

## Annual Forum Final Call



As the registrations roll in for the 2018 **qldwater** Annual Forum we're doing one final call to ensure anyone and everyone with an interest in the Queensland urban water sector will join us for our signature annual event.

The 2018 event will be held on the Gold Coast on 5- 6 September, commencing with a tour of the Gold Coast Disaster Management Unit and Broadwater Parklands/ Commonwealth Games Aquatic Centre. Day one also features the Ixom Best of the Best Queensland Water Taste Test, finishing off with a dinner at the Gold Coast Turf Club.

Day two is jam packed with interesting presentations and panel discussions focusing on strategic sector-wide investment, data transforming the water sector, catchment resilience, resource recovery and renewables and customer expectations. The keynote is Associate Commissioner John Madden presenting on the National Water Reform Inquiry Report.

This event is not your typical conference. There is no call for papers – the sessions are sourced based on the work of our Technical Reference Group and the issues that group has identified as being of strategic importance for our industry. We work hard to develop a program which engages both our industry and key regulatory agencies to proactively address our challenges.

It will be relaxed, informative and thought-provoking and the Gold Coast in September is a great place to be. We look forward to seeing you there.

## QWRCIP Scholarships

Following the success of the Queensland Water Regional Communities Innovations Program (QWRCIP) scholarships last year, the Vendor Pitch session at the Annual Forum will again fund professional development opportunities for our smaller, regional members.

Congratulations to the three selected scholars who will be spending part of the week of 3 September with some of the bigger utilities around the south-east corner.

Apart from joining us at the Annual Forum at the Gold Coast and TRG meeting on the Friday, Mark Caon from Banana Shire Council will spend a couple of days with Queensland Urban Utilities, focussing on worker safety, water supply safety, productivity and operations procedures; Cliff Caton from Central Highlands Regional Council will spend time with Logan City Council and the Logan Water Infrastructure Alliance looking at infrastructure delivery; and Nick Hall from Charters Towers Regional Council will join Unitywater for some focussed asset management.

We thank our willing hosts, amongst others Nerida Airs and Moira Zeilinga, Peter Donaghy, Rob Lynch and Richard Petterson, and Daryl Ross for their swift and positive approaches.

*(...continued Page 5)*

## CEO Report

The Queensland Water Regional Alliance Program (QWRAP) has been in place since 2011 and with thanks to the sustained efforts of LGAQ, has received a grant from the Department of Natural Resources, Mines and Energy for a further four years commencing 1 July 2018. Outputs from the work to date are available at [www.qldwater.com.au/qwrap](http://www.qldwater.com.au/qwrap).

While the grant has been increased and it is a very positive thing for the industry in regional Queensland, it only includes financial support for the five most mature regional collectives which unfortunately leaves some uncertainty around the effort being built in North and Central Queensland, and growing interest in North-West Queensland. **qldwater** will continue to support activities in these locations and advocate for inclusion in the broader program.

The grant extension follows a positive Deloitte Access Economics review of the program:

***“(QWRAP)... is a program that focuses on building collaborative models to deliver urban water and sewerage services on a regional basis.***

***QWRAP represents a potentially effective mechanism to develop regional economies of scale to realise the four dimensions of water security, reliability of supply, water quality and appropriate water pricing.”***

The review suggests benefits from the program to date are likely to range from \$1.9 million to \$4.0 million, but also notes significant data gaps in benefit data suggesting a much higher return on investment, posing a challenge for stakeholders to address with the program going forward.

Earlier this year we undertook a review of our strategic priorities, and a short summary is provided here. These topics have been identified as key challenges facing Queensland’s urban water and sewerage services into the future, and will be used to shape our advocacy, work program and event themes. Six of the ten are being considered in some way as part of our annual forum at the Gold Coast in early September 2018.

### 1. Data transforming the water sector

Broadly, this priority incorporates many things from the growing interest in smart/ automated data monitoring tools being increasingly adopted, to what you can do with that data. It is the latter where **qldwater** has attempted to provide leadership, championing industry benchmarking for many years within and among utilities, and with regulators. Our Statewide Water Information Management System and published annual

benchmarking reports have laid a solid foundation, and the next phase proposes to further “drill down” to understand value and costs at a scheme level through clustering.

### 2. Strategic sector-wide investment

The “infrastructure cliff” concept has previously been presented in journal articles but the overall theme of smart investment given declining resources is fundamental to our work. The priority incorporates working with LGAQ and the Queensland Government on grant reform, and the TOTEX concept including financially sustainable infrastructure solutions. The annual forum will include an address by a Productivity Commissioner and panel session, specifically focussing on this work.

### 3. Regional innovation

Incorporating QWRAP and other regional collaborative activities, this priority focusses on a regional-scale view of services for customers – looking beyond local government boundaries for value and efficiency.

### 4. Harmonising water regulation

The priority seeks to take a holistic approach across all regulatory areas, including water security, drinking water, environmental management and economic regulation.

### 5. Resource recovery and renewables

This has become a hot topic internationally with many successes in resource recovery (particularly from sewage) in Europe and other places. Fostering innovation is crucial, however it is important to also understand that models which may have worked overseas can’t necessarily translate directly to Queensland conditions – due to factors like distance (between treatment activities and potential end users of recovered products), characteristics of wastewater, prevailing treatment technologies and scale of plants. We will strive to build understanding of options and their economic viability, and encourage appropriate trials.

### 6. Catchment resilience in a changing environment

Focussing on broader catchment health, this priority looks beyond specific impacts, for example a point source discharge, to innovative, fit-for-purpose solutions which achieve desired goals more effectively, including offset mechanisms and bubble licences.

## CEO Report (.../continued)

### 7. Understanding and exceeding customer expectations

This priority includes building greater understanding of supply and demand factors and positively influencing behaviour, the impacts of demographic change, as well as pricing and affordability.

### 8. Building jobs in a changing industry

Incorporating the work of the Water Skills Partnership, the priority focusses on adapting workforces to meet future skilling challenges through job redesign, re-skilling and up-skilling, and building career pathways and recognition.

### 9. Next gen water

A consideration of trends, issues and industry disruptors and technologies to support change, including communities of practice around “smart” water initiatives.

### 10. Small remote and nimble

A recognition of the particular challenges of providing sustainable services in regional and remote locations, affordable technologies which exploit the advantages of remote locations (including space) and consider issues of distance between communities, boom and bust population cycles, and population decline.

**qldwater**'s main objective is to be the central advisory and advocacy body within Queensland's urban water industry, acting as a collaborative hub, working with members to provide safe, secure and sustainable urban water services to Queensland communities.

