Treatment Working Group. This group has spearheaded the launch of a PFAS webinar series, which is led by the US EPA and features international speakers discussing the latest advancements in regulation, monitoring, analysis, and treatment.

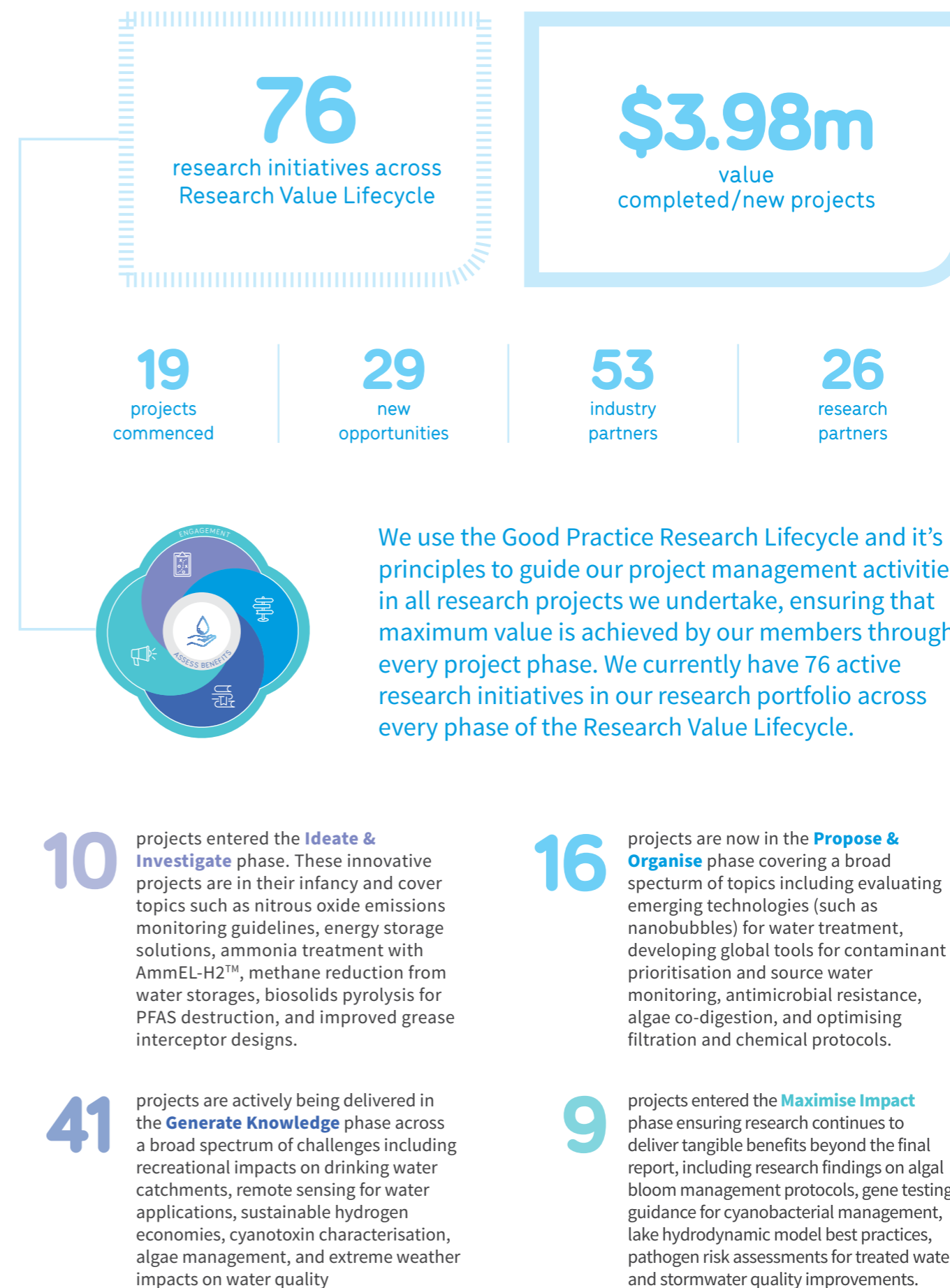
A key highlight of FY2023-24 year was co-hosting with WSAA the GWRC Board meeting in Melbourne in March. This event was a unique

opportunity to connect our members with global leaders in water research. We were thrilled with the strong turnout at our "Know Your Neighbour" (KYN) event during this time, which brought together members of the GWRC Board, the WaterRA Board, and our broader membership.

Following the GWRC Board meeting, we hosted a one-day workshop focusing on the circular economy, where international GWRC members engaged in discussions around sustainable resource management. WaterRA Research Manager, Vincent Bianchini, played an integral role in organising the event and showcasing the collaborative efforts between WaterRA, Australian universities, and students working on circular economy solutions. This workshop exemplified the depth of collaboration that defines our approach to research and knowledge sharing.

Looking ahead, we are excited to celebrate the successful funding bids for two new global research projects, supported by the GWRC. These projects, "A practical guideline to monitor and quantify nitrous oxide emissions from full-scale wastewater treatment plants" and "Developing a global risk-based tool for prioritising contaminants of emerging concern (CEC) for the water industry," represent critical advancements in addressing global water challenges. Both initiatives build on WaterRA's legacy of research in these areas and underscore our commitment to driving innovation that benefits the water sector both locally and globally.

As we continue to expand our international collaborations, we remain focused on sharing the outcomes of this work with our members, ensuring they are well-equipped to meet the evolving challenges of the water industry. Our partnerships through the GWRC position us—and our members—to thrive in a future where global collaboration is essential to solving water industry challenges.





## Building Research Programs to address National Priorities

WaterRA's National Priorities Research Prospectus, launched in FY2023-24, is a direct response to the pressing needs of our industry. Developed through extensive member consultation, it outlines a strategic research agenda focused on key areas including Service Delivery, Supply Optimisation, Circular Economy, Liveability, and Workforce.

Building on the insights from our Roadmaps to Research workshops, we've initiated targeted research programs designed to address these national priorities. These programs complement our existing research portfolio, fostering collaboration and driving innovation.

The Prospectus serves as a roadmap for WaterRA and our members to jointly tackle industry challenges. By investing in robust research, we're working towards solutions that will benefit both individual organisations and the industry as a whole. As we continue to identify emerging needs, our research programs will evolve to meet the dynamic demands of the sector.

### Service Delivery

**WaterRA has continued to address knowledge needs associated with providing cost effective and fit-for-purpose service delivery for all. WaterRA and its BIG Team aim to align with One Health goals to enhance safe and reliable water services by integrating the health of people, animals, and ecosystems. Future research will focus on leveraging emerging technologies to improve predictive tools and response capabilities for managing risks and operational challenges in water resource management.**

#### Drivers for research in this area include:

- Advances in monitoring technology and the potential for coupling with Artificial Intelligence (AI) platforms.
- The attractiveness of Internet of Things (IoT) technology to improve the efficiency of utility operations related to around monitoring and control of networks and treatment technologies.
- The need for greater predictive and timely assessment capabilities to respond to and maintain safe water supplies in the face of extreme or disruptive events.

The **Extreme Events – Prevention, Preparedness, Response and Recovery** program focuses on enhancing resilience and ensuring business continuity for water supplies during disruptive events. It involves developing risk assessment tools to strengthen water source resilience, with ongoing projects on data-driven decision-making, bushfire modelling, and water quality analysis. The program also evaluates community and regulatory acceptance of emerging contaminants testing, sets management criteria for these contaminants during extreme events, and applies localised climate models to address water security risks from changing rainfall patterns.

The **Towards a Digital Utility** program aims to improve efficiency in managing water assets through emerging technologies. It includes developing decision support tools and standards for IoT, OT, and IT, and exploring advanced analytics, AI, and Big Data for operational enhancements and early detection systems. Key activities involve remote sensing, catchment health metrics, sewer monitoring, and optimising energy efficiency in water processes using AI and machine learning. The program also looks for opportunities for further research and technological advancements.

#### Highlight Project

##### #1145 Hydrological modelling to support water quality risk assessments for burned catchments

The project was initiated to improve resilience in water supply systems following the severe 2019-20 Australian bushfire season, which highlighted significant challenges in managing contaminants like ash, sediment, and nutrients introduced into waterways. The aim was to develop a catchment modelling tool that could predict and manage these pollutants, offering a nationally consistent yet regionally customisable solution. The first stage of the project involved creating a detailed model development plan, which includes designing modules to simulate the transport of contaminants from burnt catchments and integrating these with existing water utility models. A flexible Python library for post-bushfire analysis was also proposed, along with plans for ongoing support and a budget for further development.

The development process was informed by extensive literature reviews and scoping workshops with Australian water utilities, which helped identify key management questions and requirements for the model. These workshops guided the creation of a conceptual model to address issues such as cost-effective risk reduction, the impact of future bushfires on water quality, and prioritisation of post-fire erosion control. By incorporating insights from past bushfires and collaborating with utilities and research institutions, the project aims to enhance strategic planning and ensure the reliability of water supplies in future bushfire events.





## Supply Optimisation

**As the water industry moves towards diverse supply options beyond rainfall-dependent sources, an evidence-based, research-led approach is essential for assessing fit-for-purpose solutions. WaterRA and its BIG Team aim to enhance supply security by validating and advancing innovative treatment options for emerging contaminants.**

### Drivers for research in this area include:

- The need for safe, sustainable, and affordable fit-for-purpose use of different water sources and supplies.
- New developments in the water industry's social licence to operate diverse water treatment and delivery options.
- Increasing public pressure and expectation for the water industry to maintain effective control and response to addressing contaminants of potential, known and emerging concern.

The research programs focus on advancing water treatment and management through innovative approaches. The "Treatment Technologies and Approaches" program explores cutting-edge methods like nanobubble technology and low-environmental-impact chemical generation to enhance water and wastewater treatment, while also improving validation processes and sustainable advanced oxidation techniques.

