



2018-19 Annual Report

our impact
our year

10 Years and Beyond

2018-19 marked the 10 year anniversary of Water Research Australia (WaterRA). Throughout the last decade one of WaterRA's enduring qualities has been our versatility – a capacity to adapt to change and, with our members, shape the water sector through science. Over our long history, it has been a quality that has enabled us to seize opportunities, adjust our approach to serving our members and develop new responses to emerging issues. WaterRA exists to build healthy people, healthy lives and a healthy planet through the advancement of water science. This commitment lies at the core of all that we do and is underpinned by our 2018-21 member-focussed strategy through which we are:



Optimising our business model to provide enduring value for members



Tailoring our services to meet the evolving needs of our members



Strengthening and enhancing our engagement activities to give members increased pathways to become involved



Nurturing and developing the skills of our BIG Team

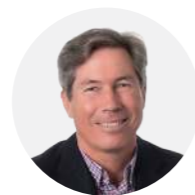
To deliver on our strategy in 2018-19, we have listened intently and engaged tirelessly with our BIG team of members, alumni, trusted partners, staff and Board, to build on our strength of collaborative and innovative research and develop innovative new and impactful responses to need, including:

- » Next Water – our research and innovation conference – to address not just what's NOW, but especially what's NEXT, where over 200 national and international delegates from utilities, researchers, health regulators, government, non-government organisations and consultants came together to learn and explore how collaborative research is generating impact within the water industry.
- » extending our Communities of Interest approach to include Horizon – a large-scale research planning workshop which brought together all industry members to **collaborate** – discuss organisational research strategies and identify collective research needs, determine collaborative research opportunities and plan WaterRA's research agenda and knowledge transfer activities for the upcoming year.
- » working alongside our BIG Team of industry and research members, and trusted partners to deliver six completed projects representing the culmination of effort of 15 industry partners and six research agencies. WaterRA leveraged more than \$700k in in-kind contributions, and approximately \$1.4m in funding from collaborating agencies, to create these projects for and with our Members, with a total value of \$2.1m.
- » harnessing the value of research through member collaboration to create 36 new project opportunities – seven underway and nine in development, in addition to 22 current projects. These opportunities – along with our current and completed projects, cover all of our 11 focus areas, consolidating WaterRA's transformation from water quality research specialists into an organisation which can **innovate** to meet the broader research needs of members, aligning with the big challenges and strategic initiatives of water utilities across the country.

Still, many challenges remain across the research value cycle, such as ensuring water security in a changing climate, tackling ever-emerging new contaminants, ensuring safe and sustainable water management so that communities thrive regardless of where they are in Australia, and a future-ready workforce.

Momentum continues to build for what will be one of WaterRA's most ambitious and significant developments in our long and proud history, our priority research project 'The Value of Research' which will be a key resource in addressing many of these challenges. The Value of Research project aims to identify the many ways and domains where the **impact** and value of research can be realised and quantified across the water sector. 2018-19 saw the completion of Phase One of this project. Funding and project partners have been secured for Phase Two, which will now begin in earnest – refining the scope and sourcing the best candidates to undertake the research.

Like many organisations, WaterRA is learning to adapt to a rapidly changing world. We are achieving this through the talent and drive of our awesome BIG team, underpinned by sound governance structures that have served us well to date. However, as we move forward and embrace new members, new systems and new services, we foresee the need to review and potentially update and reshape our governance. We look forward to taking this journey with our BIG team in 2019/20, but in the meantime express our thanks for the very generous support we have received throughout the past year from our Board, members and committees that collectively has enabled WaterRA to thrive.



Shaun Cox
Shaun Cox Board Chair



Karen Rouse
Karen Rouse CEO

collaborate

In 2018-19 WaterRA's research program continued to mature – addressing urban, regional and remote water issues – embracing all aspects of drinking water, recycled water and wastewater.

Central to the diversity and power of our research portfolio is that it is shaped by our members' needs and fine-tuned through our signature Community of Interest (CoI) and Problem and Opportunity Definition (POD) workshop process. Members engaging in this process gain the most valuable outcomes from their research investment and 2018-19 was no exception. This year we not only continued subject-specific CoIs, but for the first time we applied the POD process at a whole of portfolio scale through the introduction of Horizon – our first annual research needs planning day. This event held in November 2018 brought together research program managers and member representatives from 13 of our industry members for one day to share their research needs and identify collaboration opportunities across both the long and short term.

