

OPERATOR

August 2019 Edition



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John Van Ryt, Queensland Operator of the Year. Read about him on Page 8.

Zoe Thiel presenting at the NSW Interest Day and Charity Bowls in Port Macquarie. Find out more on page 10.



Jillian, Narelle and Heidi at the Women of Water Forum in Queensland. More on the forum on Page 11.

Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

FROM THE MD'S DESK

Welcome to the third edition of Operator for 2019. It is loaded with news about our recent activities and provides a great opportunity to congratulate the achievements of many of our members and water industry colleagues.

There have been a few developments in the Certification space recently. The Victorian Department of Health and Human Services released a letter to all Victorian Water Corporations advising of the transition to the National Certification Framework from 1 July 2019. The letter also confirmed the DHHS and VicWater endorsement of the benefits of Certification, including demonstrating that the minimum level of competency has been reached including appropriate training, qualifications, experience and ongoing skills development on water treatment processes for which the operator has responsibility. We are sure that this will be the catalyst for an increase in participation in the near future.

WIOA has recently commenced work with a software developer to build a data management system and website portal to assist with management of the certification process and data. It is anticipated that this project will be completed later in 2019, and we look forward to its launch and the benefits it will provide.

The Queensland conference in Bundaberg in June was a great success and the support from Bundaberg Regional Council as Host was outstanding. There were representatives from almost 40 Queensland and Interstate Councils and service providers in attendance. The support of all the event sponsors and exhibitors, along with the members of the Queensland Advisory Committee was awesome. A large volunteer workforce at the event enabled the workload to be shared around. A full report on the conference and all the award winners appears later in this edition.

The second WIOA South Australian Conference and Expo was held in Murray Bridge in early August and there was a good roll up of delegates. We were amongst the first events to be held at the new Murray Bridge Race Club venue and the facilities are first rate.

We are excited to be staging the second Water Industry Safety Event (WISE), to be held in Melbourne on 9 October 2019. Hosted again by Melbourne Water, the event is targeted specifically at the various water industry workplace safety representatives and includes several presentations, a forum focussing on mental wellbeing and managing fatigue along with a product and services exhibition.

Our attention moves to the Victorian conference in Bendigo in the first week of September which has again received extraordinary support. All 203 exhibition sites were allocated to companies within a couple of hours of going on sale. There is a well balanced technical program with a range of platform and poster papers covering a variety of topics.

Our WIOG NZ cousins hosted 14 Australian Operators in May this year as part of the annual Operators tour to New Zealand. They visited a number of water and wastewater sites in the central region of the South Island, before making their way to Christchurch for the WIOG conference. Once again the Kiwis provided an interesting, enlightening and valuable experience for all the attendees. There will be six Kiwi operators coming

over to attend the Victorian WIOA conference in September and touring around several Victorian plants. Thanks in advance to our Victorian members who are hosting the group. A report on the Kiwi conference and tour is included in this edition.

With the completion of the South Australian Ixom Best Tasting Tap Water competition in August, there is now only the Victorian competition left. After the Bendigo conference, we will know the 5 State based Taste Test winners for 2019. Just like 2018, we will be staging a national grand final to coincide with National Water Week. It will be held at the 3 Peaks Festival in Dunkeld on 19 October. The sample judged the best in the nation will then represent Australia in the International Taste Test competition in the USA in February 2020.

The Advisory Committees in all States are ramping up their activities, with a range of Interest Days and other events planned. It was great that the NSW Committee ran their first charity event with an Interest Day and Bowls afternoon held in Port Macquarie on 26 July. Engagement, ownership, contributions and participation by members in all States is a vitally important part of our future plans. We hope that members will support the efforts of the Advisory Committee members, attend the events and participate in all the other opportunities on offer to encourage networking and share knowledge.

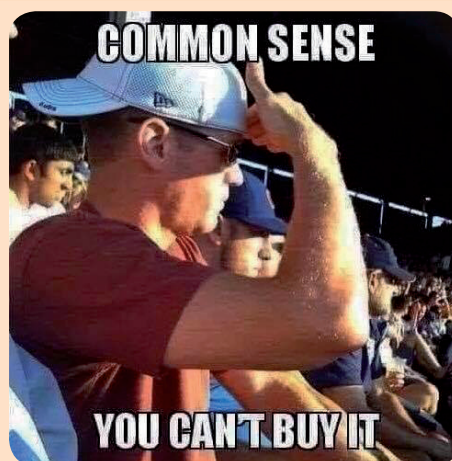
We have welcomed two new IDIOTS members recently and there is a write up on both Bill Collie and Darren Lord in this edition. Congratulations to both Bill and Darren and we certainly appreciate everything you have done for WIOA.

Finally, WIOA has developed a number of one day Technical Seminars on topics including Distribution Systems Management; Media Filters; and Chemical Dosing Optimisation to name a few. These seminars are run based on demand and Members need to let us know if there is demand to participate from their area. If you would like more information on a seminar, or would like to have one staged in your area, please contact us at the office and we'll see what we can arrange. More information on the seminars is available from the WIOA website at wioa.org.au/wioa-events/onedayseminars/

Until next time,

George Wall – WIOA Managing Director

THE LIGHTER SIDE



PROFILE OF A MEMBER



Name:
Matthew Whitelaw

Position: Coordinator
Water Treatment

Employer & Location:
East Gippsland Water –
Bairnsdale, Victoria

How long have you worked in the water industry and what attracted you to it?
Roughly 8 years including a university placement.

What do you enjoy most about your job?

The variety of work and the locations I get to work in. I work anywhere from Water Treatment Plants to Farms and get to learn how these systems operate.

What are the major challenges in your current role?

Constantly balancing the priorities from different areas of the business and trying to remain as efficient as possible with our resources.

How long have you been a WIOA member?

Roughly 6 years as a member. I have had paper presentations at 2 WIOA conferences and attended 2 others. I am now a member of the WIOA Victorian Advisory Committee which will be a great new challenge.

How do you relax?

Spending time with family and friends. Football and fitness work.

Where do you live and what's the best thing about it?

Bairnsdale - The bush, the sea or the snow are all at your doorstep.

Quick questions

Age: 28

Nickname: Claw (mostly at footy but probably now at work too...)

Family Status: Partner Tayla and a 1 year old daughter Lucy

Pets: None

Favourite food: Pizza

Least favourite food: Anything with coriander

Favourite TV show: Brooklyn Nine-Nine, Friends or Scrubs

Worst TV show: Anything too serious or too slow

Favourite Movie: Can't decide between Die Hard and Armageddon

Favourite Musical artist/s: I'm a bit all over the place with music... anything from older Linkin Park through to Ed Sheeran or Hilltop Hoods depending on my mood...

Favourite book: Hard to choose but have always been a fiction fan

Favourite team: Collingwood (don't judge me)

Ambition in life: To be the best role model for my daughter I can be

Hobbies: Football

Best Trait: Friendly and like a joke

Worst Trait: a bit messy...

Four people to invite to dinner: Ryan Reynolds, Dane Swan, Chris Pratt and Jonathan Brown – Would be some interesting banter thrown around.

WIOA LOOK-ALIKES

When packing down after the Bundaberg conference a number of the Xylem team were calling Tim Brown from Xylem Warnie. The resemblance is obvious and Tim suggests at least once a fortnight he is told by some random person that he reminds them of the former cricket great.



Tim Brown from Xylem



Shane Warne

If you know of a WIOA member who has a look-alike send us a photo.

PROFILE OF A STAFF MEMBER



Name: Dale Osborne

Position:
Project Officer

Employer & Location:
WIOA Shepparton

How long have you worked in the water industry and what attracted you to it?

11.5 years in the industry, I am passionate about water and the resource

management of it. There are so many diverse opportunities in the industry.

What do you enjoy most about your job?

The different Industry support and guidance networks WIOA offer their Members.

What are the major challenges in your current role?

As a new employee, getting my head around all facets of WIOA

How long have you been a WIOA member? (your involvement)

4 Months

How do you relax?

I spend time with my family

Where do you live and what's the best thing about it?

I live in Kialla, a southern suburb of Shepparton in Victoria. Everything we need is not far from where we live.

