

2018 - a year in review

As we race towards the end of yet another year, we take the time to reflect on our achievements, thank those who have participated in our efforts, and set our sights on a productive year ahead. Here are some of the highlights:

Awards

The success of the **Queensland Water Regional Alliances Program** (QWRAP) was evident in a string of awards in the latter part of the year, including the AWA Program Innovation – over 250,000 users award, the AWA Regional Service Award and the IPWEAQ Innovation & Sustainability in Water Project (over \$5million).

AWA Regional Service Award

Program Manager Rob Fearon received well deserved recognition for his pivotal role in the program, along with many years additional service to the sector, taking out the AWA Regional Service Award.

Starting with **qldwater** in 2006 as CEO and now Director, Innovation Partnerships, Rob's enthusiasm for promoting and developing the industry are well known and demonstrated by his support for programs and projects which ultimately improve the capacity of our members. His strategic foresight, technical understanding, and policy and government experience are core to the success of the Directorate.

Rob was keen to share the success with our team, and key stakeholders including our TRG, members and the LGAQ.



AWA Program Innovation Award

David Wiskar, Executive Director of Water Policy from DNRME and LGAQ's Simone Talbot, Manager of Infrastructure, Economics & Regional Development accepted the prize on behalf of DNRME and LGAQ, acknowledging the efforts of LGAQ, **qldwater** and all contributing councils and staff in championing regional collaboration for the sector.

We also acknowledge the efforts of Arron Hieatt, LGAQ's Lead for Water, Sewerage and Infrastructure for his huge effort in championing the program.

In addition, eight out of ten AWA award recipients were **qldwater** member organisations.

Well done to all!



IPWEAQ Innovation & Sustainability in Water Project Award

QWRAP 2011-2018 took out the Innovation & Sustainability in Water Project (over \$5million) at the IPWEAQ Gala Ceremony and Dinner on Thursday, 11 October.

QWRAP was designed as an industry-led exploration of alternative regional institutional models following the release of three national reviews of the urban water industry that recommended fundamental changes to the governance of council water and sewerage services. All projects supported by QWRAP have been designed to provide social benefits for Queensland's regional and remote communities either directly or through cost savings through scale economies.



Memberships

2018 was a great year for qldwater with membership continuing at high levels and both swimlocal and the Water Skills Partnership showing steady growth.

At the time of writing our 2018/19 membership profile was:



Affiliate Members



Events

In 2019, our events brought together over 200 participants representing around 45 organisations across state and local government as well as industry. The Annual Forum is our biggest event each year, attracting around 100 representatives from 28 organisations.

Website

The **qldwater** website averages approximately 14,000 hits per month. After the home page, the QWRAP page got the most hits at 1,414 for the year.

Resource Library

Over the course of 2019, we added more than 100 documents to the resource library, including tender specifications, event presentations, member sample documents and many reports and position papers.

The most viewed item was the “Gas or Hypo or something else” discussion paper with 169 downloads.

Other popular documents included the draft guidelines for low exposure recycled water schemes, our water demand management factsheets, feedback on the Point Source Water Quality Offsets Policy and the Water Quality online training course.

Plans for 2019

In 2019 we will continue to aim to improve the quality of our services while focusing on industry actions and policy recommendations to address the Ten Key Sector Priorities which formed the basis of many of our event themes in 2018.

As we head into the next local and state government election cycles, it’s increasingly important to have a focus on what we as a sector need to see change, to improve our cost to serve and the quality of services to benefit our customers.

We wish all members and stakeholders the best for a safe festive season and would particularly like to acknowledge the efforts of our many member representatives who go above and beyond their day jobs to contribute to sector improvements, including:

- Our Technical Reference Group
- Our Sewerage and Water Environmental Advisory Panel
- Our Emerging Leaders Group;
- Water Skills Partnership members;
- Water Industry Worker Group; and
- All of the individuals who help us with opinions, technical advice and other support for our work program in an environment which increasingly challenges capacity to undertake meaningful consultation.

Resource Library Competition

Thank you to all members for your ongoing support and assistance in building our resources.

One area that seems to be lagging are sample documents from our member organisations. So, to stir things up a bit, we are offering one \$50

Bunnings voucher for the first three contributions we receive that can be added to our library.

The competition will run until Monday, 7 January 2019. First in, best dressed!

CEO Report

Dave Cameron is overseas on long service leave until early January and as I sit in his well-worn chair and think about the transition to the new year, common themes stick out, some of which will continue to be challenges in the coming year.

Firstly, if you feel like it has been a long year and are looking forward to a break over the festive season, you are not alone. The last couple of months alone have seen numerous submissions to State government ranging from the good (e.g. the water quality offsets policy, DNRME cyber security KPI review) to the not so good (e.g. the recent Health Bill, telco infrastructure on reservoirs, End of Waste Code for Biosolids).

The proposed End of Waste Code in particular, which threatens to direct more biosolids to landfill, was particularly unhelpful at a time where waste reduction is top-of-mind, and the sector is focusing on reuse technologies (three international fora hosted in Brisbane: Nutrient Removal and Recovery Conference Nov-2018; Biosolids National Conference-Feb, 2019; and National Symposium on Recycled Organics- June 2019).

However, it has also been a year of highlights. **qldwater** Operator Awards were taken out by Andrew Hanifin (Unitywater), Brad Millful (Logan City) while Tony Cover (Goondiwindi) won the AWA Operator of the Year at the Qld WIOA conference. The prize for best tasting water this year was awarded to Mackay Regional Council, while Toowoomba represented Australia in the international competition in the US. Sadly, last year's taste winner (Livingstone) was pipped in the national finals and more sadly, lost to the NSW entry in the WIOA Water of Origin competition.

IPWEAQ excellence awards were taken out by Logan City (Round Mountain Solar Electrochlorinator) and by QWRAP (which also won an AWA award- see page 1). Our QWRCIP scholarship recipients this year- Mark Caon (Banana Shire), Cliff Caton (Central Highlands) and Nick Hall (Charters Towers) were congratulated and Cliff provided a fantastic summary of his experiences at our annual forum (page 4). More scholarships are available in the coming year with new places to be offered with thanks to additional funding from DNRME.