The **"Algal Innovation: Proactive Management of Cyanobacteria and Algal Blooms"** program aims to tackle cyanobacterial issues by updating guidelines on cyanotoxins, predicting algal blooms under changing climates, and developing cost-effective treatment technologies, including advanced methods for controlling algal taste and odour.

The **"Chemicals of Emerged and Emerging Concern (CECs)"** program focuses on managing contaminants with enhanced tools like ECHIDNA for risk prioritisation, studying PFAS impacts, and employing effects-based monitoring and non-target analysis for water safety.

The **"Disinfection: Effective Treatment Outcomes, Including Management of DBPs"** program seeks to improve disinfection practices by managing disinfection by-products (DBPs), exploring waste-reducing treatment methods, and addressing distribution system impacts on water quality and pathogen control.

Lastly, the **"Alternative Water Sources – Fit-for-Purpose Solutions Across the Water Portfolio"** program supports safe water delivery through improved monitoring of recycled water, overcoming challenges in stormwater reuse, evaluating decentralisation models, and managing waste streams like brine with potential beneficial uses. Future research in all areas will be explored through targeted workshops.

### Highlight Project

#### #1163 AquaWatch end-users community of practice

WaterRA has formalised a strategic partnership with CSIRO to develop, manage and lead a community of practice for AquaWatch end users. CSIRO's AquaWatch mission is a system intended to deliver near real-time data for monitoring and managing the quality of water systems throughout Australia and the world. This system links a broad network of in-situ sensors, Earth Observation sensors and advanced data analytics. As well as monitoring the health of inland rivers, dams and waterways, AquaWatch has potential application in monitoring coastal wetlands, aquaculture farms, riparian vegetation and terrestrial biodiversity, mine sites, mangroves and coral reef environments.

WaterRA will develop a community of practice (CoP) for end users of AquaWatch's products and services with an objective to foster collaboration, information sharing, and engagement between AquaWatch and its end users. Among the end users are water quality scientists and researchers, industrial water users, traditional owners, catchment and resource managers, water utilities, regulators and government departments.

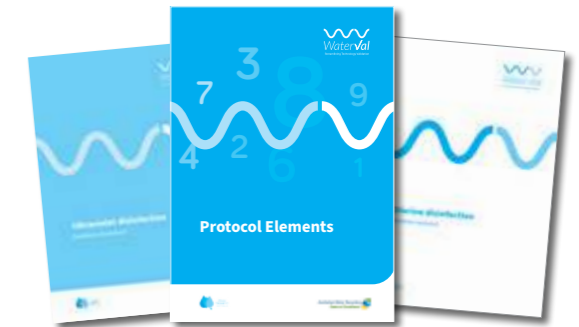
The CoP will be an ongoing avenue to build end users' capacity to use the outputs from AquaWatch and will support end users to be involved in system development, data access, science activities and system validation. To ensure the utility and uptake of AquaWatch's products and services, the CoP will also provide a platform for end-user feedback to AquaWatch. WaterRA will deliver ongoing activities to bring AquaWatch and the CoP together, and facilitate the cross interactions required to deliver value from this partnership, which is crucial for the success of AquaWatch.

### Highlight Project

#### WaterVal expands global reach

WaterRA, as the custodian of the WaterVal historic resources and validation protocols, plays a vital role in ensuring the effective removal of contaminants from Australia's water sources. WaterVal, a nationally developed framework, has been at the forefront of streamlining the validation process for water treatment processes, driving collaboration between researchers, utilities, regulatory bodies, and the private sector.

WaterVal's recent partnership with CalVal, a California-based water industry project, marks a significant step towards international expansion. By learning from CalVal's rapidly expanding water reuse program, WaterVal can further refine its validation protocols and resources. The collaboration has already yielded tangible results, with five CalVal representatives attending Ozwater and presenting at WaterVal workshops. This exchange has paved the way for WaterVal's participation in the upcoming WaterReuse California Conference, where WaterRA will share its WaterVal expertise and knowledge.





## Circular Economy

Following on from last year’s successful development of our Circular Economy Framework and through further exploration in Roadmaps to Research workshops undertaken early in 2024, we have continued to evolve our comprehensive research program on this critical area of research. Guided by the centralised framework, our program prioritises areas within the circular economy of critical importance to our members.

### Drivers for research in this area include:

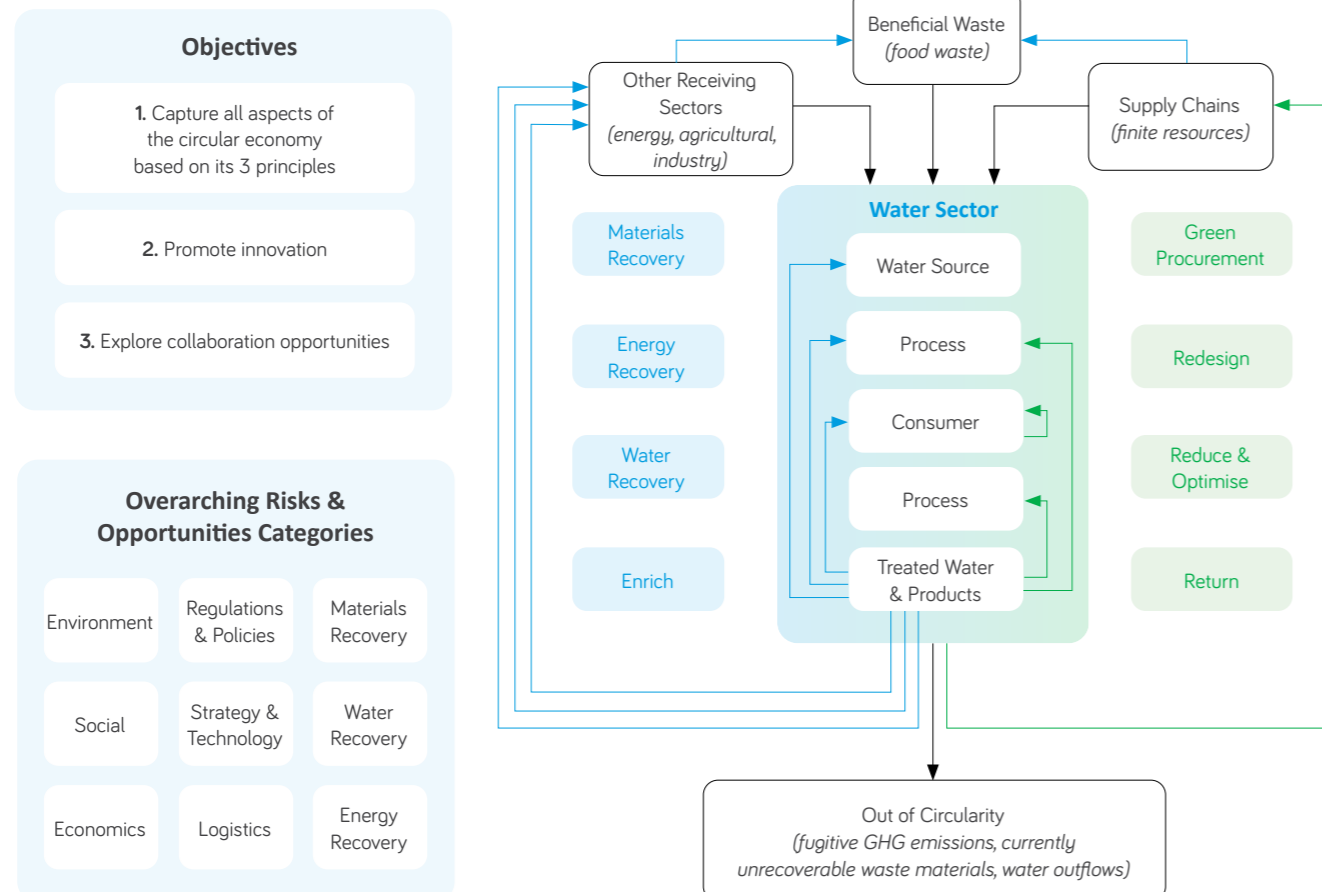
- A need for a strategic plan of action supported by a regulatory environment that eliminates waste and pollution.
- A need to overcome logistical challenges around supply chain and resource dependencies to enable local water and energy security.
- Building resilience through resource recovery to reduce costs, improve economic efficiencies and enable greater circulation of valuable products and materials.
- Supporting the healthy regeneration of ecosystems to meet changing societal expectations around liveability and licence to operate.

Throughout the year many of the opportunities identified in this focus area were initiated and are now well underway:

**Path to Net-Zero:** WaterRA is actively working with industry partners globally to develop a recognised and implementable methodology for monitoring and quantifying nitrous oxide emissions from wastewater treatment plants through partnership with the Global Water Research Coalition. On the water supply side, we are working with Australian water utilities to explore mitigation strategies for methane emissions from water supply storages. Additionally, we are supporting national research initiatives of others in this domain.

**Hydrogen:** Through workshops and panel discussions, we have gained valuable insights into the water industry’s perspective on the impact and opportunities of the emerging hydrogen industry on our sector and identified key priorities for future research. A hydrogen roadmap is currently in preparation to support industry decision making.

**Resource Recovery:** WaterRA has collaborated with technology providers to explore research opportunities to support the implementation of innovative methods for ammonia removal from wastewater and PFAS destruction from biosolids including the use of pyrolysis and the tracking of fluorine.



## Liveability

The water industry is crucial to the productivity and liveability of cities and regions by providing essential water, wastewater, and drainage services that enhance sustainability and quality of life. Despite the progress made, ongoing research is needed to further improve liveability outcomes and address challenges in enhancing natural systems, disaster management, and public health.

### Drivers for research in this area include:

- Providing water and land for green infrastructure including green parks, open spaces and corridors to support active, healthy lifestyles.
- Supporting blue infrastructure including clean healthy beaches and waterways with community and ecosystem benefits.
- Supporting cool, healthy environments by using water and greening to reduce heat in the urban landscape and improving air quality.