Quick questions

Age: 37

Nickname: Ozzie

Family Status: Wife Sheree and 4 children Jack 12, Rhys 11, Aiden 9 and daughter Rhyley 7.

Pets: (German Shorthaired Pointer) Roy

Favourite food: Lollies

Least favourite food: Beans

Favourite TV show: AFL

Worst TV show: Cooking shows

Favourite Movie: Anything with Adam Sandler in it

Favourite Musical artist/s: I'm a radio man.

Favourite book: Don't read enough to have one

Favourite team: Dookie United Football Club 2007 Senior Premiership Team

Ambition in life: To always be happy

Hobbies: : Family time, football coaching and watching my kids play sport, exercising and I like long drives in the car (think time).

Best Trait: Funny (I think)

Worst Trait: Probably thinking I am funny, hahah

Four people to invite to dinner: My Wife, Chris Ludeman and his wife (best mate) and me makes four.

COMPUTER SAYS NO!

Carol Beer is a receptionist character played by David Williams in the TV show Little Britain. Carol's famous catch cry in customer service is "Computer Says No". Unfortunately, this is exactly the experience WIOA provided our potential exhibitors seeking to register for sites at the Bendigo conference. The Victorian sites went on sale at 1.00pm AEST and the Computer Said No, with our website crashing almost immediately due to an unprecedented number of visitors landing on the site simultaneously.



The crash resulted in us needing to postpone the site sales and necessitated a rethink and new process for site sales to avoid a recurrence. The solution is to provide all the information and forms in advance of the sites being offered for sale. The change was communicated to all corporate members and we confirmed that we would not accept any registrations in advance of the appointed date and time. Some companies that jumped the gun were asked to resubmit their forms. The new process will be used for all future conference site sales.

The second attempt for our Victorian conference site sales meant that within 65 minutes all 203 sites were allocated and another 21 companies that missed out, were placed onto a waiting list. Changing our process by making the registration form available in advance, allowed organisations to complete their form in readiness to send by email at 1.00pm.

As soon as the clock struck 1.00pm we received 72 applications inside the first minute, 10 in the second minute, 31 in the third minute and 19 in the fourth minute, with some companies booking multiple sites. Numbers started to slow over the next 60 minutes before the last of the available sites was allocated at 2.05pm. The very popular premium sites around the meals area were allocated in the first 30 registrations, all of which were received inside the first minute.

WIOA is continually examining our processes to improve on them and to create a fair and equitable process for everything we do, including the site sales.



In 2020, our sponsorship policy is being amended to allow companies that sponsor a single item at all three conferences to receive a site selection in advance of the site sales process. It is assumed that there will be limited, if any, sites surrounding the meals areas available for non-sponsors. If interested in sponsorship for 2020, please contact Craig at the WIOA office.

NEW IDIOTS INDUCTEES

Bill Collie

Bill Collie is the 38th WIOA member to be inducted into the IDIOTS fold. Bill joined WIOA in February 2009 and has been a member for just over 10 years.



Bill Collie (L) presented his IDIOTS pin by Col Haynes



Bill showing off his golf prowess

Bill joined the Queensland Advisory Committee in early 2012 and has been an active member ever since.

He first attended the Queensland conference in 2013 and has been to every one since then. Bill doesn't just show up to the conferences, he gets there early to help us set up and run the event. He is one of the first to put his hand up to help out. You will see him doing tasks like driving the forklift, helping the exhibitors with their equipment, chairing paper sessions and even packing the satchels (without complaining). Bill took on the role of MC at the Meet the Exhibitors dinner in 2018 and did an awesome job. So much so, that he agreed to be MC again in 2019.

Bill has really pushed the benefits of being engaged with WIOA within QUU and we have seen a substantial increase in support from QUU over the last few years.

As well as a dramatic increase in conference attendance, we have had 2 excellent Interest Days at Luggage Point and QUU has really embraced the operator certification concept. QUU participated in the pilot roll out of wastewater operator certification in 2017 with 3 of the first 6 operators certified. They have many more operators finalising their training at present to allow them to be certified in the future.

Bill constantly encourages work mates to do a paper or poster at the conference, or to present at one of the Interest days. He even looked after the Kiwi Young Operator of the Year in 2018 and provided a work experience placement for him at QUU.

In 2018, WIOA was approached by the Qld Dept of Environment and Science to be part of the Technical Advisory Panel on the project to develop an End of Waste Code on the use of Ferrous Chloride. Bill has taken on that role on behalf of WIOA.

Bill is a regular contributor of reports and articles for our Operator newsletter.

Like all inductees before him, Bill had to demonstrate his worthiness for such an award. We heard Bill doesn't mind a game of golf and is often sought out to play in ambrose events. We thought we'd see just how good he really was with a couple of shots. They didn't get very close, so don't call us Bill we'll call you when we need a team member!

Darren Lord

At the Tasmanian Taste Test and Interest Day in July, Darren Lord became the 39th IDIOTS member and the first from Tasmania. Darren joined WIOA in September 2010 and has been a member for just under 9 years.

Darren was one of the inaugural members of the Tasmanian Advisory Committee when it first formed in July 2010, then representing Cradle Mountain Water. Darren has been an active member of the Tasmanian Advisory committee ever since, including being Chairperson from 2013 to 2017.

The main reason that Darren stood down as Advisory Committee Chair was that he left TasWater to take on a new opportunity with Xylem. He felt that it would be better to have a TasWater person in the Chair role.

He was also a member of the WIOA national Committee from 2013-2015 and in 2017. In his role on the national Committee, Darren has attended the Victorian conference and helped out with organising and running the event.

In 2014, Darren submitted an entry into the PASS Award describing a safety initiative to allow 20 litre drums of hypo to be decanted safely into larger tanks. He won the award, and got to participate in the New Zealand tour. None of those present will forget his chillie eating exploits.

Darren has really pushed the benefits of being engaged with WIOA within TasWater. We know that Darren is constantly encouraging the TasWater operators to be involved in the interest days, site tours and the taste test days. He is a regular contributor of reports and articles for our Operator newsletter.

In researching what to do for his challenge, we were advised that Darren is a bit of a handy man and is keen on doing home renovations. We also understood that he loves quad biking. Any renovation dude needs a uniform and some tools and a trike took the place of a quad bike for a lap around the presentation room, along with revving noises at appropriate times.



Darren Lord (c) with other IDIOTS Tony Hourigan and George Wall



Darren doing his quad bike challenge

Through their contributions, Bill and Darren have both played an important role in allowing WIOA to expand and gain the acceptance we now enjoy in Queensland and Tasmania. We need more committed members like them. Congratulations on your efforts from all of us!

2019 QUEENSLAND CONFERENCE REPORT

The **44th Queensland Water Industry Operations Conference and Exhibition** saw over 600 people from across the water industry attend the event at the Bundaberg Multiplex Centre on 5 & 6 June 2019.

Dr Kathy Northcott from WaterRA provided the Opening Address covering two skills projects; the Value of Operator Competency project and the WIOA Technical Competency Project. Both these projects highlight the need for well trained operators and provide a blue print to follow.

Jillian Kilby from the Infrastructure Collective delivered the conference Keynote Address providing a well-received insight into working in the water industry from a woman's perspective. Jillian shared a range of stories about her career and experiences from working in a variety of roles and situations.

At the Awards Dinner held on Thursday evening, John Van Ryt from Mareeba Regional Council won the Leon Henry Memorial, 2019 Queensland Operator of the Year award. Ali Sacipovic from Fraser Coast Regional Council was the winner of the 2019 Young Operator of the Year Award. The Award for the Queensland Operator of the Year (Civil/All Rounder) went to Spencer Stacey from City of Gold Coast. WIOA congratulates all of the award nominees for the outstanding contributions they make to the industry.

Others recognised at this event included Andrew Watson from South Burnett Regional Council who won the WIOA Award for the Best Paper by an Operator and Mark Tosh from

Queensland Urban Utilities won the Best Poster Award. The Brian Davis Award for Best Paper Overall was awarded to Cale Maclean from Unity Water.

The event included a comprehensive exhibition with 111 sites where companies exhibited the latest in equipment, services and process technologies available to the water industry. Ozzi Kleen was awarded the Ron Bergmeier Award for the Best Exhibition Site.