The work of QWRAP and identified strategic priorities strongly reflect this objective, and our network has never been stronger, with excellent attendances and interactions at our most recent events including our skills forum, SCADA/cybersecurity workshop and regional conferences at Cloncurry, Goondiwindi and Bundaberg and the growth of other information sharing efforts including our online fora.

There are countless examples of service providers working together on common solutions, a willingness to foster exchanges. Particular thanks to Unitywater, Queensland Urban Utilities and Logan City Council for agreeing to mentor scholarship recipients from regional Queensland recently, and other hosts of industry networking events (Cloncurry, Goondiwindi, Bundaberg and City of Gold Coast).

We have our biggest week of the year approaching commencing 3 September:

- 5/9 at the Gold Coast is the annual forum tour, taste test, vendor pitch and local presentations
- 6/9 is the main day for presentations, largely based on the themes above
- 7/9 is our quarterly Technical Reference Group meeting, and a few of us will be attending the AWA Gala Dinner in the evening.

We look forward to catching up with as many members as possible.

Cheers

Dave Cameron



## WIOA NZ Great Learning Experience

*2017 Qld Young Operator of the Year Harry Coleman shares his experience of the WIOA NZ tour.*

I had the privilege of being awarded the 2017 Queensland Young Operator of the Year award at the WIOA Queensland conference. I would like to thank the Queensland Water Directorate for sponsoring the award and giving me the opportunity to participate in the brilliant WIOA tour of New Zealand.

The tour group, which consisted of 17 people from all over Australia, met in Wellington and got to know each other over an entertaining teppanyaki dinner. The way that everyone in the group came together and interacted positively with one another is part of what made the tour as pleasant and entertaining as it was.

We set off on the morning of Saturday May 5<sup>th</sup> on a tour of a number of water and wastewater plants in the southern region of the North Island.

First cab off the rank was Wainuiomata Water Treatment Plant which is one of three WTP's supplying Wellington. Here we got to experience a jigger ride (mini train) along 3km of track through a mountain to get to their isolated but picturesque plant intake. The rail line runs beside the water pipe from the intake in a clear river up in the mountains to the plant. We were shown through their plant processes by their very experienced operators.

Our next stop was Paraparaumu WWTP in the Kapiti Coast district, where we were given another in depth walk through of the activated sludge plant.

After an overnight stay at Paraparaumu, we piled in the tour bus on Sunday morning and headed to our next stop which was the Waikanae WTP also run by the Kapiti Coast District Council. This recently upgraded plant was home for our NZ Host and Tour Guide, Bruce Nesbitt.

His knowledge and experience really showed out on the tour and I couldn't get over how clean and clear their water sources are, a lot different to ours back here in Yarraman! After Waikanae, we headed for the TUI Brewery for a tour which was very interesting and tasty. We pulled up for an overnight stay in Napier.

In the morning we headed off to Napier WWTP which was home to the biggest trickling filters I've ever seen and where we were also shown around some of their reticulation upgrade work sites.

After Napier, we took the highway over the Gentle Annie range to the town of Taihape and got to witness some enjoyable scenic views along the way. After arriving, we were bused up to the Taihape WTP which was similar in size to our treatment plants at home and was just as interesting as the larger treatment plants we had seen previously. Once again the expertise of the operators Keith and Dan helped me to get a good understanding of the plant in a brief amount of time.

After the tour we were treated to a lovely home cooked meal at the Taihape working mans club and played pool and darts into the night.

After a stop off and tour at the Hunterville lagoons and WWTP, we headed to Palmerston North for an afternoon of fun with Go-karting followed by the Presidents Dinner to kick off the Water Industry Operations Group of New Zealand conference.

The next two and a half days were spent at the WIOG conference which was great. It had a real emphasis on the operators and suppliers presenting papers, the quality of which was outstanding and they all proved to be very informative.



*The tour group at the Waikanae WTP Clarifier*



*Waikanae WTP Control Room*

## **WIOA NZ Great Learning Experience (.../continued)**

The highlight was definitely seeing the Aussie girls absolutely crush the NZ team in the live mains tapping competition. After the conference we bussed back to Wellington and had some free time to have a look around before flying out on the Saturday.

All in all, it was an excellent trip and many people deserve a thank you. The Operators and Guides on all our plant tours graciously gave up their time (some even giving time on the weekend) and provided the group with great explanations and knowledge about their treatment plants.

Our tour organiser, route planner, and guide Bruce did an outstanding job and really allowed us to experience so much in such little time.

I would also like to thank George and Anthony from WIOA for their contributions to making a fantastic tour.

Finally I would like to pass on my thanks to the Queensland Water Directorate for sponsoring this

award and giving me the chance to embark on such a great learning experience. It is excellent that such an opportunity exists and I encourage the employers of any young operators to have a shot for the award.

*Harry Coleman  
Toowoomba Regional Council*



*Wellington WTP Offtake*

## **Ixom Best of the Best Queensland Water Taste Test**

The Ixom Best of the Best Water Taste Test continues to gain traction as it spreads across our nation, with some excellent media coverage achieved by Ixom and WIOA including coverage from the WIOA conference and a great segment on The Project.

Through all its iterations, the taste test has always been our way to promote the good work done by water service providers in Queensland in providing a food quality product to our communities 24/7.

While we hosted a number of regional and community taste tests this year, the Queensland event to be hosted at the Annual Forum is open to all our members regardless of whether you've entered samples in a regional event.

John Mills from Toowoomba (who has undoubtedly tasted success by winning the Queensland, Water of Origin and National titles and having a go internationally) has even foreshadowed modifying treatment processes to improve the taste and characteristics of their water!

For 2018, John arranged a taste test with the Mayor and 10 Councillors judging all 13 schemes to select their finest drop for this year's event- Mt Kynoch has now been retired in favour of Haden



water, so we'll see how they go! Southern Downs Regional Council is entering their People's Choice Award, Killarney, as voted by the Stanthorpe and Warwick communities through two public taste test events earlier this year.

Please get your entry forms through to us at least one week prior to the event so we can work out the logistics.

Samples can be dropped off at the Gold Coast Turf Club prior to the technical tour departure or sent to our offices at least two days prior to the event. We will require 4 litres of each entry.

May the tastiest water win!

## Water Connections Tour

Dating back to 2006, the Water Connections Tour Week is specifically devoted to council meetings and site visits in Regional Queensland. The 2018 tour was held in May and was once again financially supported by Dial Before You Dig. The Water Connections Week tradition commenced in 2006 with a focus on sewage treatment and remote councils and has since covered most regions of Queensland.