The “**Supporting the Liveable Communities Value Proposition**” research program aims to enhance liveability strategies with well-researched tools and approaches. Key activities will include developing a nationally accepted method for valuing the co-benefits of liveability initiatives, such as land management that reduces greenhouse gas emissions. Ongoing projects focus on the impacts of wetland sediment, recreational activities, and riparian buffer zones on public health and environmental outcomes. The program also aims to explore nutrient offsets and their regulatory acceptance, the role of cool parks in future water needs and their benefits, and the effects of making reservoirs accessible to the public on drinking water treatment. Future research opportunities will be explored through workshops to address these areas comprehensively.





**Workforce**

**As new generations enter the industry there is an increasing need for a multi-faceted approach to build and maintain a vibrant workforce, emphasising the importance of research into worker development, diversity, and safety.**

**Drivers for research in this area include:**

- Emerging skill gaps in the drive for digital and highly knowledgeable water supply operational experts.
- Loss of institutional knowledge in a transitional workforce.
- Regulatory pressure to ensure that incidents affecting work health and safety or water quality due to operator error are avoided.

- The need for an agile, highly trained and diverse workforce to embrace innovative thinking.
- The opportunity to retain staff in a highly competitive market by providing growth and development opportunities and positive experiences.

The **“Enabling the Future Workforce to Succeed”** research program aims to foster a vibrant and safe workforce in the water industry through personnel and technology-focused research.



**Highlight Project**

**#1139 - Technical Competency Benchmark for Water Industry Operators**

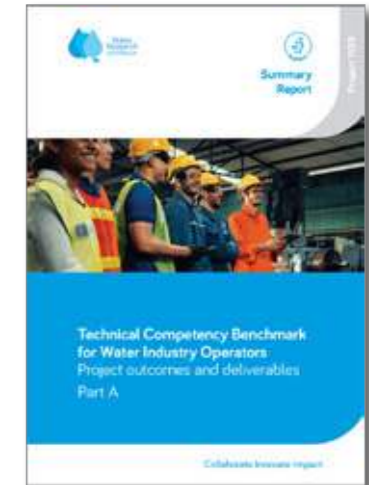
This groundbreaking collaboration involved 23 project partners from various sectors of the water industry across seven states and territories to produce essential tools aimed at enhancing the competency of water industry operators. The project developed a suite of products, including an Auditing Tool and Benchmarking Report, along with a comprehensive Summary Report. The release of these products is a significant milestone in enabling standardised training and competency within the water industry, addressing the critical need for a structured approach to operator training and competency.

The initiative, built upon the findings of the Value of Operator Competency Project (2019), was aimed at frontline water industry operators. Through extensive industry engagement and collaboration the project has delivered a recognised industry Technical Competency Benchmark and auditing tool that can support a more create a more uniform approach to training and competency across the water industry.

Part B, planned for release later in FY2024-25, will explore the crucial aspect of learning from experienced operators. It will identify common themes in water safety incidents, attributing them to factors such as complacency, naivete, and ignorance, all of which stem from a failure in the decision-making process. However, literature on the decision-making processes of water industry operators is scarce, emphasising the imperative to enhance our understanding of the workplace experiences necessary

for cultivating effective decision-making abilities. This investigation aims to engage frontline operators to gain insights into their experiences, particularly focusing on instances where the right decisions were made at the right time, as well as those where hindsight reveals opportunities for better choices. By openly sharing experiences, this endeavour seeks to gather further evidence to inform industry regulators and utilities about the minimum competency standards for frontline operators and underscore the significance of continual professional development in creating a culture of safety and efficacy within the water operations sector.

All project resources are available to both WaterRA members and non-members, aiming to bridge the gap between industry and regulators and ensure the industry is well-equipped to meet evolving challenges and deliver essential services to communities nationwide.





## Published Reports



#1138

### Protocols for algal bloom management - technology performance & optimisation assessments

This collaborative project with University of Melbourne and Monash University provided the water industry with a clear and consistent approach to assess the efficacy and performance of the many technologies for managing algal blooms in waterbodies. Protocols were applied and tested by participating utilities and were the first instance of using the newly established WaterVal principles to develop a technology performance and optimisation assessment protocol.



#1139

### Technical Competency Benchmark for Water Industry Operators

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#1141

### Guidance for integration of gene testing in cyanobacterial management

This collaboration with Walter and Eliza Hall Institute of Medical Research (WEHI), Monash University and University of Newcastle provided a scientifically robust and economically viable approach to support managing cyanobacterial blooms. It highlighted the potential of molecular methods, particularly quantitative PCR (qPCR) methods, which can detect and quantify cyanotoxin biosynthesis genes more efficiently and accurately and offers several advantages, including cost-effectiveness, rapid turnaround times, and enhanced ability to forecast bloom toxicity.

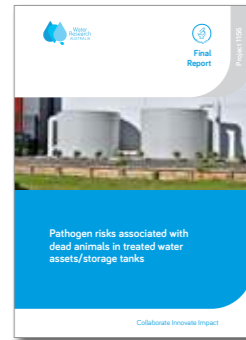


#1143

### Best practice guidance for lake modelling to support quantitative microbial risk assessment (QMRA)

This project developed best practice guidelines for using lake hydrodynamic models to support Quantitative Microbial Risk Assessment (QMRA) in unprotected water sources. In collaboration with partners including the Australian Rivers Institute, Griffith University, Melbourne Water, WaterNSW, Hunter Water, Seqwater, and The University of Queensland, the project balanced theoretical and practical pathogen modelling. A case study with Hunter Water showcased building a 3D lake model to simulate pathogen concentrations in Lake Chichester and effectively transferring findings for practical use. Continuous review will be needed as technology and data evolve.

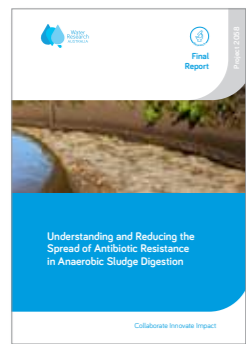




#1156

**Pathogen risk associated with dead animals in treated water assets/storage tanks**

This project was completed by Murdoch University driven by the need for water utilities and regulators to have up-to-date and peer-reviewed information on the pathogen risks associated with different animals being found in treated water assets or storage tanks. By identifying gaps in current knowledge and emphasising the importance of ongoing research, this project offers a roadmap for enhancing water safety protocols and prompts reflection on the broader implications of animal reservoirs and transmission pathways, shaping future strategies for mitigating risks to public health.



#2058

**Understanding and reducing the spread of antibiotic resistance in anaerobic sludge digestion**

This project completed by University of Technology Sydney used lab-scale experiments to test the impact of different anaerobic conditions on Antibiotic Resistance Genes (ARG) and Antibiotic Resistant Bacteria (ARB). Findings included temperature-phased anaerobic digestion (TPAD) and free ammonia (FA) pretreatment significantly reduced ARG levels. TPAD alone reduced ARGs by over 92%, while the combination with FA pretreatment enhanced ARG removal by an additional 15%.

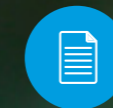


#3048

**Update to stormwater quality knowledge for AGWR**

This project led by University of NSW collated previously unpublished datasets from Australia's water utilities and academic institutions about the types and amounts of pollution in stormwater from different sources. This resulted in a comprehensive review of information on stormwater pathogens, heavy metals and organic chemicals, treatment systems and risk assessment methodologies that can be applied to recycle and reuse different types of stormwaters, along with recommendations on updating the existing Australian Guidelines for Water Recycling.

**Published Factsheets**



**PRFacts 1: Pathogen Risk associated with dead animals in treated water assets/storage tanks**

**PRFacts 2: *Cryptosporidium* and *Giardia* in bats**

**PRFacts 3: *Cryptosporidium* and *Giardia* in birds**

**PRFacts 4: *Cryptosporidium* and *Giardia* in cats and dogs**

**PRFacts 5: *Cryptosporidium* and *Giardia* in frogs and reptiles**

**PRFacts 6: *Cryptosporidium* and *Giardia* in marsupials**

**PRFacts 7: *Cryptosporidium* and *Giardia* in rabbits**

**PRFacts 8: *Cryptosporidium* and *Giardia* in rodents**

Project 1156



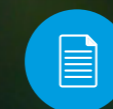
**Investigating the riverine antibiotic resistome from minimally impacted, through agricultural and urban aquatic systems**

Project 3043



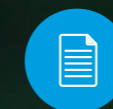
**Microplastics in drinking and recycled water**

Project 1128



**Antimicrobial resistance  
What role do our rivers play?**

Project 3043



**Best practice guidelines for lake modelling to support quantitative microbial risk assessment (QMRA)**

Project 1143

# Celebrating Over 25 Years of Water Quality Insights: Health Stream and the Future of Water-Related Public Health Knowledge

For more than 25 years, Water Research Australia's Health Stream publication has been an essential resource for professionals dedicated to water quality and public health. Published three times a year, Health Stream delivers critical insights into water-related health incidents, cutting-edge research, and significant developments in water quality management. Under the leadership of editor Dr Daniel Deere (Water Futures) and supported by industry experts such as Professor Nicholas Ashbolt (UniSA), the publication continues to empower its readers by ensuring they remain informed on both local and global developments.

Since its inception in 1996, Health Stream has maintained its position as the premier source of knowledge in the field. Initially launched under the Co-operative Research Centre for Water Quality and Treatment (CRCWQT) and later supported by Water Quality Research Australia (WQRA) from 2008 to 2013, the publication's legacy is rich in history and relevance. Recognising its importance to the water industry, WaterRA has committed to its continued production, ensuring that Health Stream remains a cornerstone for professionals seeking to stay up-to-date on the latest water quality research and public health information.

## Highlights from This Year's Editions

The 2023-24 financial year has been marked by three highly informative Health Stream issues, each tackling significant topics of interest:

- **Issue 111:** Jim Graham, Chief Advisor of Water Science at New Zealand's water services regulator, shared insights into how authorities handled a *Cryptosporidium* outbreak in one of New Zealand's prime tourist destinations. His detailed analysis offers valuable lessons in outbreak response and risk management.