The conference again hosted the Ixom Water of Origin Taste Test that saw the Queensland entry from Mackay Regional Council go head to head against the NSW/ACT sample from the Shoalhaven Water. Unlike the State of Origin Rugby later that night which was won by Queensland, it was the NSW sample that took the honour, Queenslanders now hold a slender 4 to 3 margin over NSW.

WIOA also hosted the Queensland Mains Water Tapping Competition with a huge roll up of spectators cheering the teams on. The team from Gold Coast Water & Waste – Cool Tapping recorded the best time to win the title. Bundaberg Regional Council, Reece Civil and Ixom supported the competition with \$1000 donated to Buy a Bale on behalf of the Tapping Competition winners.

After running a Charity Bowls Day earlier in the year and a raffle at the conference, Narelle D'Amico from conference host Bundaberg Regional Council, announced the WIOA charity donation of \$2,000 to WaterAid. Thanks to all the members and supporters who helped raise these funds.



Enjoying the Meet the Exhibitors dinner



Hayley Paton presenting her paper



Emotions running high during State of Origin 1 on the big screen



Water of Origin Taste Test underway

QUEENSLAND CONFERENCE 2019 WINNERS

Congratulations to all the award winners from the Queensland Conference and Exhibition.

**AUSTRALIAN
WATER
ASSOCIATION**



IXOM



Queensland Operator of the Year

John van Ryt
- Mareeba Shire Council

Queensland Young Operator of the Year

Ali Sacipovic
- Fraser Coast Regional Council

Queensland Operator of the Year (Civil/All Rounder)

Spencer Stacey
- City of Gold Coast

Brian Davis Award for Best Paper Overall

Cale Maclean
- from Unity Water

WIOA Awards for Best Paper by an Operator

- 1 **Andrew Watson**
- South Burnett Regional Council
- 2 **Marcus Boyd & Terry Hennes**
- Toowoomba Regional Council
- 3 **Duncan Shillito** - Seqwater

WIOA Award for Best Poster by an Operator

Mark Tosh
- Queensland Urban Utilities

Ixom Water of Origin

QLD
Mackay Regional Council v
NSW/ACT - Shoalhaven Water
Won by NSW Shoalhaven Water

Ron Bergmeier Award

- Best Exhibition Site
Ozzi Kleen

Queensland Main Tapping Competition

Won by the Kool Tapping team comprising Dan Lee and Gavin Stacey from City of Gold Coast.
\$1,000 donated to **Buy a Bale**

WIOA Conference Charity

\$2,000 Presented to **Water Aid** on behalf of conference host Bundaberg Regional Council



Winner Best Paper Overall – Cale Maclean (L), with Colin Haynes



Winner Best Operator Paper, Andrew Watson (L) with Heidi Josipovic



Winner Best Operator Poster, Mark Tosh (L) with Heidi Josipovic



The team from OzziKleen took out the Ron Bergmeier Award for Best Exhibition Site

QUEENSLAND OPERATOR OF THE YEAR

John Van Ryt from Mareeba Shire Council was announced as the winner of the 2019 Leon Henry Memorial, Queensland Operator of the Year sponsored by AWA at this year's WIOA Queensland Conference in Bundaberg in June.

John is a critical and invaluable member of Mareeba Shire Council's Water and Wastewater Treatment Team. As a qualified electrician, John started with Mareeba SC in 2012.

Council was seeking a qualified treatment plant operator and John applied knowing he didn't have the necessary water training certificates but had a desire to work in the industry. Given John's previous experience with SCADA and telemetry, Council identified the value in recruiting him and provided his training to become a qualified water industry operator.

It soon became evident that John is not only technically skilled, but he has the unique ability to bring the water operations team together to work as a highly effective team. His coordination and natural leadership style united the team and John has the respect of his peers through his diligence and technical abilities.

John brings to the Council an excellent work ethic, invaluable technical problem-solving skills, effective team membership and a steadfast demeanour. He is well respected by his peers and demonstrates leadership that enables the team to work effectively and professionally. Council has recognised these personal and professional attributes recently by promoting John as the acting Supervisor of the Water and Wastewater team.

John has been instrumental in delivering Council's capital programs within the water and wastewater section of Council. Taking the lead and liaising with a range of industry stakeholders to provide the necessary outcomes on some key projects, specifically the SCADA and Telemetry projects.

John has been invaluable in achieving environmental compliance at water and wastewater sites by undertaking and understanding preventive maintenance, environmental and process monitoring, keeping detailed records, investigating and rectifying technical issues. His ability to communicate on these matters has been instrumental in Council building sound relationships with regulatory authorities.



John at his plant

John proactively integrates health and safety management principles into the supervision of his work site, work role and he recognises his responsibility for the health and safety of specialist contractors and employees. His commitment and keen involvement is critical for the implementation of MSC's health and safety management system.

ALI S - ANYTHING IS POSSIBLE

Ali Sacipovic from Fraser Coast Regional Council (FCRC) is the 2019 Queensland Young Operator of the Year. In presenting the award, Dave Cameron from award sponsor **qldwater** spoke highly of Ali and his work performance, eagerness to assist others, and continual improvement of practices to save time, money and increase safety.



QLD Young Operator of the year 2019 Ali Sacipovic (L) with Dave Cameron

Ali has been employed by FCRC for 4 years from 2015 and has enthusiastically taken on roles with greater responsibilities during this time. Following completion of a traineeship, Ali was retained by Council as an Assistant Wastewater Treatment Operator. He has recently been successful in being appointed the Wastewater Treatment Operator at the Aubinville STP in Maryborough.

The Aubinville STP was constructed circa 1940 and due to the age of some components and others reaching capacity, Ali faces a number of challenges operating the Aubinville STP while works are underway for further augmentations. In Ali's short time as Aubinville STP Operator, he has demonstrated that these constraints do not prevent improvements being made at an operational level and that things can always be made better.



Ali at work at the STP

Ali has continually undertaken training and development and has completed a Certificate II Water Industry Operations. Ali is doing a Certificate III Water Industry Treatment, which is due for completion in June 2019. Ali also has numerous qualifications related to safety including Confined space entry; working at heights; and Manual Handling.

Ali is heavily involved in the community outside of his employment with FCRC, within the Fraser Coast region and western Queensland where he grew up. Ali was recognised for his community involvement by being selected as a baton bearer for the 2018 Commonwealth Games and participated in the Queen's Baton Relay through the Fraser Coast region.

Ali's contributions to the Boulia community have been recognised by the Boulia Shire Council appointing him as their Official Ambassador for 2019.

SPENCER IS TOP IN CIVIL WORKS

Spencer Stacey from Gold Coast Water and Waste (GCWW) was announced as the 2019 Queensland Operator of the Year (Civil Works/Allrounder), sponsored by **qldwater** at the Bundaberg conference.



QLD Operator of the Year 2019 (Civil/Allrounder) Spencer Stacey with Dave Cameron

During the 3 years of Spencer's employment within GCWW he has demonstrated a very high level of initiative and willingness to not only learn, but also improve on the organisations processes.

Spencer has also been part of GCWW's water main tapping competition team "the Tapping Tubbies" which has won the competition for the past three years. He encourages a team focus for all activities and has been instrumental in the development of the leak detection program and use of correlators. He also steps up and acts in higher duties roles when requested, manages himself well and steers the team whenever required.



Spencer (L) with Trent Roberts in 2018

GCWW treats workplace health and safety as a major, if not the most important, part of the business. Spencer has shown he is a key driver in this area, not only an employee that can follow rules, but as leader. He has completed a number of safety related training courses including confined spaces, first aid, risk assessment and work method statements and he is a champion to others in the Civil works area. He has good vision in the safety area and does not take short cuts. He also participates in monthly meetings and is actively involved in the topic of Safety. Spencer sets the bar for the rest of the team.

Spencer is currently enrolled in Cert III Water Industry Worker; he holds numerous tickets and accreditations that relate to the water industry. Once again it's great to have employees like Spencer who love to learn, and develop. Over the past 3 years he has developed very well and is a future leader in the water Industry.

Spencer has many active interests outside of GCWW including snowboarding and camping. He has also nominated both the Animal welfare league and the Currumbin Wildlife Sanctuary to be the recipient of the donations (\$2000) from winning the main tapping competition. He has a genuine care factor.