The 2018 Tour incorporated visits to Burke Shire Council, Carpentaria Shire Council, Cloncurry Shire Council, Doomadgee Aboriginal Council, Mornington Aboriginal Council and Mt Isa Council.

Council	Area (sq km)	Pop	Water Conn.	Mains (km)	Sewer Conn.	Sewers (km)
Burke	40,126	607	184	15	118	3
Carpenteria	64,381	2,103	930	127	762	23
Cloncurry	48,112	3,736	871	56	846	33
Doomadgee	1,862	1,344	177			
Mornington	1,274	1,339	298	6	270	6
Mt Isa	43,342	23,544	7,728	155	7,406	191

The “tourists” included staff from **qldwater** as well as representatives from DES, DNRME, and LGAQ. Big thanks go to Trevor Harvey from North Burnett Regional Council who represented the TRG on the tour and provided a strong technical foundation for the visits.

Highlights from the tour included seeing the significant improvements that have been made to water and sewerage management in Carpentaria since previous visits. While the schemes in Normanton and Karumba still face significant issues, they are clearly on a path of technical and strategic improvement. In Mornington Aboriginal council, the issues of small size and remoteness were highlighted by staff and councillors of this small island council which is arguably the most remote in the State.

Burke Shire council shared many of the issues of remoteness with Mornington and was in the midst of a string of improvements at both Burketown and Gregory. Ongoing improvements were planned for the sewage treatment plant and the tour provided an opportunity for the council representatives to meet and develop ongoing communications with representatives from the Department of Environment and Science.

During the visit to Doomadgee senior council staff highlighted the difficulties for maintaining ongoing appropriate support and advice to manage the town’s water supply. This need was reinforced during the visit by the many planned upgrades slated for the plant thanks to a recent funding allocation as part of a larger program supporting all aboriginal councils.



## Water Connections Tour (.../continued)

The visit to Mt Isa focussed on the significant improvement program undertaken by the council in the past few years which has seen a well-managed but overloaded sewage treatment plant transformed to provide more recycled water for the community. The improvement program was marked by the innovative reuse of existing infrastructure and the carefully implemented staged approach to upgrades supported by the local councillors.

The final stop of the tour was Cloncurry where the water treatment plant was inspected. The plant has suffered for some time from the tyranny of multiple and diverse water sources. Differences in water chemistry for each of the sources provides challenges for the plant which is only partially automated. The operators had

successfully implemented a number of innovations to deal with these issues and were seeking further funding support for capital improvements to the plant.

The NW Regional conference was also held in Cloncurry on the final day of the tour with a strong collection of presentations from the councils within the region and from the visiting state agencies. The theme of regional collaboration came through strongly in many of the presentations and resulted in an informal discussion of future options for greater cooperation among the councils. The group agreed to have a follow-up meetings to discuss technical issues and opportunities for collaboration through QWRAP.

More images at <https://qldwater.smugmug.com/>



## SCADA & Cyber security workshop

The TRG SCADA / Cybersecurity workshop was held on Thursday 31 May at the Crosby Park Events Centre in Albion following identification of the importance of the topic **qldwater's** Technical Reference Group.

Guest speakers included representatives from 8 utilities as well as the water regulator and a range of recognised experts. The **summary report** outlines common themes from the presentations, identifies risks for consideration by **qldwater** members, and future **qldwater** actions.

Presentations from the workshop are available to members at [www.qldwater.com.au/SCADA\\_Cyber\\_Security\\_Workshop\\_Presentations](http://www.qldwater.com.au/SCADA_Cyber_Security_Workshop_Presentations) (password required). Our thanks again to all who made their time available to contribute to these discussions.



## WIOA Conference

**qldwater** was pleased to be an exhibitor at the Water Industry Operators Association of Queensland Conference (WIOA) in Logan in June, sharing our booth with Lutra to showcase the partnership between **SWIMLocal** and Lutra’s Infrastructure Data program. It was a very successful event attended by more than 800 individuals, with high quality presentations and some great social events. Some of the highlights included:

### Mains Tapping Competition

The Ixom Mains Tapping competition involved five teams going head to head in a bid to tap a live water main in the shortest time. Trent Roberts and Spencer Stacey, also known as The Tapping Tubbies from City of Gold Coast, will be hanging on to the title for another year edging out Cool Tappings.

Plenty watched the spectacle with many suggesting they could do better – time to follow through and get organised for the 2019 competition!

Special mention to the Logan ladies team (Hot Tappers) of Madison Hilleary and Zoe Nelson – in their first heat against the Tubbies the blokes were so keen to win that they broke the equipment to register a no result!



Thanks to Ixom and the Tubbies, the Currumbin Wildlife Sanctuary Animal Hospital received a \$1,000 donation. Our thanks to the fantastic people at Gold Coast and Logan for all their efforts to organise this great event again.



### Pipped by the Blues

The Ixom Water of Origin Taste Test saw Livingstone Regional Council rolled by Port Macquarie-Hastings Council. Our own Carlie Sargent tried her best to get the Queensland water over the line but much like the state team just couldn’t make it happen on the day! No doubt an entry of Livingstone Lager would have produced a different result!

### Awards for Awesomeness

As our annual opportunity to acknowledge our operators, it was with great pride that we announced the 2018 **qldwater** Young Operator and Civil/Allrounder of the Year.



Described by his peers as the go-to liaison for “challenging” customers, an excellent role model for his team and a regular contributor to his employer’s ideas portal, the 2018 Young Operator of the Year- **Andrew Hanifin** (pictured above) from Unitywater- sets an excellent example at work and out in his community.

Andrew coaches kids’ sports and acts as a crisis phone councillor for the Salvation Army when he finishes his day job. He also makes time for further studies having completed all his water industry worker training requirements as well as a Cert IV in Plumbing and Drainage.

The 2018 Operator of the Year Civil / Allrounder was awarded to **Brad Millful** from Logan City Council.

## Awards for Awesomeness (.../continued)



Brad (left) has been in the water industry for 24 years and a champion for learning and development for much of that time.

As a leader for the SEQ water industry worker program Brad has been a mentor for over 75 field staff, a contributor to training materials and a representative on various industry and technical advisory groups. Aside from trade qualifications, Brad has achieved a Cert IV Training and Assessment, Diploma of Water Operations and Diploma of Project Management. With a focus on continuous improvement, Brad instigated a range of business improvements above and beyond the requirements

of his role. Above all, Brad is a much-loved bloke and a fantastic contributor to his organisation and the industry more broadly.