- **Issue 110:** North East Water recounted its experiences managing water quality during and after the 2020 bushfires in Australia, illustrating the challenges posed by natural disasters and the critical role of preparedness.
- **Issue 109:** An in-depth examination of gaps in the provision of water and sanitation services to some communities in high-income countries highlighted persistent inequalities that continue to exist, even in the most developed nations.

The topics tackled in Health Stream underscore the global nature of water quality challenges and the ongoing need for knowledge sharing within the industry.

## The Health Stream Editorial Advisory Committee: Strengthening the Future of the Publication

In 2024, WaterRA took a significant step to enhance the quality and scope of Health Stream by establishing the Health Stream Editorial Advisory Committee (HSEAC), which first met in March 2024. This newly formed body is tasked with providing expert guidance and oversight to ensure the publication remains at the forefront of the industry. The committee works closely with the Health Stream editor to curate high-quality editorial content, maintain scientific rigor, and support the long-term success of the publication.



The HSEAC plays a critical role in managing the Health Stream editorial process, overseeing the planning of significant features and themes for each edition, and engaging with potential contributors. Its responsibilities include:

- Shaping editorial content, ensuring each edition focuses on relevant and emerging issues in water quality and public health.
- Actively seeking contributions from Australian and international researchers, ensuring a diversity of voices—from early-career professionals to established experts.
- Maintaining scientific quality by providing subject matter expertise and reviewing articles, ensuring the most accurate, relevant, and impactful content.

## Looking Ahead

The establishment of the HSEAC ensures that Health Stream continues to thrive in a rapidly evolving water industry. By focusing on collaboration between researchers, industry professionals, and health experts, the publication will remain a vital resource for those dedicated to safeguarding water quality and public health.

As a trusted source of knowledge for over two decades, Health Stream will benefit from the diverse expertise of its advisory committee. The HSEAC's involvement will help attract high-quality content, ensure scientific accuracy, and broaden the publication's reach, both locally and internationally. The committee's efforts will also support WaterRA's broader mission of advancing water quality research, public health, and sustainability initiatives through knowledge sharing and innovation.

WaterRA is proud of Health Stream's legacy and its ongoing role in supporting the water industry's future leaders. With over 100 editions published since 1996, Health Stream continues to provide invaluable insights for professionals across the sector, making it a trusted tool for navigating the complexities of water quality and health management.

As we look ahead, the future of Health Stream is brighter than ever, thanks to the dedication of its editorial team, the invaluable contributions of its authors, and the guidance of the new Health Stream Editorial Advisory Committee. Together, we are ensuring that this vital resource continues to support the global water industry.

## HSEAC Committee Members

**Prof Nicholas Ashbolt** (Chair) | University of South Australia

**Dr Daniel Deere** (Editor) | Water Futures

**Marilyn Braine** | University of New South Wales

**Dr David Cunliffe** | SA Health

**Jacqueline Frizenschaf** | Water Research Australia

**Prof Karen Gibb** | Charles Darwin University

**Dr Alex Keegan** | SA Water

**Prof Stuart Khan** | University of Sydney

**Rachael Miller** | Water Corporation

**David Sheehan** | Coliban Water

**Dr Melita Stevens** | Melbourne Water





# Empowering Future Leaders and Advancing Innovation through the Research Leadership Program

WaterRA's Research Leadership Program continues to nurture the next generation of water sector innovators, providing students with valuable mentorship, networking, and research opportunities. This year, the program supported numerous emerging leaders, driving cutting-edge research and strengthening the industry's future capabilities.



The Research Leadership Program (RLP) is a cornerstone of our commitment to fostering the next generation of water research leaders. The RLP has continued to provide tailored support, mentoring, and professional development opportunities, to empower water professionals at all stages of their careers to excel in their research endeavours.

With a proven track record of success, the RLP has consistently delivered exceptional outcomes and this year has been no different.

Two key programs within the RLP—the Student Program and Mentoring Program—have continued to grow and expand offering individuals from undergraduate students to seasoned professionals, the opportunity to have their curiosity nurtured, enhance their research skills, and build the capacity of the water sector in a supportive environment.

Our Student Program continued its historical success in integrating students into water industry organisations, providing guidance of leading experts as they complete their research degree. This year alone the Student Program numbers swelled to 60 supported students and saw 13 students complete with over 95% of our graduates retained within the water sector.

Our partnership with 14 universities and 12 water industry sponsors, demonstrated our members' deep commitment to developing the future capability and capacity of the industry. Our continued support of the ARC Training Centre for Transformation of Australia's Biosolids Resource (ITTC Biosolids Hub) program also allowed the program to achieve its mission of delivering cost-effective, high-calibre research which improves operational practice and water industry guidelines, responds to emerging issues, develops new technologies and provides environmentally sustainable solutions for treated waste streams.

## RLP Student Orientation Day and Opportunities in Melbourne

WaterRA hosted a highly successful Student Orientation Day in Melbourne, on 19 and 20 March 2024. Over the course of two half-days, new students had the chance to network, learn, and engage with their peers, gaining valuable insights into the water industry and research landscape.

The event featured a keynote presentation by David Bergmann from South East Water, who provided a thought-provoking discussion on the intersection between industry and research. His use of AI Chat to generate slides underscored the importance of adapting to new tools, even when outcomes may differ from expectations, and focusing on leveraging strengths. Dr Minh Duc Nguyen, a WaterRA graduate and current professional at Isle Utilities, shared his personal journey through the WaterRA Research Leadership Program, highlighting the significant benefits of participating in the program and the impact it has had on his career.

A key component of the orientation involved student presentations on their individual research projects, fostering a collaborative environment where students learned the importance of networking beyond their specific research areas. This underscored the transferability of skills across disciplines and the value of connecting with professionals throughout the industry.

In breakout sessions, students participated in discussions on future challenges facing the water sector, addressing barriers and key challenges in their respective research projects. These sessions encouraged critical thinking and collaborative problem-solving, enhancing their understanding of the sector's broader needs.

WaterRA's General Manager Research Services Jacqueline Fritzenschaf delivered an engaging presentation on the value of research, offering practical advice on how students can articulate the impact of their research when seeking funding or industry support. Her insights resonated with the students, reinforcing the importance of recognising and communicating the real-world applications of their work.

The event also welcomed supervisors, industry members, and student mentors, facilitating broader connections between academia and the water industry. On the evening of the first day, students had the opportunity to further expand their professional networks by attending the Melbourne Know Your Neighbour (KYN) event, connecting with WaterRA members and industry experts.

Overall, the Student Orientation Day provided an excellent platform for emerging researchers to build connections, gain industry insights, and refine their understanding of the water sector's key challenges.







### Celebrating Excellence: WaterRA’s 2024 Memorial Awards

In March 2024, WaterRA honoured exceptional talent at the Melbourne Know Your Neighbour (KYN) event with the presentation of its two annual prestigious memorial awards. These accolades celebrate outstanding contributions to the water industry and continue to uphold the legacy of influential figures in the field.

The 2024 Nancy Millis Memorial Award, named in honour of Emeritus Professor Nancy Millis AC ME for her profound impact on the water sector, was awarded to Ortal Raikhlin of Monash University. Ortal’s PhD research, titled “Scalable and Environmentally Sensitive Technologies for Managing Algal Blooms in Water Bodies and Their Associated Infrastructure,” represents a significant advancement in sustainable water management. The award panel recognised Ortal for her exemplary academic performance, superior communication skills, and her innovative approach to integrating industry collaboration. Her work is noted for its potential to influence multiple aspects of the water industry, particularly in advancing scalable and environmentally conscious solutions.

The 2024 Michael R. Moore Memorial Award, established to honour Professor Michael R. Moore’s notable contributions to the Australian water industry, was presented to Stephanie Faulks from Griffith University. Stephanie’s Honours project, “The Occurrence and Persistence of Antimicrobial Resistance Through an Advanced Water Treatment Process and Supply Network,” was lauded for its critical examination of antimicrobial resistance in water treatment systems. The award panel commended Stephanie for her insightful research and leadership, recognising the importance of her findings in understanding and mitigating public health risks associated with water quality.

These awards underscore WaterRA’s commitment to nurturing a culture of research excellence and celebrating the impactful contributions of emerging researchers.

### Successes of the ARC ITTC Biosolids Training Hub

In its fourth year, the ARC ITTC Biosolids Training Hub has made significant strides in advancing the water industry’s future by integrating 31 students into the Research Leadership Program (RLP). This initiative, aimed at preparing the next generation of water professionals, has already seen six students complete the program, with many others actively engaged in industry placements and working towards their research submissions.

The RLP is instrumental in shaping a future-ready workforce by hosting over 30 students from the ARC Training Centre for the Transformation of Australia’s Biosolids Resources. Given the pivotal role that sludges, biosolids, biochar, and greenhouse gas emissions play across the water cycle—from initial sources to end products—it is essential for emerging professionals to gain a comprehensive understanding of these components and their impact on the industry.

The program equips participants with vital skills, including pitching their research, networking within the water sector, and presenting at national and international conferences. Students also benefit from developing business cases and engaging with experienced mentors. WaterRA’s commitment to this program not only enhances the students’ confidence but also creates valuable employment pathways within the water industry and related fields.