TASMANIAN INTEREST DAY

The WIOA Tasmanian Advisory Committee held an interest day on 15 May at the Kingborough Bowls and Community Club followed by a tour of the refurbished Blackman's Bay WWTP.

The assembled guests were welcomed by Tasmanian Advisory Committee Chair, Mark Abela. It turned out this was to be the last event as Chair for Mark, who announced that he has taken on a new role in Samoa and would be finishing up with TasWater in July. Thanks for all your efforts as Chair, Mark, it is greatly appreciated by everyone at WIOA.

The delegates heard a number of informative presentations including an excellent insight into diversity and inclusion at TasWater by Sophie Fahey.



Sophie Fahey presenting on diversity and inclusion

The sponsor for the day was W A Chromarty and Jim Buckby showcased the latest in instrumentation for the water industry. Phil Tuck spoke about a range of issues

they are working on in their area of the east coast. Anthony Allen from the TasWater sewer optimisation team talked about the treatment process review process currently under way.



The delegates listening intently

Matt Robertson from TasWater spoke about the results of the filter core inspections process recently undertaken for the water treatment plants. A discussion on the various types and grades of media was very interesting. Last speaker before lunch was George Wall from WIOA who gave an update on the association's activities.



Everyone on site for the tour

Following a hearty lunch courtesy of sponsor W A Chromarty, Michael Evans from TasWater gave an overview of the Blackmans Bay WWTP upgrade project. This was followed by a site tour of the WWTP which was hosted by Michael Evans and Craig Griggs and included the new raw wastewater screening process and the new activated sludge treatment process. A great day was enjoyed by the 30 or so people in attendance.

NSW BOWLS FOR CHARITY

The WIOA NSW Advisory Committee conducted a Water Interest day that included the first NSW charity event in Port Macquarie on 24 July.

A total of 35 individuals attended the day. Technical presentations were delivered by Alex McCaffrey from Port Macquarie Hastings Council, Zoe Theil from MidCoast Council, Peter Anderson from Kempsey Shire Council, and Kerryn Lawrence from the local department of health unit who shared some experiences on incident management. All presentations were well received and a great discussion around the future workforce, traineeships and how to encourage new entries into the industry got everyone thinking.



Kerryn Lawrence from NSW Health presenting

After the technical session it was over to the bowling rinks as 10 teams battled it out over a lot of good banter and friendly rivalry. When time was called on the preliminary rounds, the finalists were determined. In the play off for third and fourth it was the VOR Environmental team up against the Calix team and in the play off for the Tradies Cup, team Xylem was pitted against top team Aqualift Project Delivery.



All the bowlers

Prior to the finals everyone took the opportunity to have a diagonal roll using the extremes of the rink and Harry Lindsay from Port Macquarie Hastings Council put his bowl alongside the jack to claim victory.

In finals that made the Cricket World Cup look well organised, 3v4 were tied after the two ends and the rule book was required to determine what happened next. It was a bowl off, between opposing captains Vincent and Zoe, with one bowl each. Vincent and Zoe marched their way to the far end of the rink and it was Vincent who would bowl first. Disaster! As the green has been drying out through the day and getting a bit quicker, Vincent's bowl had a little too much pace and found its way into the sand. This left Zoe needing to only ensure her bowl stayed on the green to win the bronze medal for her

team. She dropped her bowl at her feet and raised her arms in victory much to the delight of onlookers.



Tradies Cup winners Jay, Jill and David

The Grand Final was an equally tense affair with the scores in the balance on the final end 3 bowls could barely be separated. Justin from Xylem tried a Xylem measuring app on his phone that not surprisingly would have seen victory for his team, but after a quick dash to the car park to find a tape measure, it came down to a 4mm victory for the Aqualift Project Delivery team.



Various ways to measure the distance

Jill Bush captained the victorious team that included Dave Barry and Jay Charnock from the Port Macquarie Hastings Council.

The third placed girls, Zoe, Kerryn and Lisa



The lawn bowls is a great way to mingle and network and attendees shared many stories about their workplace, learning from one another. The day could not occur without the generous support of our sponsors that enabled it to be a free day for members and guests. Our thanks and appreciation go to Royce Water Technologies, Aqualift Project Delivery, VOR Environmental, Safe Group Automation, Xylem, For Earth, and Dredging Solutions for their support. It was a great day, in fantastic weather, with great camaraderie amongst members. The Royce Water Technologies – Blue team was also recognised as having the most opportunities for improvement on the bowling greens.

More than \$2,000 was raised on the day that will be provided to a charity at the 2020 NSW conference.

Contributed by Alan Butler, Port Macquarie Hastings Council.

KOOL TAPPING NEW CHAMPS



As the fourth staging of the Queensland Mains Tapping competition got underway at the Bundaberg conference, there was bound to be a new winner with the Tapping Tubbies from Gold Coast Water hanging up their tapping tool for this year.

After a technical delay, we had the wrong sized drill bits for the ferrules, the competition got under way with 8 teams entered. Two heats of two teams each were conducted on both Wednesday and Thursday morning. Teams were entered from Gold Coast Water; Bundaberg Regional Council; Cairns Regional Council; Queensland Urban Utilities and Wide Bay Water. The competition continued to be a drawcard with a huge crowd packing in to have a look each day.



The Tapping comp under way in front of a large crowd

In the first heat on Wednesday morning, the "Kool Tapping" team from Gold Coast Water set the early benchmark with a time of 1 min 52 seconds narrowly defeating their heat competitors "Cant Tap This" from QUU, who finished in 2 min 24 seconds.



Winners "Kool Tapping" comprising Dan Lee (L) & Spencer Stacey

As fate would have it, these ended up being the two best times for the whole competition with Gavin Stacey and Dan Lee declared the winners from Runners-Up Daniel Marshall and Thomas Pilcher.

Bundaberg Regional Council provided all the pipes and constructed the tapping rig for the competition. Reece Civil sponsored all the tapping tools and equipment and Ixom also supported the competition. The winning team nominated Buy a Bale as the recipient of a \$1000 donation on behalf of the sponsors and WIOA.



More participants under way

WOMEN OF WATER QUEENSLAND

At this year's Qld conference, the WIOA Diversity and Inclusion working group kicked-off a new initiative called the Women in Water Forum. The Forum was held during on the Wednesday afternoon in a nearby conference room at the Bundaberg Multiplex. It was a panel style discussion featuring invited panellists; Heidi Josipovic – Albury City Council (WIOA President); Narelle D'Amico – Bundaberg Regional Council; and Jillian Kilby – The Infrastructure Collaborative.



The forum underway

The Women in Water Forum was well attended by both men and women hailing from all different backgrounds and roles across the water industry. Attendees were asked to write a short answer to the question – "Tell us one thing your boss has done that worked really well". The responses were collected and the best ones were read out by the panellists after which they gave their thoughts and responses to the written question answers.

Some of the participant feedback included:

Learn / Support

- Let me do my job, not micromanage, relies on open communication of my whereabouts and the projects I work on
- Supported and guided discussion about how I could grow and learn from her. Let me be myself as we do this
- Encouraged me to develop my own leadership style and offered to mentor
- Encourage self-ability
- Let me play with his \$1 million



Team / Culture

- After our quarterly team meetings, we would go out for dinner and have drinks. Boss would pay for first round and encourage everyone to take part – team culture / building
- Lunch on Fridays to get all staff together
- Celebrates the success of woman (and brought in a cake for International women's day)
- Enabled the staff and changed the culture
- Very patient explaining plant process

Both Heidi and Narelle gave great perspectives on good managers and leaders from front line operations point of view. Jillian Kilby did a fantastic job summarising all of the comments into two key messages for direct line managers; 1) Trust your team and give them an appropriate level of autonomy to perform their roles – don't micro-manage!, 2) Empower your team to step up, speak up and recognise those who go the extra mile! Overall an interesting and insightful discussion.

Contributed by Kathy Northcott, WaterRA

BIRDS EYE VIEW

Facilities Members Operate

Falls Creek

Wastewater Treatment Plant

Falls Creek has a Biological Nutrient Removal (BNR) plant utilising the activated sludge process with enhanced chemical phosphorus removal (Alum dosing). The final effluent from the WWTP is processed through a UV disinfection system before being discharged into “No Name Creek” as per the EPA license.