Recognition of the good work being done across the sector will continue to be a central operating principle for **qldwater**. Our Water Skills Partnership is founded on the need to recognise and develop the sector's "HR assets" and has increased to 47 member organisations this year. The Partnership continues to support training for operators and also certification

to recognise skills that are fit for purpose and up-to-date. Up to 70 operators have been participating in training to be certified this financial year. Contractors are not forgotten: the Aqua Card initiative provides free training and recognition for members but is also being developed into a fee-for-service model for contractors to demonstrate their accreditation.

Initiatives for networking, mentoring and collaborative training have grown over the year and a new Regional Water Industry Worker pilot is being championed through Mackay and a Regional Traineeship Program through Bundaberg. Many of these themes will be revisited in our upcoming Skills Forum on 7 March which is followed by a dinner with special guest speaker, Neil Brennan, CEO Seqwater.

Regional collaboration has been a central theme for the sector for some time particularly through QWRAP which was given a boost this year through ongoing support from DNRME including funding for five regions until 2022. The Program received strong affirmation earlier in the year through an independent review commissioned by DNRME and recognition by the National Productivity Commission which noted the success of the Program while highlighting the need for more small councils to be involved.

Governance change has stayed in the news more broadly with the failed attempt by the Tasmanian government to take over council-owned Taswater and the national enquiry in NZ following the Havelock North incident. **qldwater** provided input to this enquiry and is awaiting the outcome – if governance reform is recommended it would be a rare example of water quality issues driving structural change. Usually, reform is driven by broader investment needs (see infrastructure cliff research on page 12).

Regardless, water quality remains a key theme for the sector. The potential impacts of PFAS were a strong driver throughout the year and water service providers responded to this potential threat in a responsible manner in spite of political and media confusion about the risks involved and how they can best be managed. The industry focus on safe water was also reflected in discussions and presentations at all **qldwater** regional conferences and annual forum and our recent factsheet on disinfection options was downloaded more often than most other documents in its first few weeks.

The DNRME Water Quality workshop in November was well attended and we will soon publish videos of some of the presentations from the day. On a closely-related issue, the Department of Health has released a

CEO Report (.../continued)

consultation draft of new recycled water guidelines which have been long anticipated – comments are due by mid-January.

Performance reporting and benchmarking also continue to be important drivers for the sector. Improving processes for competition by comparison was a clear recommendation from industry representatives at our annual forum. SWIM has experienced continued success with 71 of 72 council-owned service providers using it for mandatory annual reporting and 34 subscribing to SWIMLocal for more detailed internal data management.

This year's **qldwater** benchmarking report is under development and we are discussing collaborating with the Department in future reporting. DNRME commences their review of the Queensland KPIs early in the new year and the National Performance Report indicators are also being reviewed with broad consultation commencing shortly. Streamlining and improving reporting will continue to be an issue for all service providers in 2019.

A range of other issues can be expected to continue to challenge the industry as we move into the new year. The BoM are predicting a hotter and drier than normal summer for Queensland meaning many councils suffering drought may get little relief and demand management will continue to be a challenge. The Bureau's predictions are less certain for western Queensland giving some hope that there may be relief.

Pressure for reduction of outputs from STPs will continue to receive a lot of attention in 2019, particularly in Reef catchments. Finalisation of proposed reef regulations and new instruments for water quality offsets, sewage pumping stations and biosolids reuse are due in the first quarter.

Across the state, but particularly in regional areas, our recent workforce snapshot indicates that skills shortages, particularly for appropriately qualified operators will worsen, and will accelerate if there is a surge in the resources industry. As usual, **qldwater** will be seeking to understand members challenges and suggested solutions while working with the sector and the government to identify and address key issues.

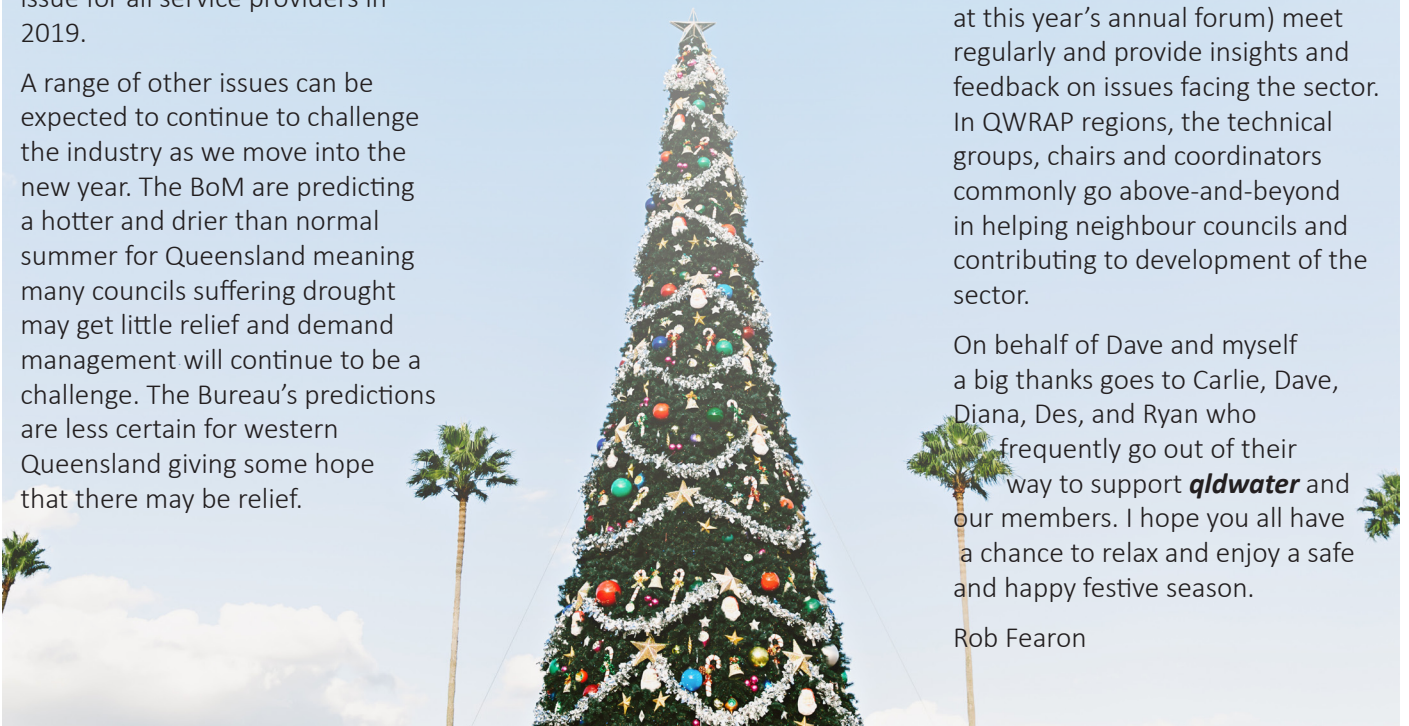
Our communication activities in the coming year will include opportunities to comment and shape a proposed industry 'roadmap' about emerging challenges that must be addressed urgently and collaboratively.