Congratulations also to Tony Cover from Goondiwindi Regional Council who won the AWA Leon Henry Operator of the Year award and Gary Fenwick from QUU who was highly commended for the same award. Tony has supported our footy tipping and helped us with a few tours over the years, and Gary was one of the first operators certified under the national Wastewater/ Recycled water framework. Glenn Twite from Townsville City Council also picked up best paper by an operator.

## SWQ Conference - Goondiwindi

A very chilly Goondiwindi greeted attendees of the mini-conference on 18 July, but delegates enjoyed a lovely dinner, visit to the Goondiwindi STP (DAF wastewater plants are a rarity in Queensland) and diverse range of presentations. Congratulations to Toowoomba Regional Council for taking out the conference's taste test.

John Mills entertained everybody with tales of what he did on his trip to Berkeley Springs to compete in the international competition earlier in the year, and what he planned on doing to "optimise" Mt Kynoch's water to become a world beater in future.

He has subsequently run into a bit of a snag with Toowoomba's councillors conducting their own blind test to determine the scheme to be entered into this year's state-wide competition, with Mt Kynoch soundly beaten by the Haden supply, servicing around 195 people

just to the North of Toowoomba city.

Thanks to our event sponsors, particularly new sponsors Challenger Valves, A1 Earthworks and Actuators and 360 Engineering for their support, and Trevor Seth and Goondiwindi staff for helping make a great networking event.



# SEQ Conference - Bundaberg

The SEQ Conference hosted by Bundaberg Regional Council on 8-9 August started off with a technical tour of the Rubyanna Wastewater Treatment Plant shortly after it was officially opened that morning.

As the largest infrastructure project ever undertaken by Bundaberg Regional Council, the plant will service 60,000 residents. The impressive array of 1440 solar panels will provide around one third

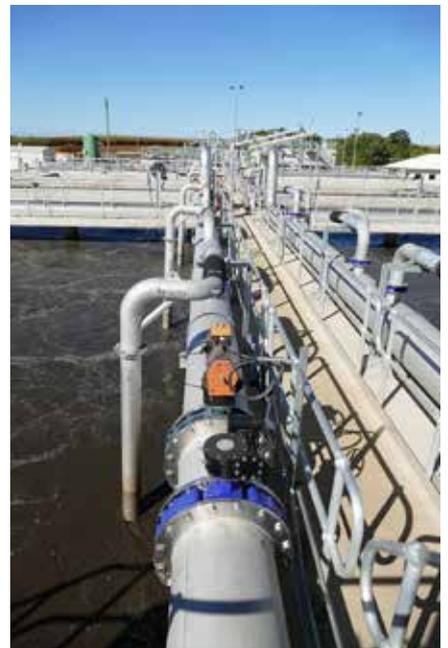
of the plant's power.

The tour group then made their way to the Bundaberg Rum Distillery for a guided tour of the museum and the fully operational facility, after which we had the opportunity to taste a variety of rum flavours- the liquors went down a treat!

Day two was held at the Bargara Cultural and Community Centre hall with a range of presentations as well

as the SEQ taste test, with water from Burgowan Water Treatment Plant selected as top drop for the region- congratulations to the team at Fraser Coast Regional Council.

Thanks for our event sponsors Aqseptence Group, Aquatec Maxcon, Challenger Valves and Actuators, Royce Water Technologies and Hydramet.



# Member Resources - What's New

## Gas or Hypo or something else?

The majority of Queensland water and sewerage schemes use chlorine for disinfection. Chlorine gas and liquid sodium hypochlorite are by far the most commonly used chlorination chemicals, with chlorine gas generally, but not exclusively favoured by the larger service providers and for large water and sewerage schemes and sodium hypochlorite for smaller, often regional and/or remote, providers and schemes. Many service providers use different types of chlorine for different schemes.

**qldwater's** "Gas or Hypo or something else?" discussion paper, developed by Alan Kleinschmidt, examines the pros and cons of

traditional chlorination options as well as emerging technologies, including electro-chlorination and advancements in calcium hypochlorite solutions. It attempts to provide management guidance to help choose options which provide the appropriate balance of cost, disinfection outcomes and drinking water safety, and worker and community safety in a range of scenarios, reflecting the diversity of Queensland's communities.

options, and as it is a discussion paper, encourage all to review the published document, and provide feedback towards its continuous improvement.

Check out our resource library at [www.qldwater.com.au/resource-library](http://www.qldwater.com.au/resource-library), for the growing list of **qldwater** resources, member sample documents, procurement materials and more. Better to borrow than re-invent the wheel!



## Telecommunications Infrastructure on Reservoirs

The activities of telecommunications service providers are attracting a growing profile with changes to the federal telecommunications legislation aimed at streamlining the introduction of NBN and 5G. It is challenging keeping up, with the formation of a Powers and Immunities Reference Group (peak bodies for telecommunications, water, roads, rail, power and facilities management), a sub-group representing landholders, and a water sector-specific group convened by the Water Services Association of Australia, as well as a range of separate consultations with the Department of Communication and the Arts.

A range of case studies across NSW have been presented to support the landowners' case and Seqwater has been a focus, with the Alexandra Hills reservoir being a special case

for scrutiny, including from Work Health and Safety Queensland. The proliferation of equipment on the reservoir is compounded by examples of poor installation, an unknown origin for many of the devices, and is the subject of legal challenges.

WSAA has taken a lead role in championing our industry's efforts, the Department of Natural Resources and Mines has been very supportive including advocacy from the Minister, and the guidelines jointly developed by qldwater and the NSW Water Directorate have proven to be a valuable resource. At the time of writing, the landholders had generated a range of process documents, looking at complaints handling, asset identification, access and emergency shutdowns for broader endorsement.

The water sector representatives remain keen to see this equipment ultimately removed from reservoir roofs, with some concessions offered to help telecommunications providers, however while awareness has definitely been raised, it is difficult to speculate whether it will ultimately lead to the necessary regulatory reform. What appears to be an obvious risk requiring major intervention to manage, is caught up in a bureaucratic process.

There is however some evidence that complaints processes are being better managed, where water utilities seek to pursue them. All members are encouraged to keep good records of their interactions with the Australian Communications and Media Authority and relevant telecommunications providers where issues are encountered, and report these through **qldwater**.