The sewage collection system includes a gravity sewer through the village. The pre-treatment at the inlet works to the plant includes a 5 mm sieve screen and a vortex grit trap. Following screening and grit removal, the screened wastewater then flows into either Tank No. 4 or Sequencing Batch Reactor (SBR Tank) treatment systems, operated in parallel. Both Tank No. 4 and SBR Tank are operated in the winter, high load period. During the summer, low load period, only Tank No. 4 or SBR Tank is in operation.

- Aeration Tank No. 4 is of steel construction and was constructed in 1986. It has an internal concentric clarifier. Process capacity of 1.4ML daily
- The SBR Tank is the most recently installed tank, in 2016. It is of concrete construction. It is equipped with a mechanical skim decanter, which decants settled effluent in an adjoining effluent equalisation tank. Process capacity of 650kL daily
- Waste Activated Sludge is pumped to the Aerobic Digester/Sludge Storage Tank (Tank No. 3) from Tank No.4 and SBR Tank treatment systems, separately.
- The waste sludge receives further aerobic stabilisation with aeration. Digested Sludge is transported offsite by tanker (as a thickened liquid at approx. 2 to 3% w/w solids content).





- 1 Tank 4
- 2 Blower Room
- 3 Generator Room
- 4 Aerobic Digester
- 5 Control Room / Office
- 6 SBR Tank
- 7 Pre-treatment room
- 8 Caustic Dosing Plant
- 9 Alum Dosing Plant
- 10 UV Disinfection Plant
- 11 Discharge "No Name Creek"



NEW ZEALAND TOUR 2019

This year 14 operators from the “West Island” made the annual pilgrimage over the ditch to visit our NZ cousins. We landed in Christchurch in the wee hours of Friday morning and those who had not already met were introduced to one another, then off to the motel with our newfound friends. Up early Friday morning, we embarked on the world famous Tranz Alpine Railway making our way over Arthur’s Pass to the west coast. The scenery was stunning and the conversations lively as we all took the chance to get to know one another and pump up our own tyres before the truth come out.



Tranz Alpine train scenery

The railway journey was amazing. Wild rivers, deep gorges, valleys, and all ringed by tall rugged peaks. The feats of engineering were also incredible, with tunnels through solid rock and bridges over deep ravines, all mostly built by hand.

We meet up with our hosts Bruce Nesbitt and Kathryn Russell at Greymouth and we started our road trip on the bus with Bruce behind the wheel. The vistas were stunning, tall forests, sweeping bays and views of the wild ocean out every window. We stopped in the pub at the little town of Hari Hari to have a couple of sharpeners and get the conversations flowing even better.

We continued to Franz Joseph, a little village home to a spectacular glacier of the same name. Unfortunately, we couldn’t get too close to it as the only bridge across the Tatara stream washed away in a recent flood event.



Franz Joseph glacier

Next morning we went and met with Martin and David from the local council. They showed us through their brand new aerated oxidation and maturation sewerage ponds constructed after the devastating floods of 2016. During the flood, the rock wall levee protecting the treatment plant from the river had blown out after 1.2 metres of rain in 48 hours. This had washed

away their plant, along with a holiday village downstream and caused a tremendous amount of damage.

They had to come up with a solution so the locals built the plant and then applied for the permit! Now they have an excellent new facility, just need to go through a few legal hoops and they are right to go. The other “issue” that the locals are wary of is the one in 150-year 8.0 richter scale earthquake, overdue by about 200 years. Not a matter of if but when.

A visit to the water treatment plant was next. We barrelled up the side of a mountain along an access (goat!) track and saw the pressure filter plant they had to deliver the town’s water supply. The turbidity coming in can vary wildly depending on rain events. On the day we visited, it was 0.125 NTU raw water and going out at 0.018 NTU after filtration! A good indication of how remote this part of the world is, was the water tank which was overflowing at a rapid rate but an operator was not going to be able to attend site for another several days. I guess water supply is not too much of an issue with 5 metres of rain a year!

On our way back up north we stopped and had a look at the maturation ponds and another pressure filter supply plant outside of Hokitika which was to be our next stop. There we visited the National Kiwi Centre to have a close encounter with the local fauna. We saw some monster eels, trout and went yabbying, where we all caught one except for “Cricky Andrew” from Queensland, who despite his close affinity with Steve Irwin was not much of a hunter! Fellow maroons, Holmesy and Super Tone showed their fishing skills and represented well. Adam from the Mexican village of Albury was a fine rep from those of us south of the boarder.



Hokitika WTP

We were lucky enough to also see a pair of Kiwis. We watched them in almost complete darkness as they come out for a feed. They flittered around a bit, scurrying around the enclosure and then as they relaxed and settled in to their lunch, Boom! A blinding flash of light lit up the room, one poor Kiwi blinded by the light ran in to the glass, the other bird leapt 2 feet in the air and the birds were off! The culprit was a rather sheepish John Harris, saying sorry and that he did not see the NO PHOTO sign. For this cultural faux pas Mr. Harris was to wear the “mugs hat” for a day, which was a fitting punishment for giving the young Kiwis a heart attack!

The nights’ accommodation was to be at the famous Mahinapua pub which is renowned the world over for its hospitality. An awesome home cooked roast pork dinner was followed by a night of darts (Tassie Brad), singing (Shaq), pool

NEW ZEALAND TOUR 2019

comp (Jaeger Toby), dancing (most people but especially me!) and general merriment by all and sundry! A Contiki tour vibe had come into force and the operators had a ball. The manager of the pub could not believe that we were a group of strangers who had only met a couple of days before. It was a special night that will live on in WIOA folklore!

The next morning after countless tries of wrapping our tongues around the Maori language in a failed attempt to look the part, we were fortunate enough to visit a Marae. As we entered the Marae, we partook in the custom of rubbing noses, called the Hongi. The welcoming speech was in both Maori and English and was an introduction of the local family and tribal histories. They spoke of their connection with the land and what it means to them. The group then sang us a song. George Wall then replied which is the custom, with an explanation as to why we were in NZ, where we were from and our special interest being water. Our hosts were well pleased to hear that we, as George so eloquently put it, "weren't just another bunch of Boofheads from Australia" and loved the fact we sang a rousing rendition of Waltzing Matilda! We shared some tucker with our hosts and swapped stories over a cuppa. We took a tour of the facilities and heard some of the traditional stories at which Tabatha was most pleased to hear that Maui from Moana is real and not a made up Hollywood fairytale. Nice one Tab!



The Marae visit

Our travels that day took us back through Greymouth, past the spectacular Punakaiki Pancake Rocks formation and stunning coastal scenery to Westport where we met Sam from the local council. He showed around their activated sludge treatment plant. The approach to biosolids management at the plant was interesting as they mixed it with soil, sawdust to turn it into compost and used locally.

We continued to Reefton to our digs at the Old Nurses Home (not the old nursing home!) where the nurses used to live when working at the local hospital. A few of us could have done with some nursing back to health after the previous night's shenanigans (me especially)! Up early for a hearty breakfast and then a tour of the Reefton Water Treatment plant with Sam. We saw the pressure filter plant where they filtered the water from a well next to the local river. The water in town was beautiful, clear and sweet to drink

Our last stop was Hamner Springs. We had a free afternoon for some hot springs relaxation, pub relaxation, sightseeing or some adrenaline fuelled adventure in the form of jet boating

and bungee jumping. Rodney and I went on the Waiau River for a thrilling ride in just a few centimetres of water and a few centimetres space between some rather dangerous looking boulders and cliffs! The two big V8 engines in the jet boat had Rodney giggling like a schoolboy and I took the leap of faith off the extremely high Waiau bridge with just a large rubber band tied to my ankles.



Hamner Springs WTP

We met Rick and his crew the next morning and had a tour of the water plant and then on our way back towards Christchurch, he took us past a small disinfection plant that pumped from a well to some rural customers. These customers were Merino sheep who apparently did not like the taste of chlorine in the water. Something in common with their owners it would seem! We then toured the site of the water tank farm destroyed during the most recent earthquakes. The plant is now in shipping containers and the tanks interconnected with flexible pipe to allow for movement.