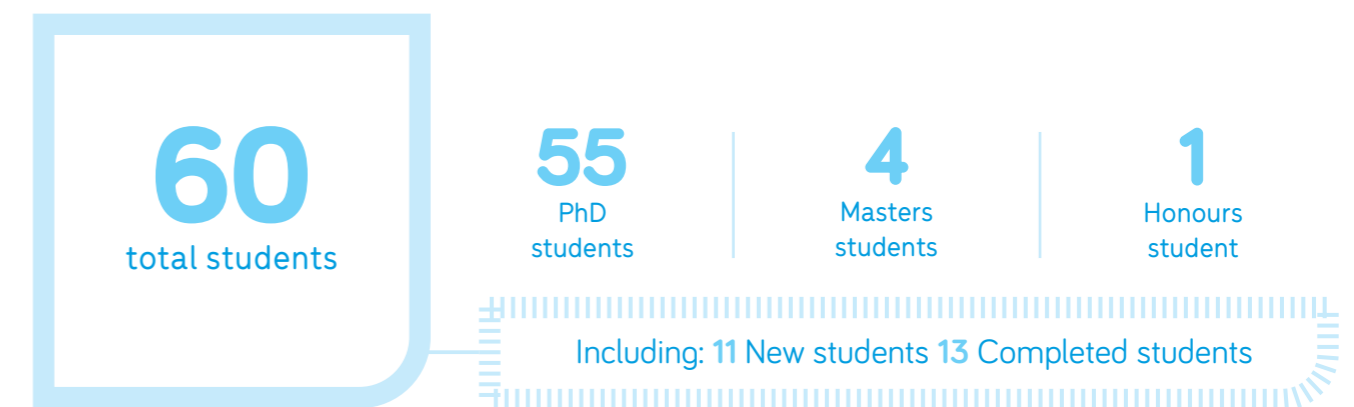
To date, six students have successfully completed the program from the Hub, demonstrating its effectiveness in fostering professional growth and readiness for the workforce. As the program continues, we remain dedicated to supporting these future leaders and ensuring their contributions will advance both our industry and their personal careers.



2024 Michael R. Moore Memorial Award award winner Stephanie Faulks of Griffith University, with Water Research Australia’s Research Capability Manager, Carolyn Bellamy.



2024 Nancy Millis Memorial Award award winner Ortal Raikhlin of Monash University, with Water Research Australia’s CEO, Karen Rouse and Chair, Mark Gobbie.





## Mentoring Program

WaterRA's Research Leadership Program includes a structured Mentoring Program that serves as a crucial element in developing the next generation of research leaders within the water industry. At its core, mentoring traditionally involves a senior, experienced employee offering guidance to a junior or less-experienced colleague. This relationship focuses on accelerating the mentee's professional growth and career development, empowering them with the skills and confidence needed to navigate their career path effectively.

Key discussions between mentor and mentee typically revolve around the organisation's objectives, industry trends, and workplace culture, providing a clear understanding of the bigger picture. By sharing their insights and experiences, mentors help mentees align their personal career aspirations with organisational goals. This often involves conversations about career progression, professional development opportunities, and strategies for maintaining a healthy work-life balance, which are essential for long-term career success and personal well-being.

Through this one-on-one mentorship, mentees gain access to a wealth of knowledge and real-world experience that might otherwise take years to accumulate. One of the most significant benefits of the program is the opportunity to set clear professional goals. Mentors work closely with mentees to define these goals, create actionable plans, and hold them accountable throughout their journey. This results in accelerated professional development and helps the mentee become a more effective and confident leader within their organisation.

Beyond goal-setting, the mentoring program is also designed to expand the mentee's professional network. Mentors often introduce their mentees to key industry contacts, fostering connections that can open doors to new opportunities and collaborations. This enhanced network is invaluable for career advancement, as it provides mentees with access to a wider pool of knowledge, resources, and potential career opportunities.

Another crucial aspect of the program is the emphasis on leadership development. By offering tailored guidance and advice, mentors play a significant role in shaping the leadership potential of their mentees. They provide insights into leadership styles, decision-making, and management strategies, which can be critical as mentees take on more advanced roles within their organisations. The program's focus on rapid leadership development ensures that mentees are well-prepared to step into higher-responsibility positions, supporting their organisations and the broader water sector in addressing emerging challenges.

The program's success lies in its ability to create lasting, impactful relationships that benefit both the mentor and the mentee. Mentors have the opportunity to share their knowledge, leaving a legacy within the organisation and contributing to the sector's future leadership. Meanwhile, mentees gain the confidence and skills to take on new challenges and advance their careers.



**66**  
mentoring pairs

**49**  
student + industry pairings

**16**  
mid-career + senior leader pairings

**1**  
reverse mentor pairing



## 2024 Completed Student



**Nimesha Rathnayake** PhD  
**ITTC | RMIT University**  
 4960 | Investigating the feasibility of pyrolysis/co-pyrolysis of the Victorian biosolids and alum sludge

**Alka Batra** PhD  
**ITTC | RMIT University**  
 4958 | Development of point-of-care detection assay for waterborne pathogens

**Edward Tsyrlin** PhD  
**Melbourne Water University of Melbourne**  
 4521 | Development and evaluation of molecular techniques for monitoring aquatic macroinvertebrates in freshwater systems

**Charles Dike** PhD  
**ITTC | RMIT University**  
 4964 | Application of biosolids-derived biochar for the bioremediation of hydrocarbon-contaminated urban soil

**Jin Zhu** PhD  
**Sydney Water | WaterNSW University of NSW**  
 4546 | Ecophysiology of T & O producing organisms and the mitigation of T & O in drinking water

**Sarah Aucote** PhD  
**SA Water | Hunter Water Melbourne Water University of Queensland**  
 4542 | Operational improvements to mitigate methane emissions from sludge drying lagoons

**Rafael de Medeiros Paulino** PhD  
**Melbourne Water University of NSW**  
 4544 | Assessing GAC capacity for algal T & O removal: Development of a predictive tool

**Ibrahim Hakeem** PhD  
**ITTC | RMIT University**  
 4963 | Biosolids to biochar and platform chemicals

**Caitlin Romanis** PhD  
**Melbourne Water University of Newcastle**  
 4526 | Microcystis blooms - insights from genomics and metagenomics

**Praveen Kuppan** PhD  
**ARC Linkage Biosolids University of Newcastle**  
 4973 | Phycoremediation of Winery wastewater enhancing circular economy and ARC Linkage Biosolids project

**Kala Senathirajah** PhD  
**Water Corporation University of Newcastle**  
 4543 | Investigate & develop options for management of microplastics in water supply cycle

**Jake Elliott** PhD  
**ITTC | RMIT University**  
 4956 | Recovery of bio-energy and resources from organic waste streams in established trade waste customers

**Tien Ngo** PhD  
**ITTC | RMIT University**  
 4957 | Improving methane production of chicken manure via the use of biochar addition

## Student Awards and Whitepapers

**WaterRA's 2024 Nancy Millis Memorial Award**  
**Ortal Raikhlin** of Monash University | Melbourne Water

**WaterRA's 2024 Michael R. Moore Memorial Award**  
**Stephanie Faulks** of Griffith University | Seqwater

**Kala Senathirajah (University of Newcastle & Water Corporation)** won Professional Engineer of the Year at the 2023 Western Australia 'Engineers Australia Excellence' awards

**Ibrahim Hakeem (RMIT & ARC ITTC Transforming Biosolids Training Centre)** won the 2023 Victorian AWA Student Water Prize

**Neda Gorjian Jolfaei (University of Adelaide & SA Water)** won Best Conference Paper at the 7th International Conference on System Reliability and Safety held in Bologna, Italy on 22-24 November 2023, with her paper 'An intelligent dynamic fault diagnostic model for rotating machineries'.



**George Mercer (University of WA & ARC ITTC Biosolids Training Hub)** won:

- Best Paper Presentation: Third Annual Symposium for the ARC Transforming Biosolids Training Centre, 2023
- AW Howard Study Award: AW Howard Memorial Trust, 2024
- International SOM2024 Travel Grant: 9th International Symposium on Soil Organic Matter, 2024
- Best Oral Presentation: 9th International Symposium on Soil Organic Matter, 2024

**Vincent Bianchini** authored the paper titled "Advancements in Cyanobacterial Research." The report was a collaborative effort with Karen Rouse, Dr Nicholas Crosbie, and Dr Arash Zamyadi as co-authors.

## Industry Sponsors





## A Decade of Impact and Growth

This year marks a significant milestone for the Australian Water School (AWS) as it celebrates its 10-year anniversary. Over the past decade, AWS has been at the forefront of delivering world-class professional development and training solutions tailored to the global water sector. Under WaterRA’s direction for the past 4 years, AWS has continued to develop, mature and expand its expertise. This anniversary is a testament to AWS’ remarkable journey of growth, collaboration, and innovation, shaping the future of water management worldwide.

Since its inception, AWS has empowered tens of thousands of learners across the globe through a diverse range of educational offerings, from free webinars to specialised courses. Its commitment to high-quality, industry-designed training has enabled professionals—from engineers and planners to hydrologists and modellers—to make a tangible impact on global water management.

Over the years, AWS has forged strong partnerships with leading industry experts, academic institutions, research organisations, and government bodies. These collaborations have been pivotal in aligning training programs with real-world demands, ensuring relevant and impactful content. Focusing on innovation has further cemented AWS’ legacy, allowing adaptability to emerging technologies, environmental challenges, and evolving regulatory frameworks.

FY2023-24 marked a significant milestone for AWS, as it celebrated its 10th anniversary and continued to expand its reach and influence in the water education landscape. Building on a decade of success, AWS has



made substantial strides in enhancing educational offerings, strengthening digital presence, and forging strategic partnerships.

To meet increasing demand for training, AWS delivered 12 live online courses, attracting over 400 registrations including 15 WaterRA member organisations and 30 individual members. These courses covered critical topics in the field, providing participants with valuable insights and practical skills.





In FY2023-24 AWS launched 10 new on-demand courses. This expansion brought the total number of on-demand courses in our rapidly growing library to 30, enabling individuals to access high-quality training at their own convenience.

In addition to its courses, AWS hosted 24 webinars throughout the year, drawing an impressive 15,000 registrations. As part of its offering AWS also introduced Premium Webinars. Lasting longer than a standard webinar and delivering more in-depth coverage of complex topics, the three premium Webinars delivered throughout the year have fostered deeper industry connections and knowledge sharing attracting over 335 registrations.


AWS' digital footprint has also continued to grow, with a robust subscriber base of 27,000 individuals as of July 2024. The School's YouTube channel has seen significant growth, with over 15,000 subscribers and more than 180,000 views on our educational videos. This digital presence has been crucial in disseminating knowledge and engaging with a global audience.


A major highlight of the year was the launch of the new website, featuring a comprehensive training hub. This platform provides users with easy access to educational resources, including key topics such as MODFLOW, Python, and HEC-RAS.