## Skills Update

### Future Skilling and Training Needs

**qldwater** was invited through our existing contract with the Queensland Department of Employment, Small Business and Training (DESBT) to provide advice to Jobs Queensland about the likely skilling and training needs for the water industry for the next three to five years. We invited input from members of the Water Skills Partnership Group and referred to data published in previous **qldwater** Workforce Composition Snapshot Reports to inform our report. Thank you to everyone who responded to our request.

The responses highlighted common and significant challenges in attracting experienced operators, losing staff to other higher-paying industries and the high cost of training in regional areas. All of this input was included in our report to Jobs Queensland and we hope to be able to release a copy of the report soon.

It is clear from our research that career opportunities in the water industry are not well understood and more needs to be done to promote potential career paths to both school leavers and other qualified tradespeople.

**qldwater** is planning on working with a number of Central Queensland Councils which are particularly challenged in attracting and retaining staff to trial a number of initiatives designed to raise awareness of the issues and highlight the career opportunities available in the water industry.

**qldwater**'s contract to provide industry advice to DESBT was extended to March 2019 so we will continue to advocate on behalf of the Queensland water industry for appropriate Vocational Education and Training investment and support for skilling and training.

### Operator Certification

Following the Department's approval to extend the second chance funding initiative through to December 2018, 43 wastewater, recycled water and drinking water treatment operators have commenced gap training to become Certified Operators under the national Drinking Water or Wastewater/ Recycled Water Treatment Frameworks.

The Department has confirmed this is the last time funding will be made available to support gap training to achieve Certification and has encouraged **qldwater** to find a longer-term solution. **qldwater** has been working

closely with WIOA and Australian Industry Standards to develop Skill Sets for inclusion in the National Water Package and is exploring a number of options.

**qldwater** has been working with WIOA to draft a combined Certification Framework for the existing Drinking Water, and Wastewater/ Recycled Water Frameworks and submitted the draft framework for approval by the Water Industry Skills Taskforce (WIST) on 23 August. At that meeting, the new framework document was approved with some minor amendments to be made. Its new short title will be the "Water Industry Operator Certification Framework," and the existing WIST will be reformed with a new terms of reference and title of "Water Industry Operator Certification Taskforce," reflecting that its sole focus is now as the "Framework Owner" role.

The combined framework will facilitate a more seamless approach to adding new Certification streams in the future, and improve planning for users.

### Regional Water Industry Worker Pilot

Following the success of the Water Industry Worker Program in South East Queensland, a regional pilot of the program is being conducted to potentially include Mackay, Whitsunday, Isaac, Townsville and Cairns Regional Councils. Water Industry Worker is a competency-based training program with a focus on networks staff – which can include construction and maintenance of pipe and related assets and it links to accredited training through the National Water Training Package (NWP) and broader Vocational Education and Training framework.

A workshop was recently held in Mackay to develop a collaborative approach to implementing the program. Thanks to Brad Milful from Logan City Council, and Kim Moore and Craig Dearling from Unitywater who attended the workshop to share their experiences with the SEQ program.

It is expected there will be six staff from each participating Council involved in the pilot and options for supporting the pilot with a shared project officer are currently being explored.

## National Water Training Package Qualifications Review

Following a lengthy review process, the Diploma of Water Industry Operations is almost complete and is expected to be ready for enrolments in early 2019. Thanks to Brad Milfull of Logan City Council who has participated in the Technical Advisory Committee (TAC) and represented the interests of the Queensland water industry throughout the review process, and Julia Krawitz, formerly of City of Gold Coast.

A review of a number of other qualifications in the National Water Training Package has recently been announced. **qldwater** will participate in the TAC and has submitted nominations for a number of Queensland representatives to be considered for involvement.

## Water Quality Online Course

The newly released Water Quality – an online course for people working on or around water infrastructure appears to be filling a much needed training gap. Since its release on 20 July, 234 people have accessed the course and we thank those who have provided feedback.

The course provides a simple overview of what contaminants are, the risks they pose, how they can enter a drinking water system and the responsibilities of those working on infrastructure to reduce that risk. With practical guidance on how to operate within work sites including good housekeeping and disinfection practices, the course complements our existing online offerings- the industry induction package, legislation and risk management.

This course is provided free of charge to **qldwater** and Water Skills Partnership members. It is intended to use the “Aqua Card” title referred to previously for a fee for service course targeting contractors servicing Queensland utilities. The content will essentially be the same, but a statement of completion will be generated and results tracked. Some members are

considering whether to mandate the course as part of service contracts and we are looking into the additional necessary technologies and processes.

We would particularly like to acknowledge the following people for their assistance and feedback in the development of the course: Alan Kleinschmidt (for the first detailed version of the content), Brian Hester, Shannon McBride, Jill Busch, Dave Barry, Trevor Dean, Laura Shiels and Palith Siriwardana. Thanks also to the qldwater members who have kindly contributed photographs.

Email **Carlie Sargent** if you need help accessing the course at [www.qldwater.com.au/water-quality](http://www.qldwater.com.au/water-quality).



## SWIM update

It's reporting time! All SWIM annual water and sewerage data is due by 5pm on Tuesday, 2 October 2018.

Most Queensland Service Providers now use the updated **SWIMLocal** software as the preferred method to report their annual water and sewerage data requirements, while use of the fully licenced version of **SWIMLocal** continues to grow with 32 councils now using the software for the everyday management of their water and sewerage data.

This is the fourth year of reporting against the Queensland Government's Key Performance Indicators (KPIs), which now seem stable with very minimal changes to the indicators reported last year.

The SWIM Help and Information page on our website has been updated with the latest versions of indicator definitions, metadata help files, Greenhouse Gas calculators and more- head to [www.qldwater.com.au/SWIM\\_Help](http://www.qldwater.com.au/SWIM_Help) for more information.

# Queensland Water Regional Alliance Program

## QWRAP Review and Future

The Queensland Water Regional Alliance Program (QWRAP) has been in place since 2011 and with thanks to the sustained efforts of LGAQ, has received a grant from the Department of Natural Resources, Mines and Energy for a further four years commencing 1 July 2018. The grant provides financial support for the five most mature regions which has created uncertainty about the future of efforts being built in North and Central Queensland, and growing interest in North-West Queensland. **qldwater** will continue to support activities in these locations and advocate for inclusion in the broader program.

The ongoing funding was supported in part by an independent review of the QWRAP by Deloitte Access Economics. The review concluded that “QWRAP represents a potentially effective mechanism to develop regional economies of scale to realise the four dimensions of water security, reliability of supply, water quality and appropriate water pricing.”

It suggested that benefits from the program to date are likely to range from \$1.9 million to \$4.0 million, but also noted significant data gaps in benefit data suggesting a much higher return on investment.