Feedback will be used to update the strategic priorities previously identified (see CEO message in our last newsletter) to better understand current and emerging needs from the smallest to the largest service providers. We are always keen to hear from members and receive feedback and suggestions- our communications channels have grown significantly in recent years with improvements to the website, Facebook and LinkedIn and our online resource library (don't miss the competition to assist in building the library).

As the year draws to an end, we'd like to extend thanks to all of the people that selflessly support **qldwater** and the broader industry by sharing their time, knowledge, experience and enthusiasm. Listing all the groups and individuals would risk missing someone but I'd like to single out the TRG members, SWEAP and Water Skills Partnership and SWIM representatives as well as our partners in other organisations, particularly LGAQ and state agencies. Our emerging leadership group (who chaired all sessions at this year's annual forum) meet regularly and provide insights and feedback on issues facing the sector. In QWRAP regions, the technical groups, chairs and coordinators commonly go above-and-beyond in helping neighbour councils and contributing to development of the sector.

On behalf of Dave and myself a big thanks goes to Carlie, Dave, Diana, Des, and Ryan who frequently go out of their way to support **qldwater** and our members. I hope you all have a chance to relax and enjoy a safe and happy festive season.

Rob Fearon



Annual Forum Wrap

The Annual Forum held on 5 – 6 September at the Gold Coast Turf Club had a great turnout, bringing together around 100 water industry professionals representing a wide range of councils, utilities, industry and government agencies.

Feedback has been positive with several constructive suggestions to make the 2019 event even better, including guides for presenters, some break-out sessions on particular technical topics, and better media management.

Congratulations to Mackay Regional Council who won the 2018 Ixom Best of the Best Queensland Water Taste Test, just managing to oust the 2017 winners, Livingstone Shire Council. We received some good media coverage, including **this clip on 9 News Gold Coast**. Check out the **qldwaterontap Twitter page** and **our blog** for a few more media pics and information.

Further congratulations to Rob Dexter from DCM Process Control who narrowly pipped Rod Wellings for the most favoured vendor pitch. We will work with Rob on some promotion for his company as part of the prize.

Thanks in particular to our hosts, City of Gold Coast, event sponsors Royce Water Technologies and Tracwater as well as longstanding taste test and Water Connections Tour sponsors Ixom and Dial Before You Dig, and scholarship recipient hosts Unitywater, QUU, and Logan City Council/ Logan Water Infrastructure Alliance.

There were no prizes for the best presentation, but based on the feedback forms, Kris Pardoe-Matthews' talk entitled "Planning, implementation and execution of CoGC's water quality management strategy for the Commonwealth Games period" would have been hard to beat.

Other highlights included Ian Roberts and Gary Faulkner's dinner presentation about manufacturing excellence, continuous improvement and customer service at Lion Breweries. It was also great to have Councillors David Scheffe from Maranoa and Anne Maddern from Fraser Coast tackling questions around sector investment and biosolids and the proposed End of Waste Code respectively. More photos on **smugmug**.



Day 1 included a tour of Commonwealth Games infrastructure



Dr Nicole Davies accepted the 2018 Best of the Best Qld Water Taste Test award on behalf of Mackay Regional Council



The Emerging Leaders group met with Productivity Commissioner John Madden



Interesting discussions with a bunch of passionate people made for an informative day.

DNRME Drinking Water Quality Forum

qldwater supported the Department of Natural Resources, Mines and Energy in a Drinking Water Quality Forum on Tuesday, 13 November to discuss common challenges and common solutions for the Queensland urban water industry.

Dr Peter Mosse provided excellent insights from his years working in the industry, discussing water quality awareness, the current “state of the nation” and common themes in water supply assessment projects across rural and remote Queensland.

Andrew Healy from Kowanyama Aboriginal Shire Council gave an overview of their programs and challenges, followed by Toni Veronese from Torres Strait Island Regional Council and Amy Barlow from the Tropical Public Health Services in Queensland Health whose collaboration and engagement seems to be delivering positive outcomes in their communities.

The day concluded with **qldwater** presentations on the capabilities of SWIMLocal and other collaborative opportunities through the Queensland Water Skills

Partnership and QWRAP. Thanks to Tony Cover from Goondiwindi Regional Council for taking the time to present on their experiences using SWIMLocal for operations and maintenance.

Videos of the event will be available shortly.



National Water Taste Test

Toowoomba Regional Council had the opportunity to host the WIOA Ixom National Water Taste Test for 2018, with more than 150 Toowoomba residents judging the winning samples at the Grand Central Shopping Centre on 18 October.

The grand finalists were:

- Queensland Livingstone Shire Council – Yeppoon
- NSW Port Macquarie Hastings Council – Port Macquarie
- Tasmania TasWater – Bryn Estyn (Greater Hobart)
- South Australia SA Water – Woolpunda WTP
- Victoria Wannon Water – Hamilton WTP

Congratulations to Wannon Water, Victoria, with the sample from Hamilton Water Treatment Plant taking out bragging rights for the year. The winning sample will be entered in the International Water Taste Test to be held in Berkeley Springs, USA.

Congratulations also to WIOA and Ixom for taking the taste test to the next level and continuing to raise

awareness of the good work done by water service providers in delivering a great quality product to our homes 24/7.

We expect to solve the problem with timing for this event to ensure the current Queensland winners will participate in the national event from 2019.

To see some images of the day, head to the **WIOA smugmug site**.



National Water Taste Test entrants with WIOA and Toowoomba Regional Council's mascots.