Furthermore, AWS established a new partnership with One Basin CRC to deliver webinars, enriching its content and expanding its reach. This collaboration brings together expertise from both organisations to address critical water management challenges.


As AWS enters a new phase of growth, it remains committed to a mission of empowering water education and collaboration. AWS will continue to expand its educational offerings, enhance digital engagement, and foster strategic partnerships to address the evolving needs of the water sector.

AWS' ongoing success is a testament to the dedication of its community, including subscribers, partners, presenters, and the broader water sector. By working together, AWS will continue to shape a positive future for the industry and empower professionals with the tools they need to sustainably manage the world's water resources.



**Topics of Impact**




#163  
**AI TOOLS FOR FLOOD ASSESSMENT**



#171  
**THE FUTURE OF THE MURRAY-DARLING BASIN**



#177  
**ADVANCES IN SCOUR ASSESSMENT**



#172  
**REAL-TIME FLOOD FORECASTING**

24

Webinars

15,350+

All Webinar registrations

335

Premium Webinar registrations

27,000+

email subscribers

15,000 +

YouTube subscribers

180,000+

YouTube views

Technical topics



Surface water hydraulics



Surface water hydrology



Groundwater



ARR



TUFLOW



HEC-RAS



QGIS



Python





## Bringing Our Members Together

In FY2023-24 we continued our commitment to engaging with members, sharing research findings, and cultivating collaboration. Throughout the year, WaterRA hosted 23 events, including in-person networking sessions, online research updates, workshops, knowledge-sharing events, and showcase webinars.

**23**  
member events

**66**  
member organisations participated

**882**  
individual member participants

**58**  
expert scientific presentations

Over the past year WaterRA has significantly strengthened the water industry through a diverse range of events and innovative research initiatives. These activities have played a vital role in supporting the sector by facilitating the exchange of knowledge, supporting strong peer relationships, and driving collaborative solutions to some of the industry’s most pressing challenges. WaterRA remains committed to leading these efforts, providing platforms where experts, researchers, and industry professionals can come together to engage with the latest developments in water research.

Our events have been central to achieving this mission. In the past year, we engaged 66 member organisations and 882 individual members through our various programs and initiatives. We hosted 58 expert scientific presentations, each of which offered valuable insights into critical water-related issues, sparking thought-provoking discussions and laying the groundwork for future collaborations. These events have allowed our members to deepen their understanding of emerging trends and cutting-edge technologies while contributing their expertise to collective problem-solving efforts.

Among the standout features of our events program is the “Know Your Neighbour” (KYN) series, which are designed to enhance local networking opportunities and encourage members to address region-specific challenges. KYN events have become a cornerstone of our member engagement strategy, creating a platform where knowledge exchange is targeted, personal, and

relevant to local needs. This year, KYN events were successfully held in Western Australia, New South Wales, and Victoria. The Victorian KYN event in March was particularly noteworthy, coinciding with the visit of the Global Water Research Coalition (GWRC) Board. This unique event allowed over 100 participants to engage with international water professionals, providing a rare opportunity to gain global perspectives on local water issues. Attendees praised the event for its collaborative environment, which facilitated productive conversations and strengthened ties between members, the WaterRA Board, and the global water community.

Our WaterRA Project Update Meetings remain another cornerstone of engaging our Industry members with research, providing comprehensive updates on ongoing projects, emerging developments, and opportunities for involvement. These meetings have proven invaluable in ensuring that our members stay informed and actively participate in shaping the direction of research.

A major highlight of the year was the introduction of the Roadmaps to Research workshop series, a three-week program featuring six interactive workshops led by WaterRA Research Managers. These sessions focused on high-priority areas such as the circular economy and human and environmental health. The workshops not only identified research priorities but also addressed workforce development needs, paving the way for future collaborations and impactful projects across the sector.



During FY2023-24, WaterRA also hosted four research outcomes webinars, showcasing findings from Projects 1139, 1143, 1156, and 1141. The most popular of these was the webinar for Project 1156, which examined pathogen risks associated with dead animals in treated water assets and storage tanks. This session had the highest attendance, as project partners shared key outcomes and case studies, sparking valuable discussions on how these insights can be applied in real-world scenarios. The event provided members with a platform to explore the practical implications of the research and its potential impact on water safety and management.

WaterRA also hosted the 8th Australian and New Zealand Cyanobacteria Workshop. Held at Monash University in September 2023 and followed by an AquaWatch End Users Consultation Workshop, this event has become an integral event on the global water calendar.

The 2023 Workshop was a two-day in-person event which saw over 100 participants engage with 30 presentations on new research advancements and potential applications to ensure the ongoing health of ecosystems and communities.

Preparations for **NEXT WATER 2025**, Australia's premier conference on water research and innovation, also commenced this year. Scheduled for 21-22 October 2025, in Melbourne, **NEXT WATER** continues to grow, providing a platform for exploring the latest advancements in water research. In FY2023-24 we established the **NEXT WATER** Program Committee, which met for the first time in May. The Committee has been working diligently to curate a dynamic and inclusive program that addresses both current and emerging challenges in the water sector. Composed of industry leaders, researchers, and policymakers, the committee aims to ensure that the conference reflects a comprehensive approach to sustainable water solutions. The committee comprises the following members:

- Dr Stacey Hamilton (Chair)** | Water Corporation
- Dr Deb Gale** | Seqwater
- Prof Nicholas Ashbolt** | University of South Australia
- Steve Adamthwaite** | Arup
- William Bodeker** | SA Water
- Dr Arah Zamyadi** | Monash University
- Mariah Sampson** | Deakin University
- Sandra Henville** | Water Research Australia

**NEXT WATER 2025** will feature two days of groundbreaking presentations, panel discussions, and networking opportunities designed to push the boundaries of water science and innovation. The conference will offer a unique platform for collaboration among stakeholders from academia, industry, and government, highlighting cutting-edge research and technological advancements.

This year also marked a significant milestone in our digital transformation journey. WaterRA was honored with the prestigious iMIS Great Things Award for our successful implementation of a new website and member portal. This achievement has greatly enhanced our digital presence and member engagement. Kathryn Nicholas, our Communications Lead, accepted the award at the NiUG Asia-Pacific Discovery Conference in Melbourne and shared insights into our transformation efforts.

In addition to this recognition, Kathryn achieved Certified iMIS Administrator accreditation, and seven of our staff members earned iMIS Certified User accreditation. These certifications ensure our team is fully equipped to manage and optimise our digital systems, providing a smoother, more efficient user experience for members. With these enhanced skills, WaterRA can offer improved support, streamline member interactions, and ensure that our platform evolves to meet the growing needs of our community.

Reflecting on a successful year of member events, research advancements, and digital innovations, we remain committed to driving engagement and creating meaningful impacts in the water sector. We look forward to building on this success in the coming year, delivering further events across the nation and online which advance science and bring our members together as a BIG Team.



*WaterRA Communications Lead Kathryn Nicholas (centre) with L-R Colin Bryant from ASI and Newlin Jolme from Integr8tiv.*





**Our Member Events  
in 2023-24**



RLP Student  
Orientation  
Day

**3**  
WaterRA  
Project Update  
meetings

**4**  
Research Outcomes  
Webinars



**1**  
Project Workshop/  
Knowledge Share



**Project 3048** Update to stormwater quality knowledge for AGWR

**6**  
Roadmaps to  
Research

**Project 1139** Technical Competency Benchmark for Water Industry Operators

**Project 1143** Best practice guidance for lake modelling to support quantitative microbial risk assessment (QMRA)

**Project 1156** Pathogen risk associated with dead animals in treated water assets/storage tanks

**Project 1141** Guidance for integration of gene testing in cyanobacterial management

**2**  
Showcase Webinars



Technology Showcase  
Nanobubble Technology

**3**  
Know Your  
Neighbour  
events

Western Australia  
Victoria with GWRC  
NSW with NMI

Supply Optimisation Workshop 1  
Supply Optimisation Workshop 2  
Service Delivery Workshop 1  
Service Delivery Workshop 2  
Circular Economy  
Liveability

**8th ANZ  
Cyanobacteria  
Workshop**












Annual General  
Meeting



















# Board and Staff

Our Board of Directors is dedicated to building robust relationships and promoting interconnectivity between industry and research. Each board member contributes a unique set of skills, knowledge, and experience, ensuring a variety of perspectives and a clear strategic vision. Together with our skilled staff, they strive to deliver the highest quality research, engagement, knowledge, activities, and opportunities to our members across the water sector.

## Board

 <p><b>Mark Gobbie</b> Chair</p>	 <p><b>Collene Castle</b> Non-Executive Director (Independent)</p>	 <p><b>Ken Murphy</b> Non-Executive Director (Independent)</p>
 <p><b>Assoc Prof Helen Stratton</b> Non-Executive Director</p>	 <p><b>Prof Stephen Gray</b> Non-Executive Director</p>	 <p><b>Deb Evans</b> Non-Executive Director</p>
 <p><b>Dr Daniel Hoefel</b> Non-Executive Director</p>	 <p><b>Fiona Smith</b> Non-Executive Director</p>	 <p><b>Dr David Bergmann</b> Non-Executive Director</p>

## Staff

 <p><b>Karen Rouse</b> Chief Executive Officer</p>	 <p><b>Mark Andersson</b> General Manager, Engagement, Impact and Development</p>	 <p><b>Jacqueline Frizenschaf</b> General Manager Research Services</p>	 <p><b>Sandra Henville</b> Senior Research Manager (0.8 FTE)</p>
 <p><b>Dr Louise McKenzie</b> Research Manager (0.9 FTE)</p>	 <p><b>Dr Marty Hancock</b> Research Manager (0.8 FTE)</p>	 <p><b>Dr Zach Powell</b> Research Manager</p>	 <p><b>Vincent Bianchini</b> Research Manager</p>
 <p><b>Carolyn Bellamy</b> Research Capability Manager</p>	 <p><b>Jo Ohlmeyer</b> Research Services Officer (0.8 FTE)</p>	 <p><b>Kathryn Nicholas</b> Communications Lead</p>	 <p><b>Jessica Burgess</b> Engagement Officer (0.8 FTE)</p>
 <p><b>Louie Waples</b> Digital Impact Officer (0.5 FTE)</p>	 <p><b>Ella Pietsch</b> Governance &amp; Administration Officer</p>	 <p><b>Mia Luke</b> Accounts Assistant (0.4 FTE)</p>	
 <p><b>Joel Voortman</b> Digital Training Manager AWS</p>	 <p><b>Anushree Mistry</b> Digital Training Officer AWS</p>	 <p><b>Renée Samwell</b> Digital Training Coordinator AWS (0.8 FTE)</p>	



# Our Members

We are grateful for the support of our BIG Team, as they are the lifeblood of WaterRA. Their tireless efforts allow us to continue to develop research and tools that have a lasting impact and enable us to reach out to other professionals, organisations, and communities in the wider water sector.