Management of QWRAP activities has also been updated as part of the new funding round. A key development is the introduction of a ‘maturity model’ whereby all activities are assessed based on their contribution to promotion of regionalisation. Support for different activities is moderated by this assessment so that, for example, funding for regional projects is prioritised to those that are assessed to further a groups regional development. An example of the maturity model is presented below.

Unmatched funding is still provided for Regional Coordinators but their activities are assessed against the maturity model using regular KPI assessments and incentives are provided for promoting regionalisation.

Collaboration Maturity		Examples of priority projects/activities for support
1	Little collaboration	N/A
2	Undertaking joint activities	<ul style="list-style-type: none"> <li>Projects to analyse (or mitigate) financial, operational, WHS or customer risks.</li> <li>Joint operations, planning or procurement.</li> <li>Joint Skills development activities and programs.</li> </ul>
3	Basic collaboration	<ul style="list-style-type: none"> <li>Joint KPI reporting and process improvement.</li> <li>Alignment of regulatory requirements.</li> </ul>
4	Advanced formal collaboration	<ul style="list-style-type: none"> <li>Regional projects leverage other funding pools.</li> <li>Common approach to asset management or planning.</li> <li>Skills and staff-sharing across the region or with other regions.</li> </ul>
5	QWRAP ‘Pilot Region’	<ul style="list-style-type: none"> <li>Institutional review planned and underway</li> </ul>
6	Water Alliance (formalised alliance)	<ul style="list-style-type: none"> <li>Assessment of barriers to regional full-cost pricing.</li> <li>Development of regional standards and documentation.</li> <li>Joint negotiation with regulators and Qld Government.</li> <li>Regional Strategic Planning (e.g. water security, environmental stewardship, investment)</li> <li>Joint and customer engagement programs.</li> <li>Regional water security planning.</li> </ul>
7	Considering new models	<ul style="list-style-type: none"> <li>Regional capital planning, investment (and outsourcing).</li> <li>Alignment of W&amp;S asset management.</li> <li>Formal and ongoing staff-sharing arrangements.</li> <li>Shared approach to ensuring customer service standards.</li> <li>Regional benchmarking.</li> </ul>

**QWRAP Review and Future (.../ continued)**

Collaboration Maturity		Examples of priority projects/activities for support
8	Alternative regional arrangements	<ul style="list-style-type: none"> <li>· Regional price path for cost recovery (regional CSOs).</li> <li>· Regional infrastructure planning and delivery.</li> <li>· Benchmarking against other regional entities nationally.</li> <li>· Independent budgeting and strategic planning oversight.</li> <li>· Improving on council customer engagement and liveability programs.</li> </ul>

**QWRAP Regional Updates**

**RAPAD Water Alliance**

A program to optimise Drinking Water Quality management and disinfection was recently completed. The work led to better understanding of the regions networks and processes and guides future improvements across the region in a manner that allows the councils to share and reduce their costs. New projects have been developed to tender for joint sewer relining and review the region’s telemetry & SCADA arrangements with the aim of initiating improvements assisted by the critical mass generated by regional scale. Further projects are being developed to investigate sewage treatment plant suitability to environmental values and investigate information required for a regional water security plan.

**WBBROC Water Alliance**

The Design & Construct Code developed for the region (based on the successful SEQ D&C Code) has been completed and launched by the Regional organisation of Councils. The successful sewer relining project completed last year has been developed into an ongoing program with the work for the current financial year involving all six councils across the region. The councils have also received support from DNRME to align their DWQMP requirements which will provide savings across the region.

**WIM Alliance**

The Alliance has embarked on a significant project to jointly procure services for management and improvement of two coastal STPs. This new project has been highly successful and is the first QWRAP project to touch on joint capital improvement, a key aim for QWRAP because of the opportunity it presents for significant regional savings. The region is also investigating joint skills development opportunities and has undertaken a project to review coastal discharges to the GBR.

**DASB Group**

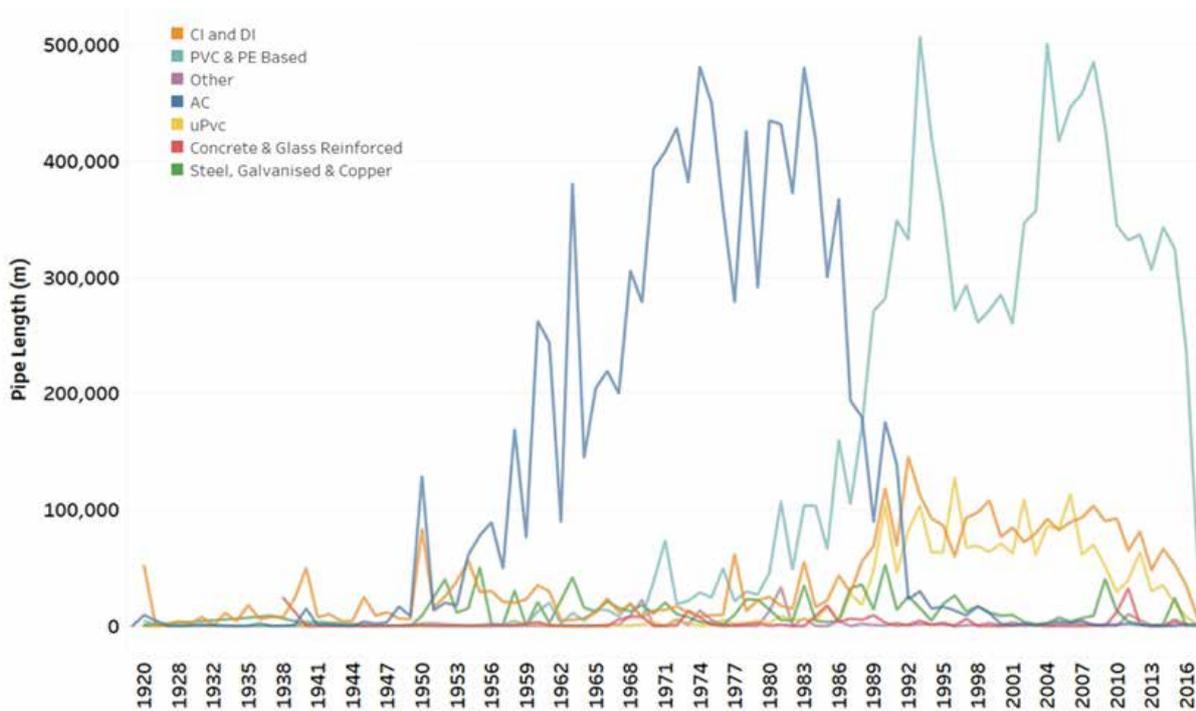
The Downs and Surat Basin group has commenced the governance review which is a mandatory element for accessing ongoing QWRAP funding. The review is investigating current management of water and sewerage services and analysing the potential benefits, costs and risks of alternative regional models. Other projects being initiated in parallel with the governance investigation include a review of current SCADA policies and the potential for regional alignment, development of a regional Water Efficiency Planning template and analysis of the potential for joint sewer relining.