Now back in Christchurch and off to the WIOG Presidents dinner and a chance to swap stories with the locals. We were well looked after and had a lovely meal and evening. The next morning, WIOG's conference began and we heard from many knowledgeable presenters. The papers were all well received and very informative. A highlight was our very own Big Al from Queensland and his paper on the application of ferrous chloride in controlling odour at his wastewater treatment plant at Maroochydore. The dinner that night included a story or two from an entertaining fellow by the name of Sir Tim Shadbolt, the Mayor of Invercargill. I thought it was a character along the lines of our Sir Les Patterson but no, he was a fair dinkum Mayor and one of the most popular public figures in New Zealand! The conference was a great success and a credit to all those who organised it.

Our tour was a fantastic opportunity to meet others with a wealth of experience as well as those new to the caper. The stories, the bus trip monologues, movie impersonations and comradery that we all shared was awesome. I'd like to thank George Wall and John Harris for their efforts in bringing us together and Bruce and Kathryn for their good humour, good company and safely navigating the tour bus.

The tour group at the Waiau tank farm



Contributed by Ashley Cox, Wannon Water.

KWATYE AWARD

Paul Beard, Operations Manager – West Kimberley from Water Corporation in Western Australia was announced as the 2019 winner of the revamped Kwatye Award at the WIOA South Australian Conference in August. With the generous support of new sponsor TRILITY, the Kwatye Award now recognises an initiative involving any cultural or diversity and inclusion-based activities within a project or community in which our members serve.

Paul has been critical in establishing a suite of community initiatives to benefit Aboriginal people in Western Australia's remote Kimberley region. At the Broome North Wastewater Treatment Plant (WWTP), Water Corporation uses treated wastewater to create a sustainable supply of saleable Rhodes grass hay which generates many thousands of dollars in revenue. Since March 2016, over \$186,000 has been contributed to a community grants scheme to benefit grass-roots community projects in the Kimberley. The grants scheme was designed to alleviate disadvantage and, given the population structure and socio-economic profile of the community, many of the projects directly benefit Aboriginal people.

Some projects include a partnership with Wunan to support an education program that gives Aboriginal girls from the East Kimberley the opportunity to attend high performing schools across Australia. In February 2016, Water Corporation partnered with Mamabulanjin Aboriginal Corporation (MAC) to grow native plants with recycled water from the Broome North WWTP. So far over 10,000 plants have been established and around 90 young people from the area have gained valuable land care experience at the site, with some completing TAFE qualifications in horticulture and land management. This project has provided people with employment, paid volunteer work and the opportunity to gain valuable new skills to improve job prospects. The seed bank also protects endangered species of native plants.

These and a range of other projects have allowed Water Corporation to engage with diverse communities on a deeper level; strengthening relationships with Aboriginal stakeholders and organisations. Water Corporation can truly claim to be advocates for Aboriginal people as well as equal opportunity employers.

WIOA received 4 excellent applications in 2019 and choosing the winner was a very difficult. WIOA congratulates Albury City Council, Wannon Water, Goulburn Valley Water and Water Corporation for the excellent contribution they are making in promoting diversity and inclusion in their respective communities, as evident in their applications.



Paul Beard (L)
with Tim Sells
from TRILITY

For winning the award, Paul will be provided a fully funded opportunity to participate in

a week long cultural exchange trip to China which will include visiting a number of water project sites as well as some sightseeing opportunities.

FUTURE SKILLING FOR A DIGITAL ECONOMY



A new report released by NCVER, *Skilling the Australian Workforce for a Digital Economy*, reveals that Australian employers should be more proactive in developing digital skills for their current and future recruits in order to maintain productivity and competitiveness in the rapidly changing digital economy.

According to the report, technology adoption across Australian organisations is “gradual and restricted, rather than rapid and comprehensive”. Based on their approach to technology adoption and associated skills development, the report identifies three groups of employers: the aggressive adopters and skills developers who actively pursue digital skills acquisition; the keen adopters who gradually adopt technology with cautious skills development; and finally, those who are aware of the growing need for digital skills but haven't invested in skills development.

The lack of preparedness among industries often has to do with associated training costs, shortage of digitally competent recruits, and unrealistic expectations of being able to hire already skilled recruits.

More than half of the survey respondents believe the VET system can do more to effectively develop the digital skills required for the emerging, highly digitalised economy. The majority of Units of Competency related to digital skills are elective rather than core, which means candidates can undertake a qualification and complete the training with little or no digital skills training. The content of these Units also needs to be pitched at a higher level of digital literacy.

The report outlines a comprehensive Australian Workplace Digital Skills Framework, the first of its kind in Australia. The framework has two dimensions: the first defines a digital skills category, and the second presents the level of need/performance. It assists employers to identify digital skills gaps and develop targeted training programs. The aim is to enable consistent and comprehensive identification and monitoring of digital skills demand and supply, which can accelerate skilling the Australian workforce for a digital economy.

The report recommends a closer collaboration between the VET sector and the government and industries to ensure the Australian workforce has the necessary digital skills to prepare for future workplace requirements. It suggests the Australian Government, in line with its Digital Economy Strategy, should provide targeted programs to encourage further adoption of digital technology and relevant skills development.

Around 70 per cent of the report's survey respondents agreed that their industries are being transformed by digital transformation. The participants at AIS national *Industry Skills Forums*, which focused on “future skilling our people in an age of digital transformation”, similarly confirmed digital literacy as a high priority skill demand in their sectors.

The *2019 Skills Forecasts* identified the recurring theme of digital literacy across the industries AIS supports. It is important to undertake an assessment of digital skills gaps and ensure the workforce is upskilled to meet future challenges of a digitalised economy. To ensure the VET system is capable of delivering the required training, it is essential to review and revise the content of Training Packages to cater for digital skills requirements and stay ahead of the game.

WINGHAM TWEMS DAM CLEAN

The Wingham component of the Taree Wingham Effluent Management Scheme (TWEMS) consists of a 20ML dam situated at Wingham Bight. The dam receives treated effluent from the Wingham STP which is pumped under the Manning River overnight.

From here, the water is distributed to 5 nearby properties where it is used for irrigation.

The dam needs de-sludging about every 5 years.



The dam is emptied over a week and is ready to clean.



Everyone clear while Lindsay's driving!

With the help of the tractor, hand squeegeeing and vacuum pump truck, the sludge is removed and deposited in sludge holding tanks at the STP to be centrifuged. Approximately 250 cubic metres of sludge was removed and the dam began receiving effluent that night.



Such a fun job



L-R Process Operator Ash Steadman, Senior Operator Matt Agnew, Process Operators Randall Carey and Aaron Little.

Contributed by Lindsay Walsh from Midcoast Council

ILLEGAL WATER METER BYPASS

It's amazing the great lengths some customers will go to for free water. Attached is a photo of an illegal water connection discovered by a water utility recently. The property owner had it all set up in the correct alignment with cloth around the illegal connection so the meter reader would just check the meter and not notice the illegal connection.

If any other members have unusual photos from in and around the water industry, please send them in so we can share them with the industry.



Illegal water meter bypass

TASMANIAN OPERATIONS INTEREST DAY

Operators from across Tasmania met in Launceston on 24 July to participate in the 2019 Tasmanian Operations Interest Day and Taste Test, sponsored by IXOM, Aquatec Maxcon and WIOA.

The day was opened by Chris Howard from Ixom who spoke about augmented reality in the water industry. His presentation showed ways to potentially improve the safety, efficiency and effectiveness of training delivery using VR technology and included an opportunity to try out the technology during breaks.



Augmented reality demonstration

The Keynote Speaker was Michael Chapman from North East Water discussing spot market energy influences and using power shredding principles to reduce power consumption and cost. What a great initiative.

The 2018 Tasmanian Young Operator of the Year, Brad Housego participated in an interview with George Wall about his experiences on the 2019 WIOA tour to New Zealand. A slide show was played in the background which also prompted some questions and some of the discussions.



Brad Housego talking about the NZ trip

Other speakers included Antoine Chassagne, Paul Hochman & Stephen Westgate from the TasWater Water System Optimisation group. Between them,

they discussed a range of topics including monitoring and optimising water treatment filters, CCP's and managing the quality of water in the distribution network. Jonathon Traynor explained a range of remote sensing opportunities available to TasWater and Dirk Stegink outlined the opportunities for sewerage system optimisation. Dale Osborne did an update of happenings from the WIOA front.