QWRCIP Scholarships

In 2016 qldwater introduced the QWRCIP Scholarship program to assist employees from regional and remote service providers in developing skills and attend the Annual Forum. 2018 scholarship winner Cliff Caton, Project Engineer at Central Highlands Regional Council, provided the following overview of his experience:

“To be honest from the moment I arrived at Logan I had no idea that I would gain the level of transparency, insight, exposure, learning, networking and education from water related infrastructure people at my host Council, Logan City (Daryl Ross) and Downer Staff at the Logan Water Infrastructure Alliance (Matt Thomson, Marlin Pritchard, Graham, Apin & Gus Trabolssi) which I have received, it has blown me away.

I am truly grateful to have had the opportunity and information which I've been exposed to and make available the chance to share with other members of similar regional Councils within Queensland. I'm sure if I was able to speak on behalf of the other two Scholarship recipients, they would wholeheartedly agree the rewards stemming from the experience will trickle down through their respective Councils given time. It was an honour to be able to hold discussions and gain feedback from the industry leaders and influential members of the Water Directorate including suppliers and vendors.

My movements over the week included:

Monday & Tuesday was spent with the Logan Water Infrastructure Alliance, the Alliance formed between Logan City Council and engineering delivery group Downer, which is focused on Project delivery of Water and Wastewater capital projects.

On Monday my time was initially spent with the Alliance staff, Matt Thomson (Project Manager – Project Delivery Group Leader) and Marlon Pritchard (Project Delivery Commissioning Engineer), learning about the Alliance and how it operates, hierarchy, communication, reporting regime, delivery strategy and outcomes over the life of the program which commenced in 2009. We visited a recently completed Wastewater Treatment Plant Upgrade at Flagstone (near Jimboomba, South Brisbane) and I gained an insight into specific innovative Membrane Bio Reactor (MBR) technology treatment equipment integrated into SCADA and the extent of the new plant infrastructure installed as part of the upgrade.

Tuesday was spent with a number of professionals associated with the upgrade of the Flagstone plant, including the Project Manager, and I gained an insight into the learnings from the implementation phase, the plant process and underlying factors which led to the final outcome. I also had meetings with the Project Manager of an upcoming project proposal (Cedar Grove WWTP Stage 1) and the innovations proposed, which included the use of a wetland pond arrangement and the return of treated water to the Brisbane River. The project has been the subject of a challenging engineering design criteria which has been a major coup for Logan Council to have approved for construction.



Cliff on the Annual Forum bus tour of Commonwealth Games Infrastructure.



QWRCIP Scholarship participants providing feedback at the 2018 Annual Forum.

QWRCIP Scholarships (...continued)

Wednesday to Thursday I attended the **qldwater** Innovation Forum comprising tours, presentations and workshops. Held at the Gold Coast Turf Club, scholarship recipients were required to present a brief summary of their host tour and to thank program sponsors.

On Friday I participated in the **qldwater** Technical Reference Group meeting at the **qldwater** office in Albion.

It was certainly a busy week of information intake and on days information overload. However, I feel it was extremely beneficial to members of our group including myself, to see and speak with current Council employees, professionals, Councillors, vendors and suppliers to the water infrastructure arena.

I would highly recommend this learning experience to other water related Regional Council staff in the upcoming years to get on-board and apply.

Additionally, the presentations were highly informative and relative to the cause we as a Council are all working towards and I gained a great deal of exposure to the network of services and people within the industry. ”

Program Updates

Statewide Water Information Management (SWIM)

With 99% of Queensland Service Providers now using the SWIM system for mandatory reporting requirements and 34 Service Providers currently using the full licenced version of SWIMLocal, the success of this industry-led program is evident.

This was the fourth year that members used the Annual Data Tool as the preferred data entry method for annual water and sewerage data reporting to State and Commonwealth agencies.

Program Manager David Scheltinga is continuing discussions and progressing the automation of lab data upload into SWIMLocal and STP data exporting to the DES WaTERS database.

Indicator alerting functionality for the fully licenced version of SWIMLocal is now complete and starting to be setup and used by Service Providers.

Other improvements currently underway include:

- developing a ‘data entry web-portal’ for your SWIM annual water and sewerage data (duplicating the Annual Data Tool functionality). This will allow other council staff (e.g. finance) to enter data directly into SWIM without having to install software onto their computers
- automating the process of pulling out (and annualising) SWIMLocal ‘daily’ data from the Operations Tool and pushing it into the Annual Data Tool is nearing completion and will be ready for 2018/19 reporting.

DNRME, ABS, BoM and NPR are currently reviewing their indicators and overall programs. **qldwater** is actively involved in these processes and hope to help with rationalisation and definitional improvements to help reduce our member’s reporting burden.



Skills & Training

Addressing the Operator Shortage

The August issue of **qldwater**'s newsletter highlighted the significant skilling challenges facing Queensland's urban water industry with an ageing workforce, issues attracting and retaining staff, competition from other industries and an increasing shortage of experienced operators seen as the most significant challenges. These are likely to be exacerbated by an increase in construction projects forecast over the next five years. Data recently received for the 2018 Workforce Composition Snapshot Report is currently being analysed and is expected to confirm these trends and challenges.

In response, the Queensland Water Skills Partnership is attempting to address the shortage of operators with a number of targeted initiatives.

qldwater is working with Bundaberg Regional Council to develop regional traineeship program for the Wide Bay Burnett Region of Councils (WBBROC) that is likely to see one or two trainees recruited in a number of councils and provided with formal training and exchanges to become Water/Wastewater Treatment Operators. There is considerable interest from Water Skills Partners in other regions and the program will likely be rolled out more widely following the pilot in WBBROC.

Additionally, the Water Skills Partnership is embarking on a campaign to attract new entrants to the water industry by promoting career opportunities to senior high school students. A number of resources have already been developed by Water Skills Partners and these are being consolidated to provide a resource package for organisations to engage with local schools and provide information about the water industry.

A pilot 'Girls in STEM' program is being trialled on the Sunshine Coast, in conjunction with Noosa Council, Unitywater, Suez and a local high school to provide opportunities for year 10 students to raise awareness of jobs in and pathways to the water industry. Students will gain an understanding of water treatment processes with practical experience and knowledge linked to the national curriculum. As part of the pilot program a range of resources will be produced for Water Skills Partners to access for future engagement with school students.