## QWRAP Research: Infrastructure Cliff Report II

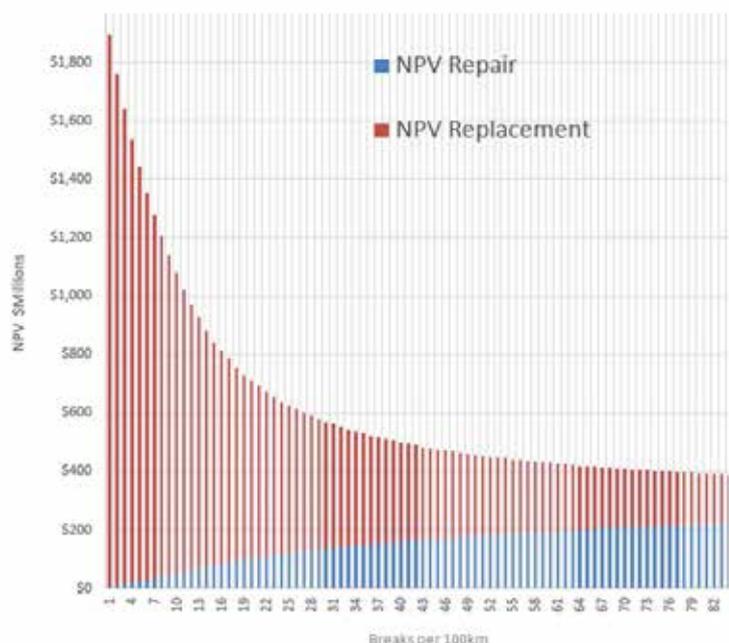
The initial research into a potential ‘infrastructure cliff’ continues to be well received by the water and sewerage industry. The first report was published in the second half of April and has generated considerable discussion within the water industry and State agencies.

The phase one report identified the potential horizon for a substantial cohort of water and sewer mains that are currently reaching the later stages of their expected life. For example, the graph below shows the installation progression for various water mains materials in Queensland, indicating a significant increase occurred in the 1960s and 1970s and a large cohort of asbestos cement (AC) pipes are reaching their expected life limits (of between 60 and 80 years).



The second stage report which is currently being finalised focuses on the potential costs of this theoretical infrastructure cliff and examines appropriate responses.

The trade-off between repair vs. replacement is hotly contested within the industry and is often hard to conceptualise due to the added variable of criticality (importance) of pipes and the variability of factors which cause early deterioration or failure. The graph on the right shows the trade-off between repair vs. replacement without criticality of pipes being taken into consideration. This figure was generated by a model that explores the competing costs of repair versus replacement to explore the optimal levels of repair that should be undertaken before seeking to entirely replace a water main.



The final report will be completed for review by an expert panel within the month and will then be released as a discussion draft for broader comment from the industry.

# Environmental Management in the Water and Sewerage Sector

The Sewerage and Water Environmental Advisory Panel (SWEAP) is a focussed *qldwater* reference group reporting to the TRG that has been meeting at least twice a year for several years. It includes representatives from a range of service providers of varying size, from across the state. The group was formalised in 2017, with the current chair being Mark Vis (Tablelands Regional Council), and Deputy Cameron Jackson (Queensland Urban Utilities). The next meeting is 16 October 2018 with a number of presentations from DES representatives. Some key issues currently under discussion are listed below.

## Review of the new Water Quality Offsets Policy

A new round of consultation on this draft Policy was launched by DES in July 2018. The new draft was a marked improvement on previous versions but still left large hurdles to offsets outside a few (mostly SEQ) prime sites. However, greater flexibility and innovation allowed under the amended Policy (and associated guidelines) was seen as an advantage by the industry and reflected in a collated response provided to DES in early August. An update on the progress of the document will be provided by Jim Fewings (DES – Policy and Planning) at the next meeting.

## History

Initial consultation on the **Draft Point Source Water Quality Offsets Policy** closed in Sept. 2017 following an **initial *qldwater* response** with a **'final response'** submitted at the end of September. Further consultation on a **'final draft'** in March 2018 resulted in **'final feedback'** in April. This feedback was critical of the Policy's uncertainty, lack of clarity and failure to integrate with other Departments or provide incentives and appropriate guidelines.

## Review of Sewage Pumping Station Standard Conditions

In early 2017 the Minister for Environment put an end to the long-term plan to transition from regulations to an industry Code of Practice and the Department instead invited industry participation in reviewing the standard conditions.

The SWEAP group has reviewed negotiated SPS conditions from around the state and is working with DES in their project to review standard conditions for sewage pumping stations.

## End of Waste Framework

Following the transition to a new End of Waste Framework by DES, it was realised that beneficial reuse of biosolids from sewage treatment may actually be reduced. The SWEAP group has been supporting the Department to assist in continuing sustainable reuse of biosolids which would otherwise represent a significant cost for landfill disposal.

The Department formed a Technical Advisory Panel to develop an End of Waste Code (by December 2018) with representation of local government-owned operators by Cr Anne Maddern from Fraser Coast and representation from QUU.

*qldwater* has sought to thank Cr Maddern and QUU for strongly representing the industry in these discussions. Further information will be provided when the Code has been drafted and Cr Maddern will be providing an update on the process to date at the *qldwater* Annual Forum.



## Tackling skills shortages in regional Queensland

With over 70 service providers managing an asset base of almost \$40 billion and employing almost 6,000 workers, the Queensland water industry plays a significant role in providing safe, secure and sustainable urban water services to 4.9 million customers across Queensland. However, those services may be under threat in a number of regions through emerging critical shortages of water and wastewater treatment operators.

Banana Shire Council stands out as an example of a Council which is challenged by the regional employment market, in spite of a range of different and innovative approaches attempting to address the problem.

According to Anthony Lipsys, Manager Water Supply & Sewerage, their focus has been on promoting the lifestyle advantages of their workplace and targeting particular workforce segments including people with young families and grey nomads seeking short term relief operations roles while travelling in Queensland.