Through Horizon, our COIs and associated POD workshops we co-created 16 new projects designed to efficiently address shared industry challenges.

Through the support of **13 sponsor organisations**, 2018-19 saw three new PhD students and one new honours student commence their studies, making up a total of **27 active students** in the program. WaterRA's students are transforming businesses through research across operational areas such as customers, water quality, source water, wastewater, integrated catchment management and climate change. Partnerships and collaboration between universities and industry provide an invaluable connection to the next generation of high-calibre research leaders who work within the business to solve focused and, organisation-specific challenges and integrate the newest techniques and technologies into business services.

WaterRA has 11 cyanobacteria-related reports in our knowledge library and three related factsheets. Through our long history and strength in collaborative cyanobacteria research and with the support of a \$45,000 grant from the 5th International Conference on Toxic Cyanobacteria (ICTC-V) we have been able to continue and expand our research in this highly-important area for years to come. Providing collaborations in five current cyanobacteria projects, ranging from the toxicity and presence of benthic cyanobacteria to understanding the cost of cyanobacteria to the Australian water industry.



5 workshops



\$1.4m worth of funding



20

additional identified project opportunities

16

new projects starting in 2018/19



Total student sponsorship value **\$161,000**

38

total projects in our portfolio

across **11**

focus areas



The Value of Research Project

Phase One of The Value of Research project (undertaken in-house by WaterRA during 2018-19) reviewed numerous existing methods for assessing the value of research and considered their suitability for use by water utilities. A key finding of this phase was that there are clearly recognisable common factors – Research Management Framework Elements – which contribute to maximising the value generated by a research program or project.

The Prospectus and Phase One report for The Value of Research Project were well received, generating commitment to participate in Phase Two (scheduled to start in 2019-20) from 13 industry and three university partners from Australia, and UK Water Industry Research (UKWIR).



innovate

Working across eight of our 11 focus areas, our projects during 2018-2019 consolidated the breadth of our research and our ability to meet our members' needs.

During 2018-2019, six research projects were completed, representing the culmination of effort of 15 industry partners and six research agencies. WaterRA leveraged more than \$700k in in-kind contributions, and approximately \$1.4m in funding from collaborating agencies, to create these projects for and with our members, with a total value of \$2.1m. 2018-2019 has also seen 36 additional project opportunities identified so that now we have seven underway and nine in the development stage.

In the past year we have also seen our traditional research outputs grow, with six project reports and presentations at many conferences around the world. Fuelling innovation in the research arena, peer-reviewed papers have appeared in journals ranging from *Earth's Future* to *Heliyon*. Within industry, new knowledge developed from our research has been actively transferred via training workshops, webinars, videos and lunch and learn sessions.

Six completed projects:

Decision-Making Framework for the Prioritisation of Research into Contaminants of Emerging Concern

Khan, S.J., Frankel, C., Vorreiter, J., Orteg, G.C.
(Joint WERF, GWRC and WaterRA Report)
Project 1108

Innovative approaches to limiting the public health risks of *Cryptosporidium* and *Giardia* in Australian Catchments

Ryan, U., Xiao, L., Oskam, C., Ball, A., Bath, A and McInnes, C.
Project 1068

The Occurrence of *Burkholderia pseudomallei* in Water Treatment Plants of the Cairns Region

Kaestli, M., Mayo, M., and Currie, B.
Project 1115

Alternative ultrafiltration integrity test using novel nanomaterials

Cran, M.
Project 2044

Full details are available online at www.waterra.com.au

Smart Sludge Pump Management

Farno, E. & Eshtiaghi, N.
Project 2047

Potable Water Reuse: What can Australia learn from global experience?

Khan, S. & Branch, A.
Project 3039

impact

In 2018-19 with its Value of Research Project, WaterRA set out on the difficult path of developing an industry-accepted, standardised and widely-utilised approach to measuring the impact of research across all stages of the research life-cycle. With the ultimate goal of maximising the value of water industry investment in research, this project enjoyed its first milestone in 2018-19 with the completion of Phase One.

Deliverables from Phase One were:

- a report that identifies and demonstrates the value and impact of research
- case studies of WaterRA projects that showcase value and impact, and
- a prospectus for Phase Two of the project.