2019 Skills Forum

Save the date! Following the success of the inaugural Forum held in March this year, the next Skills Forum has been set for 7 March 2019 at the Brother's Rugby Club, Albion.

The program is currently being finalised but will include a keynote address from a DESBT representative, Certification presentations by WIOA and sessions focused on workforce planning, innovative recruitment and retention strategies and the value of skilling and training, particularly operator competency. The 2019 Forum will be followed by networking drinks and an optional dinner.

Registrations will open in January with three registrations included for Water Skills Partners and discounted registrations for other **qldwater** members.

Sponsorship opportunities are available, please contact Carlie Sargent at csargent@qldwater.com.au or on 07 3632 6853 to discuss.



Operator Certification

Sixty-eight operators are enrolled in gap training to achieve Certification as part of the final round of second chance funding provided by the Queensland Department of Employment, Small Business and Training (DESBT) that expires on 31 December 2018. This represents more than an additional \$50K investment by DESBT in Operator Certification and is the last time funding for gap training will be made available.

In order to find a longer-term solution for operators to undertake additional study to meet Certification requirements, **qldwater** has been working with WIOA to develop Skill Sets covering the most common water and wastewater treatment processes. It is hoped these will be approved and added to the training package early in 2019 and approved for funding under the Higher-Level Skills program.

qldwater is supporting research conducted by WaterQPlus on behalf of Water Research Australia to better understand the value gained from Operator Certification and investment in programs to develop, support and continually grow operator competency. Research findings are expected to be available early in 2019 and will be shared at the Skills Forum in March.

Review of National Water Training Package

The review of the Diploma of Water Industry Operations has been completed with 20 new units developed and 17 revised units, including a new Hydrographic Survey Stream. It is currently undergoing final approvals before it can be loaded onto training.gov.au for enrolments to commence. **qldwater** hopes this will be in January 2019 as we know there are members waiting to enrol.

A Technical Advisory Committee (TAC) has been established to review the Certificate II in Water Industry Operations, Certificate III in Water Industry Operations and Certificate III in Water Industry Treatment.

qldwater is represented on the TAC along with Brad Milfull (Logan City Council) and Kim Moore (Unitywater) and representatives from other jurisdictions with a range of technical expertise of relevance to the package.

The TAC held its first meeting in October and agreed to commence with a review of the Certificate II. **qldwater** has invited feedback from Water Skills Partners about the Certificate II and expects it will remain a generic qualification and not be streamed. The reviews of the Certificate III in Water Industry Operations and Certificate III in Water Industry Treatment will follow as part of this project and are expected to be merged into one qualification. **qldwater** will continue to seek input from Water Skills Partners as the review progresses.

Aqua Card

We are hoping to release the fee for service version of the 'Water Quality Online Course' to those who are not members of **qldwater** or Water Skills Partners early in the new year.

We are aware that some members have already included the course in their induction for new staff and a number of others are looking to include it in contractor inductions.

WIOA FNQ Water Interest Day

qldwater was pleased to attend the WIOA FNQ Water Interest Day held in Cairns in October, attracting more than 75 water industry representatives.

Carlie Sargent from **qldwater** provided an update on skilling and training initiatives, including operators participating in gap training to become Certified Operators.

The day included a range of presentations highlighting the excellent work of Operators across the region and hosted the inaugural FNQ Main Tapping competition, won by the team from Cassowary Coast Regional Council. The day ended with barefoot bowls sponsored by Trility.

Congratulations to WIOA and the FNQ Committee for a great day!

Below: WIOA women rocking it at barefoot bowls.



Queensland Water Regional Alliance Program

Annual Progress Report

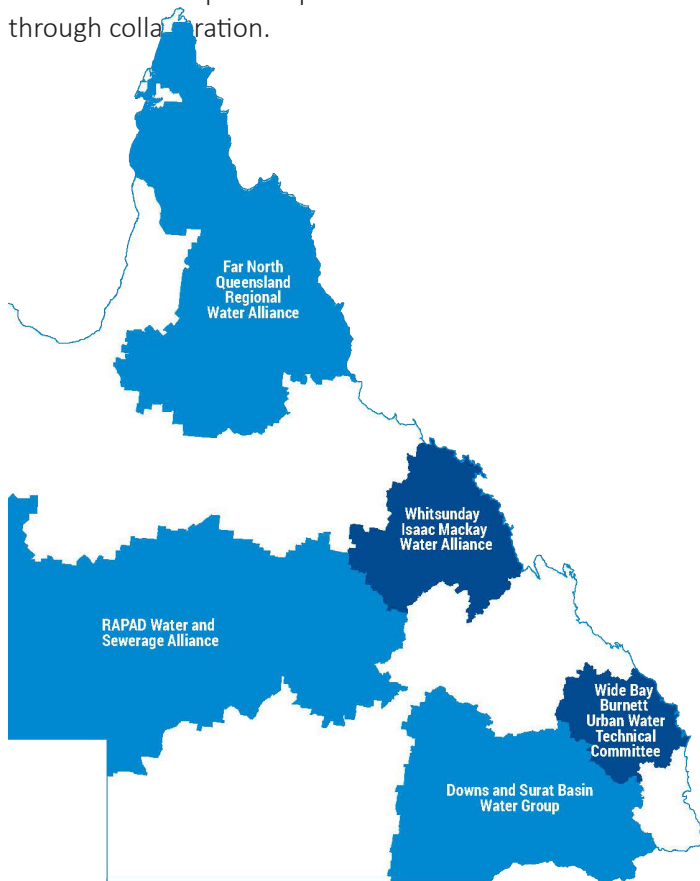
Regional collaboration is the name of the game, and QWRAP is on a winning streak.

With 30 Councils collaborating in five regional areas, the groups cover 55% of the State's area and 21% of the State's population in more than 200 communities outside of South East Queensland. These local governments manage more than \$11.5 billion in water and wastewater assets.

Reviews

A recent review by Deloitte Access Economics estimated that benefits from QWRAP are likely to range from \$1.9 million to \$4 million, leading to a return on investment of at least 2:1. The review and recommendations were accepted by the Queensland Government and formed the basis for continued funding announced in the 2018-19 budget that extended the program to 2022.