**78**  
members

**21**  
utility  
members

**31**  
research  
members

**13**  
government,  
health and  
council members

**13**  
private  
organisation  
members



## Our Members

Alluvium  
 Arris  
 Atom Consulting  
 Australian Water Quality Centre  
 Barwon Water  
 Beca Hunter H<sub>2</sub>O  
 Cairns Regional Council  
 Central Highlands Water  
 Centre for Appropriate Technology  
 Charles Darwin University  
 ChemCentre  
 Coliban Water  
 CSIRO  
 Curtin University of Technology  
 Deakin University  
 Department of Environment, Parks and Water Security NT  
 Department of Health - Environmental Health Northern Territory  
 Department of Health Tasmania  
 Department of Health Victoria  
 Department of Health Queensland  
 Edith Cowan University  
 EPA SA  
 Eurofins Environment  
 Testing Australia  
 Federation University

Flinders University  
 GHD  
 Goulburn Valley Water  
 GWM Water  
 Greater Western Water  
 Griffith University  
 Hydrology and Risk Consulting  
 Hunter Water  
 IBL Solutions  
 Icon Water  
 Lower Murray Water  
 Macquarie University  
 Melbourne Water  
 Monash University  
 Mount Barker Council  
 Murdoch University  
 National Measurement Institute  
 North East Water  
 NSW Health  
 Orange City Council  
 Port Macquarie Hastings Council  
 Power & Water Corporation  
 Risk Edge  
 RMIT University  
 SA Health  
 SA Water

Seqwater  
 South East Water  
 Swinburne University of Technology  
 Sydney Water Laboratory Services  
 TasWater  
 University of Adelaide  
 University of Melbourne  
 University of Newcastle  
 University of New South Wales  
 University of Queensland  
 University of South Australia  
 University of Tasmania  
 University of Technology, Sydney  
 University of the Sunshine Coast  
 University of Western Australia  
 University of Wollongong  
 Veolia Water Australia  
 Victoria University  
 Viridis Consultants  
 Wannon Water  
 Water Corporation  
 Water Futures  
 WaterNSW  
 Western Sydney University  
 Yarra Valley Water

## FY2023-24 new members



## Our Trusted Partners\*

Australian Water Association  
 Canadian Water Network  
 Chinese Academy of Science  
 Intelligent Water Networks (IWN)  
 International Research Center On Water and Environment (CIRSEE)  
 KWR Watercycle Research Institute  
 Public Utilities Board Singapore

STOWA Foundation for Applied Water Management Research  
 TZW Water Technology Centre  
 UK Water Industry Research  
 Veolia Environment Research and Innovation (VERI)  
 WaterAid  
 Water Environment & Reuse Foundation

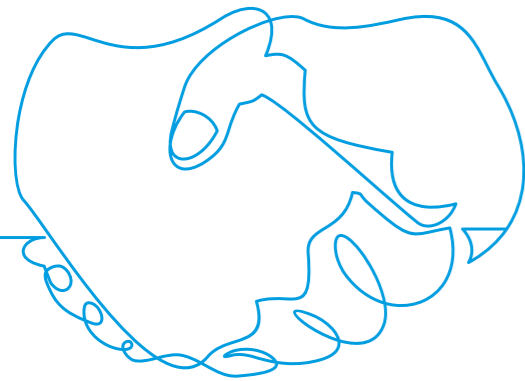
Water Industry Operators Association of Australia (WIOA)  
 Water Research Commission South Africa  
 Water Research Foundation  
 Water Services Association of Australia (WSAA)

\* through membership of the [Global Water Research Coalition](#).



## Our Committees

WaterRA is served by various committees, including the Human Resources Committee, Risk and Audit Committee and Strategic Advisory Committee. Our committees play a vital role by helping to manage various aspects of our operations, governance, and decision-making processes. They allow WaterRA to better serve members and fulfill strategic objectives.



### Risk and Audit Committee

D Evans, K Murphy, D Hoefel, R Hughes

As Chair of the Risk and Audit Committee (RAAC), I'm pleased to share the committee's accomplishments over the past year. The Committee, consisting of myself, Deb Evans (Chair), Board Non-Executive Director Dan Hoefel, Independent Director Ken Murphy, and our independent committee member Ross Hughes, has remained unchanged this year, ensuring continuity and stability in our oversight of financial matters and risk management.

Over the past year, the RAAC has supported the WaterRA Board by delving deep into our financial management policies, in particular, refining our investment strategy and insurance coverage to align with WaterRA's evolving needs. This collaborative effort, involving our dedicated committee members, has reinforced WaterRA's financial resilience and positioned us for long-term success.

I'm particularly pleased to announce the reappointment of Nexia Edwards Marshall as our external auditors. Their continued expertise and unwavering commitment to our organisation have been invaluable.

Despite several changes in our staff responsible for financial, accounting and governance functions, I'm delighted to report that our financial statements identified no unadjusted or adjusted misstatements and WaterRA has once again received an unqualified audit opinion. This is a testament to the diligence and dedication of our management team and the thoroughness of our internal controls.

I extend my sincere gratitude to my fellow committee members for their unwavering support and dedication. Their insights and guidance have been invaluable in ensuring the highest standards of governance for WaterRA.

As we look ahead, the RAAC remains committed to upholding WaterRA's financial integrity and mitigating risks. We will continue to work closely with the Board and management to identify emerging challenges and opportunities, ensuring that our organisation is well-equipped to navigate the complexities of the future.

**Deb Evans**

Chair

### Human Resources Committee

D Bergmann, H Stratton, R Brimfield, J Mouka

WaterRA's Human Resources Committee (HRC) provides advice to the Board and the management team on strategies, practices and policies in matters such as staff retention, talent, safety, culture, remuneration, performance and development.

The HRC met five times during FY2023-24. Four meetings were online and one meeting was in-person with a longer-term planning focus, running in parallel with a RAAC meeting, and adjacent to a full Board meeting.

The HRC consists of Board Non-Executive Directors David Bergmann (HRC Chair) and Helen Stratton, and is supported by non-Board member with specialist skills Julie Mouka (Yarra Valley Water), and independent appointment Rolfe Brimfield. The HRC is also attended when appropriate by the CEO, and the Governance & Administration Officer.

Specifically during FY2023-24 the HRC provided advice on staff and independent director remuneration, WaterRA's Integrity Policy, WaterRA's Safety & Wellbeing Plan, Board Skills Matrix, succession and workforce planning, organisational restructuring, culture, reward and recognition, and performance management.

The HRC monitored and advised in the specific risk register areas of Safety & Wellbeing, Availability of Human Resources, Performance & Behaviour, and Diversity & Inclusion.

In collaboration with the Board and Management it prepared and reviewed drafts of WaterRA's Environmental Social Governance (ESG) Framework, and an Employee Value Proposition statement. It also provided content and input on future workforce trends for consideration at the Boards Strategy Day.

**David Bergmann**

Chair

### Strategic Advisory Committee

S Gray, H Stratton, C Castle, G Hawke, G Lum, X Zhang

Our Strategic Advisory Committee (SAC) has been an invaluable compass, guiding WaterRA toward research that directly benefits WaterRA members. This year, we focused on implementing the SAC's insightful recommendations from the previous financial year, ensuring that our research aligns with the strategic priorities of both our Board and Management.

The SAC is comprised of a diverse group of experts, including:

- **WaterRA Board Members:** Prof Stephen Gray (Chair), Prof Helen Stratton (Deputy Chair), and Collene Castle (Wonnill Partners)
- **Industry Representatives:** Graham Hawke (TasWater & Westernport Water) and Gary Lum (Federal Department of Health)
- **Academic Expert:** Prof Xiwang Zhang (Uni. Queensland)
- **WaterRA Management:** Karen Rouse and Jacqueline Frizenschaf

While we didn't convene formal SAC meetings in FY2023-24, our Board and Management representatives remained vigilant, ensuring that our research practices were robust and risk-mitigated. A key focus was integrating First Nations perspectives into our research strategy which the management team have worked tirelessly on throughout FY2023-24. This effort has yielded great results and we're excited to announce we'll be welcoming additional First Nations members to the SAC in the upcoming financial year, strengthening our commitment to cultural sensitivity and inclusivity.

I want to express my sincere gratitude to our SAC members for their unwavering dedication and expertise. Their contributions have been instrumental in shaping WaterRA's future.

**Stephen Gray**

Chair



# Driving Sustainability, Reconciliation, and Research Excellence: WaterRA's Commitment to the Future

WaterRA is proud to showcase its continued commitment to governance, environmental sustainability, social responsibility, and research excellence in FY2023-24. Through key initiatives like the launch of our Environmental, Social, and Governance Statement, the commencement of a Reconciliation Action Plan, and our ongoing support for cutting-edge research, WaterRA is positioning itself as a leader in driving positive change for the water sector and the wider community. These governance activities reflect our dedication to creating a sustainable future, working towards reconciliation with First Nations communities, and advancing research that addresses the critical challenges of today and tomorrow.