The findings of Phase One showed that there is not a consistent or agreed method to value research investment within the water industry, despite several attempts by different organisations to demonstrate value. Stakeholder engagement identified the need for a method that is consistent, tailored to the water industry, easy to apply, and which provides defensible valuations. As work

on the project continues, the deliverables will be instrumental to water organisations going forward, enabling them to drive business and economic decisions based on evidence and build impact through work undertaken by their organisation.

Another project underway which throughout 2018-19 created impact is The Value of Operator Competency Project, which was delivered on behalf of WaterRA, members and trusted partner WIOA by WaterQPlus. This research has been presented at major conferences, such as OzWater19 and WIOA's interactive seminars and exhibitions around Australia. The work underway has generated much interest and debate among operators and regulators alike, effectively raising awareness of issues and opportunities for improvement.

2018-19 also saw funding approval granted for WaterRA's ARC Linkage Project on the development of a suite of in vitro bioassays for direct toxicity assessment, affectionately known as "Saving Nemo", led by Griffith University's Professor Fred Leusch. The project will develop a guidance framework which utilities can use to cost-effectively and ethically assess the toxicity of wastewater discharges into the environment.



One of the biggest highlights of the year came through WaterRA's research and innovation conference, Next Water. The event attracted over 200 delegates from across the world to participate in lively and engaging discussions regarding the future of, and research opportunities in the water industry.

In 2019 the event took a fresh approach to address what's NOW and what's NEXT, and saw attendance from utilities, researchers, health regulators, government, non-government organisations and consultants.

Over 60 top-class speakers from Australia and around the world shared their views on the biggest trends and challenges facing the water industry, including:

- Climate Change
- Water and Wastewater Treatment
- Resource Recovery
- One Health
- Water Security
- Data Science, and
- Alternative Water Sources.

The event also incorporated WaterRA's 10 year Anniversary Dinner, celebrating our journey from the CRC for Water Quality and Treatment to Water Quality Research Australia and now Water Research Australia.



Workshops and events



8 Community of Interest workshops

4 Wrap-up workshops

5 Tech transfer/knowledge-sharing workshops

2 Webinars

2 new factsheets in 2018-19 to take our factsheet library up to 41

144,000 document downloads

Health Stream
Factsheets | Reports
Presentations
Articles



eNews

Our **monthly newsletter** continued to deliver vital information

1700+ web subscribers

73 topics

Health Stream

Our quarterly magazine looking at water quality issues was delivered four times in 2018-2019 - editions #90-#93. Our Health Stream catalogue reached over 1900 people and proved to be invaluable to subscribers and Members with total downloads in the last three years exceeding 20,000



Four editions in 2018-2019

reached over **1900** people

20,000+ total downloads in the last four years

Next Water by numbers

202

ATTENDEES

66

SPEAKERS

80

ORGANISATIONS

11

STREAMS



Global reach...

WaterRA papers downloaded across the world in...

USA, Canada, Mexico, Brazil, UK, France, Spain, the Netherlands, Germany, Austria, Italy, Hungary, Poland, Ukraine, Bulgaria, Russian Federation, Finland, Sweden, Norway, Turkey, Iran, Pakistan, India, UAE, Egypt, Algeria, Nigeria, Uganda, South Africa, China, South Korea, Japan, Vietnam, Thailand, Malaysia, Indonesia, and Australia!



"You may have heard from us at..."

WaterRA presented at these major water industry events

International Water Association
YWP Conference

OzWater

Blue Cities 2019

Water Industry Operators
Association Logan



"You may have also seen us at..."

Queensland Water Directorate Forum
Water Industry Operators Association
Conference

AWA Specialist networks: Catchment
Management, Recycled Water, Industry,
Education, and Regional, Rural, and Remote

Industry Advisory Committee for the
Australian Research Council

Finance

WaterRA has been returning a positive operating surplus over many years and FY2019 was no exception with success driven by Next Water and increased membership plus growth of 10% in project revenue. Generating a surplus is vital for long-term sustainability including for investment back into the business to fulfil strategic goals. The WaterRA Board and management are committed to invest in, and improve member experience,

the BIG team and the organisation in line with our three-year strategy to benefit all.

The summarised financial reports (below) have been derived from WaterRA's full report for the financial year.