The 2017-18 National Productivity Commission inquiry into national water reform identified QWRAP as the sole example of collaborative work amongst small regional water utilities in Queensland, finding that there is likely to be further scope to capture economies of scale through collaboration.



Regional Coordinators

A fundamental component of regional collaboration is to employ a coordinator to facilitate meetings, drive project delivery, and facilitate strategic planning around policy initiatives and funding opportunities.

Importantly, the coordinators provide a meaningful key point of contact with the participating councils in each region and a more effective communication framework for state government departments and other external stakeholders.

Bid Pool Projects

Groups apply for funding from a total of \$570,000 made available through a bid pool that contributes to the council funding of collaborative projects.

To date there have been 26 projects funded through the bid pool, with nine additional projects that have been funded entirely by Councils. These projects had a total cost of almost \$1 million, and QWRAP contributed an average of \$17,500 per project.

Benefits

Other benefits of QWRAP include:

- cost savings through joint procurement (to date savings of close to \$100,000 through reduced costs of travel and discounts given by companies engaged);
- improved regional knowledge of water and sewerage infrastructure and the operations around it;
- better alignment and engagement with regulators;
- broader corporate knowledge applied to infrastructure planning and renewals;
- standardisation of infrastructure and operations, leading to interoperability.

\$37 Billion Water and Sewerage Assets

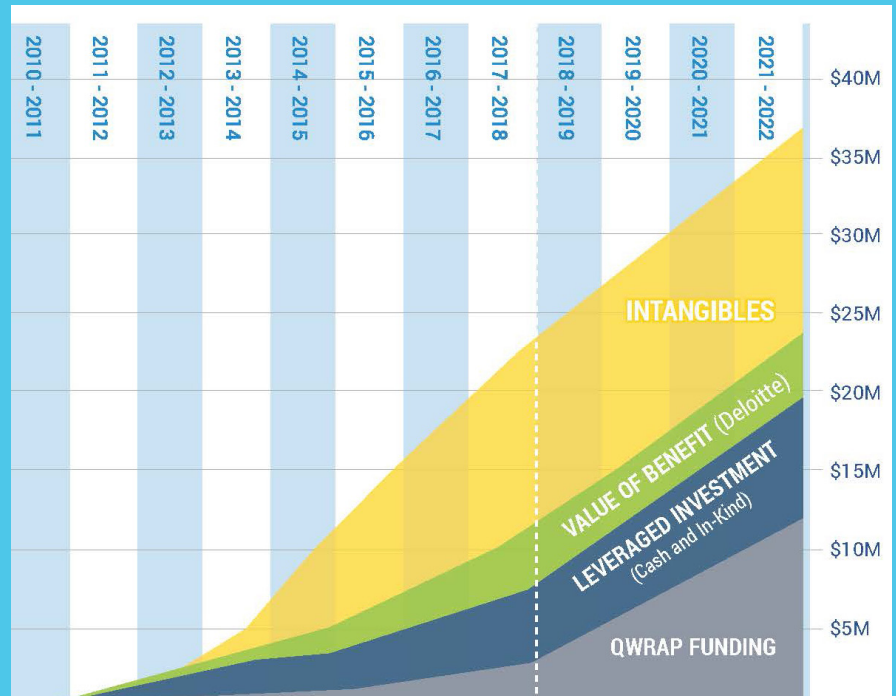
381
water plants

285
sewerage plants

42,000 km
of water mains

33,500 km
of sewers

To read the full Annual Progress Report and see some excellent graphics, visit www.qldwater.com.au/QWRAP



Infrastructure Cliff Research

With more than half of Queensland's water and sewerage assets being underground, two research reports undertaken for the Queensland Water Regional Alliances Program (QWRAP) have shed light on the state of in-ground assets and provided a comparison of costs for replacement versus repair to avoid what has been dubbed the state's "Infrastructure Cliff".

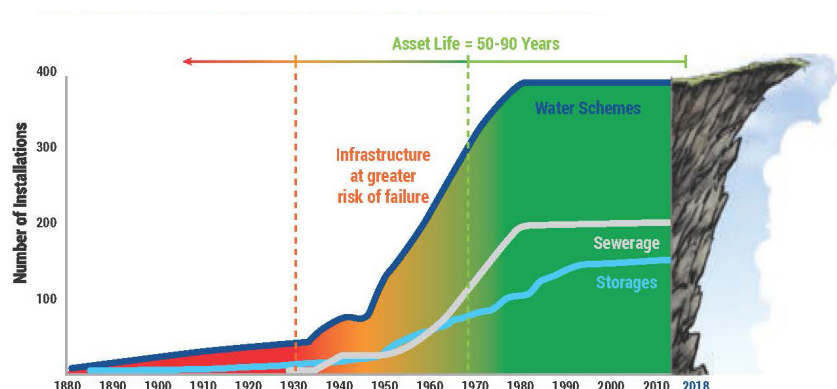
Worth an estimated \$21 billion, Queensland's in-ground assets comprise of approximately 42,000 km of water pipes and 33,500 km of sewers – more than half of the \$38 billion total replacement cost reported for all local government water and sewerage assets.

The research was funded by the Department of Natural Resources

Mines and Energy in partnership with LGAQ, **qldwater** and participating water service providers in response to concerns about the economic challenges of extensive network rehabilitation for some communities.

The reports outline the expected extent of the problem throughout

the state, incorporating data from over 80 per cent of the asset records for water and sewerage pipes from utilities around Queensland. They investigated the age of the pipes, the materials they are made from and their size as well as modelling when they might come to the end of their useful life.



Degradation of water and sewerage pipes is known to correlated with age but really comes down to a whole range of factors – how aggressive the water is inside the pipes, how aggressive the environment is outside the pipes, what pressure they are under, what loading they are under – even whether they were laid with love and care or in a bit of a haphazard manner.