The lunch was sponsored by Aquatec Maxcon and Edward O'Brien provided a presentation on lagoon system aerators and their various applications.



Edward O'Brien from Aquatec Maxcon

In addition to the presentations, the day also included the heats and grand final of the Best Tasting Tap Water in Tasmania competition which was won by the sample from the Mount Leslie WTP.

The day was a celebration of the hard work operators put into providing high quality, safe and clean drinking water to TasWater's customers. It was also a showcase of the skill set of TasWater staff with great presentations.

LAUNCESTON HAS BEST TASTING WATER IN TASMANIA

Tasmanian water treatment plants were pitted against one another in the Ixom 2019 Best Tasting Tap Water competition. After surviving the heats, the Mount Leslie WTP at Blackstone Heights (Launceston) took out the award for the best tasting tap water in Tasmania. The other grand finalists included Rock Creek, Mole Creek, and Reatta Road.



Taste Test heats under way

TasWater's Acting Department Manager Regional Services, Brendan Hanigan said the taste test competition is always popular. "It was good to have entries from three new treatment plants brought online as part of TasWater's 24 glasses campaign, our program to end all public health alerts in the state, a commitment we achieved in August last year. Rocky Creek in the Huon Valley, Mole Creek in the upper Mersey Valley and Cornwall in the Fingal Valley, were all part of the program and entered the competition.

The Mount Leslie Water Treatment Plant is located 4.7 kilometres south-west of Launceston and sources its raw water from Trevallyn Dam. Following treatment, the water is distributed to around 4,500 customers in Prospect, Blackstone Heights (part of Kings Meadows) and through to Hadspen and Carrick. The Mount Leslie WTP was constructed in 1996 and utilises a Dissolved Air Flotation Filtration (DAFF) treatment process. It has a capacity of 20 ML/day and treats approx. 1,700 ML/annum.

Mount Leslie is now in the running to be judged the best tasting water in Australia at the national competition. Competitors already in the final include Shoalhaven Water (NSW/ACT), Mackay Regional Council (QLD) and the Swan Reach (SA) representing their states.

MEMBRANE HURTS – TRANSITIONING FROM TRICKLING FILTERS TO MBR

The transition from an older, familiar technology to a newer technology can be a daunting process for any operator. This was the situation faced by Goulburn Mulwaree Council's wastewater operators who were saying goodbye to their 100 year old trickling filter plant to welcome in a new shiny oxidation ditch/Membrane Bioreactor (MBR).

So how do you bridge the knowledge gap from a relatively simple, hands-off, hydraulic trickling filter process to the wonderful world of DO profile, anoxic mass fractions, recycle ratios, membrane TMP, backpulsing and chemical cleans? It's enough to make anyone's brain hurt!

Council did have the benefit of having smaller activated sludge treatment plants, so some of the background theory was there, but exposure to oxidation ditch processes and large scale membrane facility was a whole new world. The strategy adopted was a relatively simple and fairly obvious, three stage process - Get the operators involved early; Keep them involved throughout the design process; and provide personalised hands-on training during commissioning.

Hunter H2O as designers of the plant, acknowledged the importance of taking the operators along the design and commissioning journey. This process of two way knowledge transfer commenced from the early site visits where operators had the opportunity to hear first hand the design intent and the operators could communicate any "pet hates" with the existing plant or design preferences for the new plant to the designer.

Throughout the design process operators were invited to comment and participate in design reviews and risk assessment workshops such as CHAIR, HAZOP and HACCP. This process enabled the operators to follow the design evolution, better understand the risks faced and the reasons behind certain design decisions, and all the time improving their knowledge of the process. This was supplemented by site visits to other activated sludge and membrane plants, giving staff exposure to the types of equipment they would ultimately inherit.

The real learning came when it was time to cut-over sewage into the new plant. Hunter H2O led the commissioning phase consisting of commissioning engineers, Council operations staff, the membrane supplier (Evoqua) and the constructor (Haslin Constructions). Throughout this phase Council's operations staff shadowed Hunter H2O's commissioning engineers providing explanations and hands on learning as each commissioning challenge was addressed and overcome. The side by side learning during commissioning resulted in a quick learning curve with Council staff taking over operation of the plant by December 2018, some 4 weeks after sewage cut-over.

This process was greatly appreciated by Goulburn's operators Daniel Hunt, Malcolm Thomas and Phil Elliot who pointed out the hands-on approach has been "critical to the successful operation and change over from our existing trickling filter plant to our current MBR plant" and which "included providing training on testing and sampling procedures, how to use and understand the SCADA system, how to interpret the test results, and how the process actually works."

Contributed by Stephen Blanshard and Lisa Procter (Hunter H2O)



New
Goulburn
STP



Activated
sludge plant



Goulburn
Membranes

MARK ABELA IN SAMOA

WIOA Member Mark Abela, Chair of WIOA's Tasmanian Advisory Committee in 2018 & 2019 has recently resigned from TasWater to take on a role in Samoa for the next year. He recently supplied us with the snippet below and a couple of photos.

"Mark Abela, a Water Engineer from Tasmania, Australia, is working with Independent Water Schemes Association (IWSA) for the next 12 months through the Australian Volunteers International (AVI) program as a WASH (Water, Sanitation & Hygiene) Mentor.



Mark Abela (R) installing
pipework for UV filters

He will be capacity building within their organisation through project management, engineering and business management.

He has hit the ground running assisting with the installation of Canadian Fund (Canadian Fund Local Initiative) sponsored UV filters in a number of schools across the islands.

Mark is fitting in very well and is proving to be a valuable mentor to our small organisation.

NEW FACT SHEET ON BRYOZOANS

Are you worried about *Plumatella* in your source water? Having fouling problems in your filters or have you observed a significant drop in pipeline flow?

Plumatella is one of a number of species of bryozoans commonly found in Australian waters. Freshwater bryozoans have all the characteristics of persistent foulers. They can grow on all kinds of surfaces, including docks, boats, pipes and walls. As a consequence, they may become a considerable nuisance in any system that uses raw water: irrigation, wastewater treatment, industrial cooling, and aquaculture. While bryozoans are non-toxic and do not pose a health risk to humans or animals, they do grow quickly. In the right conditions they can double in size in a week, and thus can clog pipes and filters very quickly. A variety of responses have been tried and used in different settings.

WaterRA has recently released a fact sheet on these common aquatic organisms - **Bryozoans in Freshwater: Science and Management**. The fact sheet provides practical, useful information and advice covering; characteristics, reproduction and growth, identification, problems caused and management responses. A number of these responses are outlined in the fact sheet, as well as their relative effectiveness, including; physical removal, filtration, chemical treatment with bleach, ultra-sonication, and ultra-violet light.

The fact sheet is freely available to access and download from the WaterRA website: <http://bit.ly/2YVgk8n>

In addition to this latest fact sheet, there are a large number of previous fact sheets and project summaries available on the WaterRA website. Contact Kathryn Nicholas for more information - kathryn.nicholas@waterra.com.au

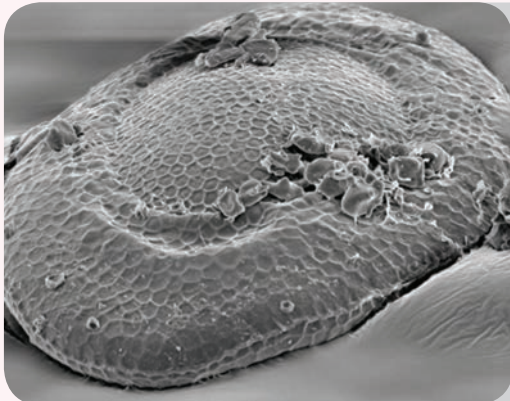


Image of a statoblast, the "seed" of a freshwater bryozoan



*Fouling bryozoans *Plumatella repens* and *Paludicella articulate* cover any surface that is underwater.*

INNOVATIVE DIGITAL METERING TRIAL

Western Water will soon be deploying 200 digital meters across its service area as part of its largest and most innovative digital metering trial to date.