For the detailed Financial Report please visit waterra.com.au



Income Statement

For The Period Ended 30 June 2019

	2019	2018
	\$	\$
REVENUE		
Revenue from continuing operations	3,124,186	2,837,378
Other income	5,341	9,919
EXPENDITURE		
Research program	(876,917)	(799,903)
Education program	(184,182)	(374,039)
Operating	(1,771,976)	(1,675,568)
Depreciation and amortisation	(680)	(680)
Chairman & Ind Director remuneration	(46,000)	(46,000)
Surplus/(Deficit)	249,772	(48,893)

Financial Position

As At 30 June 2019

	2019	2018
	\$	\$
ASSETS		
Current assets		
Cash and cash equivalents	3,506,105	3,078,718
Trade and other receivables	1,572,186	432,806
Prepayments	21,739	67,904
Total current assets	5,100,030	3,579,427
Non-current assets		
Intangible asset - software	1,360	2,040
Total non-current assets	1,360	2,040
Total assets	5,101,390	3,581,467
LIABILITIES		
Current liabilities		
Trade and other payables	563,789	268,846
Revenue received in advance	3,155,726	2,170,759
Total current liabilities	3,719,515	2,439,605
Non-current liabilities		
Employee entitlements	-	9,759
Total non-current liabilities	-	9,759
Total liabilities	3,719,515	2,449,364
Net assets	1,381,875	1,132,103
EQUITY		
Retained earnings	1,131,875	882,103
Operating Reserves	250,000	250,000
Total equity	1,381,875	1,132,103



Project reports

6 new project reports

generated in 2018-19



Member meetings

2 member-only meetings were held (Adelaide, AGM in Brisbane) with national representation across our membership

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

Our BIG Team...

gets bigger...

Our Board



Our Staff



In 2018-19 we were delighted to welcome new members:



Our Members

- Atom Consulting
- Australian Water Association
- Australian Water Quality Centre
- Barwon Region Water Corporation
- Cairns Regional Council
- Central Gippsland Regional Water Corporation
- Central Highlands Water
- Centre for Appropriate Technology
- Charles Darwin University
- ChemCentre
- City West Water
- Coliban Region Water Corporation
- Curtin University of Technology
- Deakin University
- D-CAT
- Department of Health - Environmental Health Northern Territory
- Department of Health & Human Services Tasmania
- Department of Health & Human Services Victoria
- Department of Health Queensland
- Edith Cowan University
- Federation University
- Flinders University
- GHD
- Goulburn Valley Regional Water Corporation
- Grampians Wimmera Mallee Water Corporation
- Griffith University
- HARC
- Hunter Water Corporation
- IBL Solutions
- Icon Water
- Lower Murray Water
- Melbourne Water
- Monash University
- Murdoch University
- National Measurement Institute
- Natural Logic
- NSW Health
- Power & Water Corporation
- Risk Edge
- RMIT University
- Seqwater
- South Australian Water Corporation
- South East Water Corporation
- Suez Water
- Swinburne University of Technology
- Tasmanian Water & Sewerage Corporation
- University of Adelaide
- University of Melbourne
- University of Newcastle
- University of New South Wales
- University of Queensland
- University of South Australia
- University of Technology, Sydney
- University of the Sunshine Coast
- University of Western Australia
- University of Wollongong
- Veolia Water Australia Pty Ltd
- Victoria University
- Viridis Consultants
- Wannon Region Water Corporation
- Water Corporation of WA
- Water Futures
- Water Industry Operators Association of Australia
- WaterNSW
- WaterQ Plus
- Western Region Water Corporation
- Western Sydney University
- Yarra Valley Water

Our Trusted Partners*

- Canadian Water Network
- Chinese Academy of Science
- International Research Center On Water and Environment (C.I.R.S.E.E.)
- KWR Watercycle Research Institute
- Public Utilities Board Singapore
- STOWA Foundation for Applied Water Management Research
- TZW Water Technology Centre
- UK Water Industry Research
- Veolia Environnement Research and Innovation (VERI)
- Water Environment & Reuse Foundation
- Water Research Commission South Africa
- Water Research Foundation
- Water Services Association of Australia

* through membership of the Global Water Research Coalition.