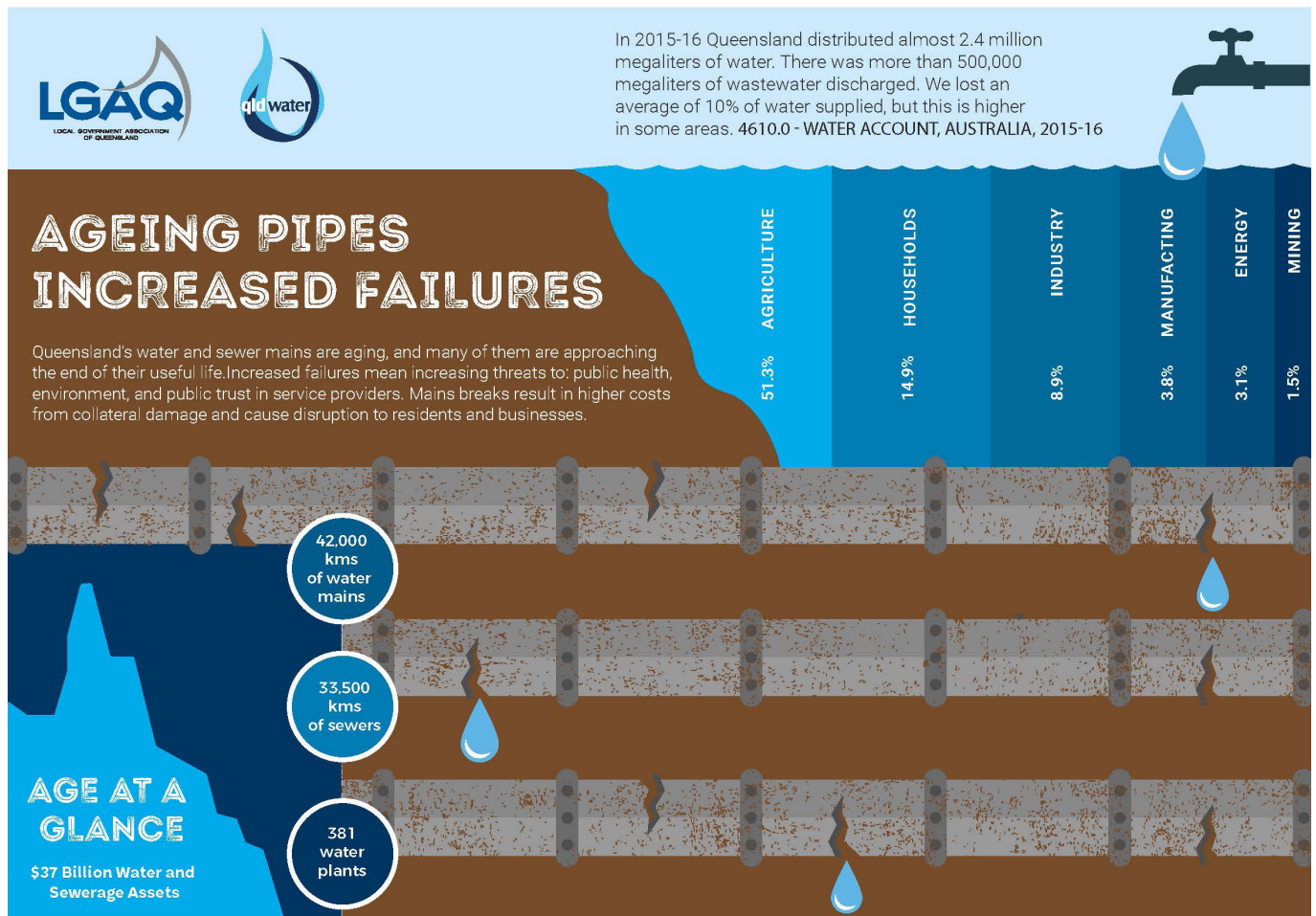
Modelling conducted for the study looked at all pipes across the state and suggested that water mains breaks are being managed at present, but problems will increase rapidly over the next two decades and could be over four times higher by 2040. Similar results were projected for sewer networks, which although typically younger than corresponding water schemes are predicted to suffer a more rapid rate of degradation.

The research estimated that at an optimistic estimate of current replacement of 0.3% per annum of the 42,000 km (\$11.5 billion) network of water mains means that pipes are ageing significantly faster than they are being replaced. Sewer mains are being replaced at an even lower rate, although sewer relining is common in many councils.

Using conservative rates, the cost of replacing 0.3% of current water mains would be \$34.4 million per year (or \$18.12 per connection) while at an annual rate of 1%, (i.e. complete replacement in 100 years) the annual cost would be \$114.7 million. Neither rate is fast enough if the average expected life of 70 years for many pipes is correct, but current replacement rates in many councils are likely even lower than these examples.

The reports concluded that a ‘business-as-usual’ approach to infrastructure renewals will not be enough to maintain current standards of service given the ageing in-ground assets across the state. The extent of pipe repair and replacement work necessary in regional centres throughout Queensland varied quite dramatically and the impact on local authorities would also vary with their size and resources.

The big question is when you should replace pipes, because it’s not efficient to replace pipes just after or even just before the first break. It’s best to replace most pipes when the cost of repairing becomes higher than the cost of replacement.



As mains reach the end of their service life, breaks become more frequent. The impacts of breaks are well known to customers when they interrupt supply or disrupt traffic. However, they also cause less-obvious impacts such as business disruptions, environmental harm, sink holes, loss of water, property damage, public health risks, overloading of sewer networks and community alarm. Combined, these secondary costs have been shown to significantly impact local economies and carry reputational and political risks for water and sewerage utilities.

Utilities must balance their investment in replacement and relining to maintain breaks at a level that is acceptable to customers and regulators, which can be a complex decision-making process.

Modelling of different investment mixes to achieve this balance highlighted the need for better targeting of funding for network renewal, not only investing in network repair and replacement but also putting funds towards condition assessment and prioritisation processes based on criticality.

To achieve this balance in regional Queensland, the report made four recommendations:

1. Greater focus on collecting, collating and analysing network data taking a regional approach to allow prioritised data collection that combines economies of scale with local knowledge;
2. More sophisticated prioritisation of repair and replacement activities, developing fit for purpose approaches across different sized councils;
3. Adopting a more holistic approach to procurement to replace or rehabilitate existing networks based on total life-cycle costs and a better understanding of their performance – again using a regionalised approach; and
4. Increased focus on network repairs to reflect changing public expectations, increased regulation and increased rates of breaks in ageing networks to move from reactive repair programs to predictive maintenance with increased communications with customers and regulators.