“We have also been open and welcoming to staff from culturally diverse backgrounds to fill operational vacancies and encouraged employment of more women who now comprise 37% of our treatment workforce. This combined with other innovative workforce strategies have helped to improve employee retention rates in the short term,” Mr Lipsys said.

Other initiatives trialled have included:

- Establishing a partnership with a local engineering consulting firm which provided a junior engineer to undertake a specific network modelling project at Council.
- Implementing greater flexibility in managing annual leave so migrant employees could meet family commitments in their country of origin.

- Offering a nine-day working fortnight to ensure the workplace was more family-friendly in an attempt to keep staff from leaving to the resource sector.
- Creating a checklist for managers to conduct an ‘honest dialogue’ with applicants for positions about what it’s like to work in the region and in their organisation to create a better “fit.”
- Offering a rent assistance program to attract applicants to the region.

“In spite of all of this we continue to experience a number of long term vacancies and it typically takes us up to 90 days to recruit new employees into vacant treatment roles,” Mr Lipsys said.

“Our record is 173 days to recruit two trainee assistant treatment plant operators, but we have a number of current active vacancies, and even our efforts to go to the market for relief operators have been problematic.”

Attracting and retaining appropriately skilled staff in remote areas remains a significant challenge, with applicant pools typically reducing in number with distance from the south-east corner and away from major coastal centres. Further, in many small and remote locations, Councils have an obligation to act as an employer to support economic development for communities, which can arguably contribute to inefficiencies in service delivery and broader sustainability. However, the tyranny of distance is not the only thing driving regional skills shortages.

Council water and sewerage employees, including those employed in the southern part of SEQ, are not as clearly identified as part of the water industry as they are in discrete water utilities instead participating in enterprise arrangements along with other Council service staff. This can act to limit the potential for incentive structures making Councils less competitive compared with other industries within a region.

The ageing employee profile of the water industry workforce has also been repeatedly identified by employers as one of the most critical workforce issues. The *qldwater* 2016 Snapshot Report prepared for the Queensland Water Skills Partnership showed that approximately one third of water employees were over the age of 51.

Anecdotal feedback confirms a high rate of turnover amongst younger operators, suggesting that the



Water Treatment Operator Nicholas Zischke

### Skills shortages (.../continued)

industry does well in retaining older workers but are struggling to recruit, train and retain younger workers to help improve longer term workforce planning and meet current capacity requirements. In general, the water and sewerage industry is not often marketed as a strong career prospect and more can be done to attract and retain a diverse workforce.

Whether you believe that there is an emerging crisis or not, there are clear limitations in traditional local government recruitment and retention techniques for water industry operations, and there is no “one size fits all” solution.

The industry is currently an exciting and rapidly changing work area, but understanding particular workforce segments and what motivates employees at different stages of their careers is fundamental.

As a minimum, we likely need to deal with the apparent decline in young people entering operational roles, as well as take a sector-wide approach to attracting experienced employees to Queensland. This will be a focus for Water Skills Partnership research in the coming period, and we are keen to hear your ideas. Contact Carlie Sargent on 3632 6853.

*(Right) Banana Shire Council Water Operator Sarah Elmes*



## Welcome new members

While our general memberships remain at an all time high, we’re also pleased to welcome a number of industry members under our Affiliate Membership program.

We’d like to introduce our two latest members, Veolia and Viridis Consultants.



Veolia Water Services help councils manage every step of the water cycle- from extraction, treatment, storage and distribution, to collection, transportation, recycling and restitution of wastewater.

Veolia offers complete municipal water management services, from sourcing the appropriate technology, carrying out design and construction and taking care of operations, maintenance and long-term management.



Viridis is a Brisbane consultancy that has been providing quality management services to the water industry for over 10 years.

Viridis provides services including: management plan development; review and audit; process performance assessments; process optimisation; validation; risk assessment; and training.

## 2018 Events Calendar

*The year is flying by but there's still opportunities to connect!*

### September

- 5 **qldwater** Annual Forum Technical Tour of Commonwealth Games Infrastructure, Gold Coast
- 6 **qldwater** Annual Forum Regulator Day & Infrastructure Cliff Workshop, Gold Coast
- 6 Ixom Best of the Best Queensland Water Taste Test, Gold Coast
- 7 TRG Meeting

### October

- 10-12 IPWEAQ State Conference, Gold Coast
- 18 National Taste Test, Toowoomba
- 29-31 LGAQ Annual Conference, Brisbane

### November

- 7 **qldwater** Strategic Advisory Committee Meeting, Brisbane

### December

- 7 TRG Meeting, Brisbane

## Seqwater gaining Smart Water Advice

Seqwater has become the first Queensland water utility to join the Smart Water Advice Program. Launched in 2006, the program currently has the support of every water corporation in Victoria, the Victorian State Government and over 35 councils across NSW. With most of inland and southern Queensland now drought-declared, Seqwater's decision to join the program is timely.

The program helps water businesses and councils provide professional water efficiency information to their customers. A small membership fee gives organisations access to the regionalised water saving tips, videos, factsheets and posters.

Sophie Walker, Corporate and Community Relations Manager at Seqwater said Seqwater sees great value in the resources available under the program.

"As part of our three year education and engagement initiative to encourage and sustain water efficient behaviours amongst South East Queenslanders, we are working closely with Smart Approved WaterMark to improve content on our digital channels and other educational materials. Having these resources ready to use means we don't have to create our own and we can focus our attention on other education and engagement activities."

Chris Philpot, CEO of Smart Approved WaterMark said water businesses and councils have a responsibility to provide water saving information to their customers.

"We found that most don't have the ability to do this themselves. Our members have seen great value in Smart Approved WaterMark providing quality, accessible, rebranded water saving resources for them."

The program removes the need for every organisation to develop water efficiency resources independently, reducing cost and ensuring consistency of design and messaging.

Contact Chris Philpot at [chris.philpot@smartwatermark.info](mailto:chris.philpot@smartwatermark.info) or visit [www.smartwateradvice.org](http://www.smartwateradvice.org) for more info.



qldwater – Unit 4, 43-49 Sandgate Road, Albion Q 4010  
PO Box 2100, Fortitude Valley BC QLD 4006

T: 07 3632 6850  
E: [enquiry@qldwater.com.au](mailto:enquiry@qldwater.com.au)  
W: [www.qldwater.com.au](http://www.qldwater.com.au)

"The Queensland Water Directorate (*qldwater*) is the central advisory and advocacy body within Queensland's urban water industry and represents members from Local Government and other water service providers across Queensland."