We would like to extend a warm thank you to all of the departing staff and Board who collectively provided over a decade of dedicated service to WaterRA, our mission and our members: Angela Gackle (Communications Manager), Deepika Jaduram (Research Manager), Claire McInnes (Senior Research Manager), Dr Ian Overton (Chief Research Services Officer) and Dr Melita Stevens (Board Industry Member | Melbourne Water)

...and better

Alumni

Next Water marked a special milestone for WaterRA – our 10th anniversary – celebrating our journey from the CRC for Water Quality and Treatment to Water Quality Research Australia and WaterRA. During our 10 Year Anniversary Dinner we formally launched our alumni network. We have a proud history of supporting and being supported by so many in the water industry and our alumni network looks to provide avenues to reconnect, forge new networks and support career growth. With over 200 alumni of past students, mentors, committee members and employees it will allow us to celebrate all their accomplishments.

Our CEO Karen Rouse was joined by past CEOs Will Buchanan, Paul Pretto, David Halliwell, Jodieann Dawe, Dennis Steffensen & Don Bursill.

Celebrating achievement

While research completion and outcomes are always a BIG Team effort, in 2018-19 there were numerous individuals who were recognised for their contributions and success. This acknowledgement of achievement was across our entire membership, spanning early, mid and late career.

2018 NSW AWA Student Water Prize – Florence Choo
[University of New South Wales / SA Water sponsored]

2018 NSW AWA Young Water Professional of the Year Award
– Dr Yulia Shutova [Past WaterRA student, graduated in 2015]

2019 Nancy Milis Memorial PhD Award – Sarah Aucote
[University of Queensland / SA Water sponsored]

2019 Michael R Moore Memorial Honours Award –
Dean Mensinga [Griffith University / Seqwater sponsored]

Thank you

WaterRA is grateful for the support of our BIG Team, which enables us to reach out to other professionals, organisations, and communities! Our BIG Team are the lifeblood of WaterRA and allow us to continue to develop research and tools that have a lasting impact on the water sector.

Our Student Sponsors



Our Committees

Risk and Audit

Jamie Hollamby (Chair)
Australian Water Quality Centre
Ken Murphy (non-Executive Board
Director) | independent
Gary Penn (non-Board member)
SA Water

Human Resources

Dr Steve Capewell (Chair)
Water Corporation
Prof Richard Stuetz | UNSW
Prof Christopher Saint | UniSA

Strategic Advisory

David Sheehan (Chair) | Coliban Water
Amy Dysart (Deputy Chair)
Power & Water Corporation
Dr David Cunliffe | SA Health
Dr Annette Davison | Risk Edge
Graham Hawke | Bureau of Meteorology
Prof Cynthia Mitchell | University of
Technology, Sydney
Dr Greg Ryan | Water Services
Association of Australia
Wendy Henderson | NSW Health
Karen Rouse (Secretary) | WaterRA

Education

Dr Rita Henderson (Chair) | UNSW
Dr Kathryn Linge | Curtin University
Asoka Jayaratne | Yarra Valley Water
Dr Louise McKenzie | Hunter Water
Dr Paul Monis | SA Water
Glen Rowlands | TasWater
Emeritus Prof Felicity Roddick (invited
Guest) | RMIT

Project Review

Rino Trolio (Chair) | Water Corporation
Stuart Khan | UNSW
Con Pelekani | SA Water
Dr Martha Sinclair | Monash University
Asoka Jayaratne | Yarra Valley Water

Our Mentors

Suzanne Froschio | SA Health
Daniel Hoefel | SA Water
David Halliwell | Deakin University
Annette Davison | Risk Edge Pty Ltd
Joanne O'Toole | Monash University
Cheryl Lim | NMI
Cameron Veale | Seqwater
Colin Long | Mak Water
Daniel Deere | Water Futures Pty Ltd
Shaun Cox | Inxure Strategy Group

Jason Barnett | TasWater
Neil Crossing | AllWater
Michael Storey | Isle Utilities
Tony Priestley | Consultant
Stephanie Rinck-Pfeiffer | GWRC
Peter McCafferty | ChemCentre
Leon van der Linden | SA Water
Tanja Stefanovic | Beyond Paradigms
Amy Dysart | Power & Water

Stacey Hamilton | WaterCorp
Tara Callingham | Goulburn Valley Water
Kris Coventry | Melbourne Water
Melita Stevens | Melbourne Water
Kathy Cinque | Melbourne Water
Leon van der Linden | SA Water

Advancing the science behind water



Member-driven

Healthy people, healthy lives, healthy planet

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