## Launching our ESG commitment

Water Research Australia proudly launched its Environmental, Social, and Governance (ESG) Statement in FY2023-24, a key milestone reflecting the organisation's dedication to sustainable business practices. This statement encapsulates WaterRA's commitment to environmental conservation, social responsibility, and ethical governance, positioning the company as a leader in shaping a sustainable future for the water sector. The ESG Statement was developed through a collaborative effort involving our team and the Board, ensuring that it is deeply aligned with our core values and operational goals. It serves as a guiding framework for future decision-making, reinforcing WaterRA's pledge to minimise its environmental footprint, uphold high ethical standards, and operate with integrity and transparency.

**Environmental Commitment:** WaterRA's environmental principles focus on reducing its carbon footprint, with measures such as promoting sustainable travel options and maintaining paperless events. In line with its commitment to water sector sustainability, WaterRA prioritises research projects aimed at reducing harmful emissions and improving environmental performance, such as those addressing waterway health and pollution management. Respecting First Nations' connection to Country, WaterRA actively engages Indigenous knowledge holders to guide research efforts, further ensuring that environmental initiatives are culturally inclusive and effective.

**Social Responsibility:** WaterRA is committed to fostering a socially responsible and diverse workplace, starting with its commitment to reconciliation with Australia's First Peoples. The organisation is developing a Reconciliation Action Plan (RAP) that builds on its ongoing support for Indigenous-led research. Additionally, WaterRA promotes workplace diversity and inclusion through regular training and by empowering women in the water industry. A strong focus is placed on ensuring the wellbeing of staff, offering comprehensive health and safety programs, and providing access to an Employee Assistance Program (EAP).

**Governance and Accountability:** Governance forms the backbone of WaterRA's operations, with a strong emphasis on transparent financial stewardship and accountable decision-making. The Board and its committees include independent members to maintain objectivity, and WaterRA ensures that First Nations voices are included in decisions related to water research. Data security and privacy remain a top priority, with stringent measures in place to safeguard member information.

The ESG Statement is more than just a formal document—it reflects WaterRA's mission to drive long-term value creation for its members while making a meaningful impact on society and the environment. This statement will continue to guide WaterRA as it strives to contribute positively to the water sector and the broader community, making it a cornerstone of the organisation's future strategy.

## Our Reconciliation Journey

WaterRA is deeply committed to reconciliation, acknowledging the importance of First Nations cultures, knowledge, and values in shaping a sustainable future for Australia's water sector. We recognise that meaningful reconciliation requires ongoing action, reflection, and collaboration with Indigenous communities. As part of our dedication to this cause, we are working to ensure that First Nations perspectives are embedded throughout our work, our research projects and in the partnerships we cultivate.

Over the past year, we have made significant strides towards realising our long-term reconciliation goals. A key milestone has been the establishment of a Reconciliation Action Plan (RAP) Working Group. This Working Group reflects our organisation-wide commitment to ensuring that reconciliation is not only a guiding principle but a lived practice. The RAP Working Group will be responsible for steering the development and implementation of WaterRA's RAP, with the aim of fostering respectful and mutually beneficial relationships with Indigenous communities and stakeholders. Looking ahead, the RAP Working Group will spearhead the creation of WaterRA's RAP during the next financial year. This plan will outline clear actions and accountability measures to ensure that reconciliation is integrated across all levels of our organisation. We see this as a critical step in building a more inclusive and culturally aware organisation.

Furthermore, we are committed to strengthening Indigenous representation within our organisation's leadership. We are pleased to announce that in addition to Collene Castle's role on the RAP Working Group, First Nations member Nellie Hirschausen from SA Water joined the Strategic Advisory Committee. Their insights and contributions will be invaluable in shaping WaterRA's strategic direction, ensuring that our future work is informed by diverse perspectives that reflect the richness of Australia's cultural heritage.

We also continued our engagement with the First Nations community at Walgett through participation in workshops convened by the UNSW Global Water Institute and The George Institute for Global Health. The workshops facilitated discussion on how to escalate action on food and water security in Australia. Loretta Weatherall, from Dhaariwaa Elders Group, presented the findings of the food and water security surveys conducted in Walgett, as part of the Food and Water for Life Project. The presentations were followed by a discussion about the Walgett water situation and how to extend the work to other communities.

At WaterRA, reconciliation is not just a goal but a continuous journey. We are committed to walking this path with integrity, openness, and a deep respect for the wisdom and contributions of First Nations peoples.

## Shining a spotlight on R&D

Our commitment to research and development (R&D) is central to our mission of driving innovation and addressing the critical challenges facing the water sector. Through our long-standing sponsorship of the Research and Development Excellence Awards, offered by the Australian Water Association, we actively support projects that push the boundaries of current practice and contribute to a sustainable water future.

These prestigious awards, which we proudly sponsor both at the national and state levels, celebrate projects that have made significant advancements in areas crucial to water management. The focus is on research that not only improves the conservation or better use of water resources but also contributes to the broader understanding of water technologies, environmental stewardship, social and economic implications, and the cultural significance of water within communities. The projects recognised must demonstrate measurable outcomes that enhance Australia's ability to manage water sustainably—an area that is increasingly vital in the face of climate change, population growth, and shifting environmental conditions.

As leaders in collaborative water research, WaterRA's involvement in these awards reflects our belief that innovative research is key to unlocking solutions that will benefit not just the water sector, but also our communities. By supporting these awards, we reinforce our role in building a culture of excellence in research, where ideas are not only encouraged but amplified to drive real-world change.

"Research is the core of what we do and the foundation for innovation and growth in the sector," said WaterRA CEO Karen Rouse. "Through our sponsorship of the Research and Development Excellence Awards, we are delighted to have the opportunity to recognise the outstanding research that is shaping the future of water management across Australia. These projects represent the very best in innovation, and we are excited to see the long-lasting impact they will have on the sector and the communities we serve."

WaterRA's sponsorship of these awards is just one of the many ways we support the development of cutting-edge research that addresses today's water challenges. By championing research excellence and encouraging innovative thinking, we remain dedicated to ensuring a more resilient, sustainable future for Australia's water resources.



# Our Financial Position

The WaterRA Board and management are committed to invest in, and improve member experience, the BIG Team and the organisation in line with our five-year strategy to benefit all.

FY2023-24 was the third year of our Board approved five-year strategy. Based on WaterRA's desire to re-invest in the business to ensure a vibrant and lengthy future for the organisation and superior outcomes for our members, a substantial deficit budget was approved for FY2023-24 at the August 2023 Board meeting.

During FY2023-24 year we made significant investment in optimisation of our membership model for member attraction and retention and business sustainability; and the development and implementation of a growth strategy for the Australian Water School.

Despite the planned investment in these initiatives, WaterRA achieved a lower than anticipated deficit, primarily due to active cash management to leverage a favourable investment environment, prudent expenditure and savings by the business on key initiatives, and accelerated growth of the Australian Water School.

## Income Statement For The Period Ended 30 June 2024

	2024	2023
	\$	\$
<b>REVENUE</b>		
Revenue from continuing operations	5,206,904	4,817,958 *
Other income	12,500	73,862 *
<b>EXPENDITURE</b>		
Research program	(2,042,351)	(1,399,160)
Education program	(174,150)	(154,633)
Operating expenses	(3,080,221)	(3,176,773)
Depreciation and amortisation expense	(21,348)	(20,625)
Chairman & Ind Director remuneration	(83,536)	(65,917)
<b>Surplus/(Deficit)</b>	<b>(182,202)</b>	<b>74,712</b>

NOTE: \* FY2023 Revenue comparatives reflect a reclassification of Australian Water School income of \$462,633 from Other income to Revenue from continuing operations

*The company is a not-for-profit entity, registered as a charity and is exempt from income tax.*



The summarised financial reports have been derived from WaterRA's full report for the financial year. For the detailed Financial Report please visit [waterra.com.au](http://waterra.com.au)

## Financial Position As At 30 June 2024

	2024	2023
	\$	\$
<b>ASSETS</b>		
<b>Current assets</b>		
Cash and cash equivalents	7,648,995	8,369,605
Trade and other receivables	29,743	163,927
Contract assets	192,500	16,500
Other	113,501	58,768
<b>Total current assets</b>	<b>7,984,739</b>	<b>8,608,800</b>
<b>Non-current assets</b>		
Plant and equipment	2,109	1,383
Intangible assets	2,000	6,000
Right-of-use assets	79,884	15,995
<b>Total non-current assets</b>	<b>83,993</b>	<b>23,378</b>
<b>Total assets</b>	<b>8,068,732</b>	<b>8,632,178</b>
<b>LIABILITIES</b>		
<b>Current liabilities</b>		
Trade and other payables	316,521	276,251
Contract liabilities	4,320,697	4,745,686
Lease liabilities	15,350	16,308
Employee entitlements	232,220	205,601
Provisions	125,000	125,000
Other	917,896	1,046,262
<b>Total current liabilities</b>	<b>5,927,684</b>	<b>6,415,108</b>
<b>Non-current liabilities</b>		
Lease liabilities	64,534	-
Employee entitlements	62,277	20,631
<b>Total non-current liabilities</b>	<b>126,811</b>	<b>20,631</b>
<b>Total liabilities</b>	<b>6,054,495</b>	<b>6,435,739</b>
<b>Net assets</b>	<b>2,014,237</b>	<b>2,196,439</b>
<b>EQUITY</b>		
Retained earnings	1,540,237	1,722,439
Operating Reserves	474,000	474,000
<b>Total equity</b>	<b>2,014,237</b>	<b>2,196,439</b>





# next water '25

**21-22 October 2025**

Join us in Melbourne, October 2025 for Water Research Australia's research and innovation conference.

NEXT WATER unites industry professionals and academics to explore groundbreaking research and game-changing solutions. This two-day event features inspiring keynote speakers, cutting-edge scientific papers, engaging case studies, interactive workshops, dynamic panel sessions, and innovative poster presentations.

[nextwater.com.au](https://nextwater.com.au)

The data and information included in this document concerning Water Research Australia's projects, financials, staff, and membership details are based on data from the FY2023-24, covering the period from July 1, 2023, to June 30, 2024. While every effort has been made to ensure the accuracy and reliability of the data presented, we make no warranties or representations regarding the completeness or correctness of the information herein.