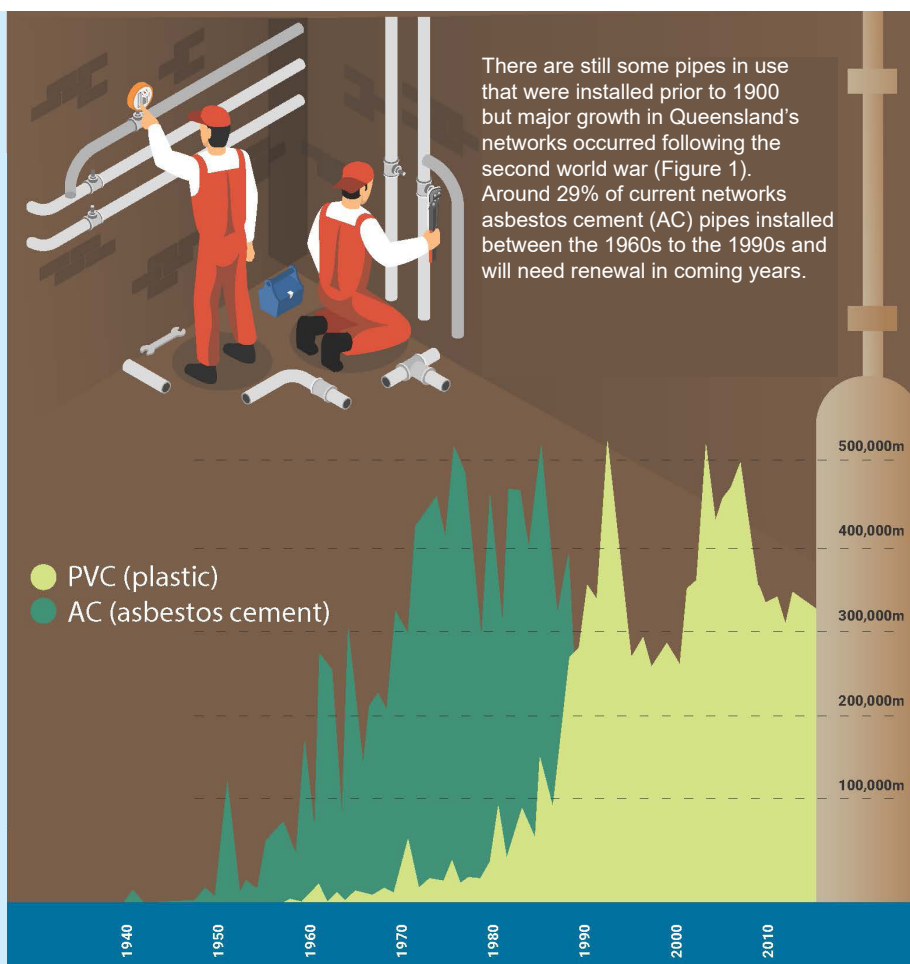
BEYOND WHATS ABOVE

In-ground assets (bulk transfer pipes, mains, reticulation and collection systems) provide the backbone of the water and sewerage services for 375 Queensland communities.

These assets are 'out-of-sight and out-of-mind' and not an obvious investment priority for the public. The only signs of underinvestment in ageing pipe fleets are increasing leaks, stormwater infiltration, bursts, elevated maintenance costs and customer complaints.

Data collected from across Queensland unearthed the hidden diversity of water and sewer networks which range in size material and age.

The data also suggests that the current replacement rate of 0.3% per annum is too slow. The ageing AC cohort alone would take over 170 years to replace. Waiting is not an option, and we need to do more than we are doing. Replacement isn't the only answer! Service providers need to make informed decisions about which methods to use, and when to repair, reline or replace the mains.



2019 Events Calendar

qldwater offices will be closed from midday 21 December, reopening on 3 January.

Our calendar of events for 2019 is taking shape – please save these dates for your diaries...

Major events are detailed below, and there will be a number of additional theme-based workshops announced early in the new year (e.g. emerging contaminants, asset management). Aside from a range of excellent presentations, workshops and networking opportunities, 2019 sees a focus on industry opportunities and gathering feedback developing policy recommendations to help members reduce costs and improve services offered to their customers.

March

- 7 Queensland Water Skills Partnership Forum, Albion
Major themes include workforce planning and capability development and there will be a presentation for operators who have completed the requirements for Certification.
- 8 TRG meeting, Albion
- 28 Regional mini-conference, Biloela
Hosted by Banana Shire Council, the date may shift slightly during that week as we are in the process of trying to organise a safety-themed training opportunity prior to the event.

May

- 13-17 Water Connections Week visiting Murweh, Paroo, Bulloo and Quilpie Shires, finishing in Charleville
- 17 Free water forum 17 May Charleville (AM)
Small event open to representatives from any of our members able to attend. It will be an opportunity to share challenges and possible solutions and engage with representatives from a number of state agencies.

July

- 4-5 Regional mini-conference, Townsville
Hosted by Townsville City Council, 4 July will include a QWRAP meeting, site tour of the Haughton pipeline and dinner. 5 July includes presentations and workshops. Consider accommodation options early and perhaps stay on for the supercars starting on 5 July.
- 25-26 Regional mini-conference, Hervey Bay
Hosted by Fraser Coast Regional Council, 25 July will include a QWRAP alliance meeting, tour of a range of sites in Maryborough and Hervey Bay and a dinner with presentations etc on the 26th. It's whale watching season, so again you might want to consider a weekend stay.

September

- 11-12 **qldwater** Annual Forum, Logan
Hosted by Logan City Council, the program will again include a range of lighter activities on 11th including a tour showcasing some of the activities of the Logan Water Infrastructure Alliance and dinner, and presentations on the 12th.

We again welcome Dial Before You Dig as our Water Connections Tour sponsor, Aquatec Maxcon, Royce Water Technologies and Lonza has taken up a sponsorship package for all regional events. Ixom has elected to discontinue its sponsorship of the Best of the Best Queensland Water Taste Test and we thank them for their support since 2012. At this stage we don't intend to run regional taste test events, but will seek a new sponsor for the state-wide test to be conducted at our annual forum.

There are plenty of opportunities for sponsors to support these cost-effective events for the benefit of Queensland's water and sewerage service providers. Please contact dkislitsyna@qldwater.com.au if you are interested.



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"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."