The primary objective of this trial is to capture data – in particular, to prove and quantify the benefits that digital metering data can generate.

Western Water's Manager, Field Services & Network Operations, Dean Barnett, said: "We've been engaging with vendors of meters, communications and IT systems for several years now, so we've got a pretty good handle on the costs side of the business case. Where we need to learn more is on the benefits side, and we know the benefits are in the data. That's what this trial will do for us."

The meters will be deployed at sites across Western Water's service area and cover different customer types including residential (brownfield and greenfield), commercial and recycled water customers. This wide coverage is designed to test a variety of use cases for the data. The water meter is the first fully integrated water meter to use Telstra's new NBIOT communications system. "There are a number of benefits we expect to see, like leakage identification. However, we also want to use this trial to identify additional, currently unknown benefits" said Mr Barnett. "The quantified benefits will then be fed into our business case to inform a potential wider rollout."

Mr Barnett also emphasised that the benefits are not purely financial: "We need to make sure we're measuring benefits holistically across our stakeholders, not just direct benefits to Western Water. So in addition to business benefits like efficiency, we also want to better understand the benefits to our customers and to our natural environment from digital metering."

Western Water's partners in the new trial are Aquiba, who are providing their latest A210 fully integrated electromagnetic digital meter (pictured) and Telstra who are providing access to their newly rolled-out NB-IoT network.



Aquiba A210 integrated digital meter to be connected to Telstra's NB-IoT network

The initial 12 month trial period will start in the next few weeks and Western Water looks forward to sharing key learnings with the industry.

GOOLWA BARRAGE TIDAL GATE

The Goolwa Barrage is located in South Australia, near where the River Murray completes its 2,530km journey. The Barrage was constructed in 1940, to restrict salt water ingress into the river during tidal events, as well as maintaining water levels in the lower lakes.

The Goolwa Barrage is approximately 632m long, up to 7m deep, and contains a 30.5m by 6.1m lock chamber. AWMA were engaged to custom design a water control gate to be retrofitted within the existing drop board guides on the Barrage.



Goolwa tidal gate ready for installation

The downwards opening DLF gate is hydraulically actuated, allowing easy and safe management of flows, to control water levels, water quality and environmental outcomes. Design features include sacrificial anodes, dual hydraulic cylinders and a solar powered hydraulic power pack (photos courtesy of SA Water).



Goolwa tidal gates installed

PUMP INTAKES - GRAVITY OFFTAKES - FISH DIVERSIONS

AWMA has introduced to the Pacific Region a range of innovative, field proven designs for fish protection and/or debris control.



Fish and debris exclusion outlets

The designs include a range of features including an innovative self-cleaning screen system; various size screen slots depending on the application (down to 2mm); suitable for sensitive, abrasive and/or corrosive environments; and manufactured to suit all pump and gravity offtake capacities.

The benefits include increased efficiencies; lower maintenance; excludes debris as well as aquatic flora and fauna; Improved water quality results in reduced filtration maintenance; Lower pumping costs from increased pump efficiencies; Install on new or retrofit to existing infrastructure plus Local customer service and support



Fish exclusion screen for pumps

They are applicable for a range of applications including urban water intakes; irrigation diversions and water extraction facilities to name a few. More information on the AWMA website at www.awmawatercontrol.com.au/

INNOVATIVE PIPE CLAMPS MAKE SPRAY BAR INSTALLATION SUPER EASY

Traditionally spray bars required pre-fabrication (such as welding) prior to installation. Once installed, adjusting the spray or adding additional nozzles was difficult.

But an innovative new product has simplified the whole process.

Designed and made in Italy, the ZPN Mini Pipe Clamps enable any spray pipe to be assembled on-site without the need for special tools or welding equipment. Simply drill the spray holes where required, attach the ZPN Mini Pipe Clamps and screw in the spray nozzles. That's it!

The single spring ZPN Mini Pipe Clamps are quick and easy to connect to pipes from ½ - 1 inch in diameter. Made from plastic, the clamps are colour coded to indicate size – making it even easier to identify which one is required.

Exclusively available from Tecpro Australia, the ZPN Mini Pipe Clamps could be a practical solution for your next install.



For more information or to check the suitability of ZPN Mini Clamps for your application, contact the engineering specialists at Tecpro Australia on 02 9634 3370 or visit www.tecpro.com.au.

MOBILE APP FOR CONFIGURING RADAR LEVEL TRANSMITTERS

Emerson's Radar Master app for the AMS Trex Device Communicator simplifies setup in the field of Rosemount radar level devices. Helps Safely Maintain Accurate Tank Measurement.

Emerson has added the Radar Master app for the AMS Trex™ Device Communicator, making it easier for field technicians to safely and efficiently configure Rosemount™ radar level transmitters. Radar level devices are critical to help deliver accurate, reliable measurements on both liquid and solid materials.



The App in use

Radar level devices in the field are typically mounted in high, hard-to-reach locations that sometimes do not have onsite power. Technicians hoping to configure these devices typically carry cumbersome laptops and device power sources into the field to perform configuration. The AMS Trex Device Communicator solves these problems by enabling technicians to carry a handheld communicator that is capable of both configuring and powering radar devices via the Radar Master app.

Dynamic graphics and an intuitive touchscreen interface in the Radar Master app help ensure that users can more quickly configure tank measurement devices with the correct settings. Tank geometry is drawn to match the physical parameters of the actual tank, allowing technicians to more easily tune measurement settings to prevent false echoes from static objects in the tank such as ladder rungs, agitator blades, and baffles, which can delay the process of obtaining accurate measurements.

The compact design of the AMS Trex communicator is ideal for working in the small, and often hazardous, environment of a tank. One-handed operation, NFC-enabled user security, and intrinsic safety ratings enable technicians to work safely and effectively in these difficult areas.

Users can track, view, and trend tank level and alert information to identify issues and aid troubleshooting by using the new built-in historian. Technicians can also view and compare snapshots of past configuration data in a timeline, giving better insight to operational impact of changes.

For more information on the AMS Trex device communicator, please visit <https://tinyurl.com/y2uakdth>

CURED IN PLACE MANHOLE LINING MAKES ITS DEBUT DOWNUNDER

Alternative Lining Technologies Australia have recently introduced a new solution for manhole rehabilitation to Australia. CIPM by Alternative Lining Technologies LLC of Michigan USA has been utilised in the USA for nearly twenty years. As the name suggests, CIPM is a cured in place lining solution that can be customised to suit virtually any shape manhole, pump well or other underground structure.

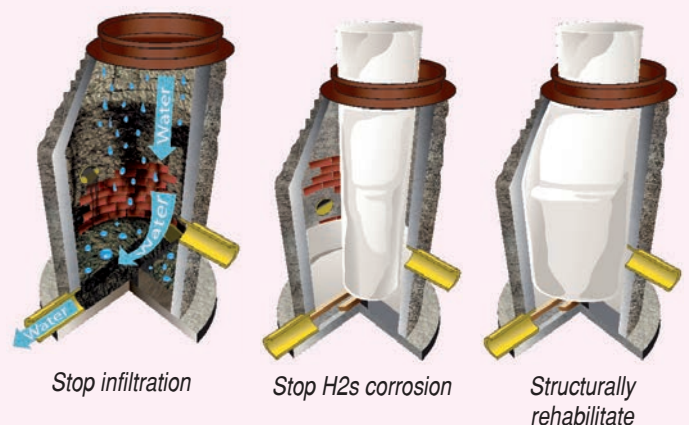
Unlike coatings, CIPM provides a structural solution as well as providing an acid resistant PVC surface.

CIPM will stop ongoing degradation of manholes as well as provide a fifty year plus lifetime solution, that is backed by a twenty year warranty.



Installing a liner into a manhole

Alternative Lining Technologies Australia and CPB Contractors recently delivered a solution to Melbourne Water at Spotswood. A fourteen metre deep manhole with an awkward upside down bottle like structure was successfully lined using CIPM.



Alternative Lining Technologies have completed installations of CIPM within Melbourne Water, Yarra Valley Water and within South East Water's catchment in Victoria. The technology is now being introduced to other regions of Australia. More information is available at www.altliner.com/australia

MAPAL AERATION SOLUTIONS PROVIDING OXYGEN TO YEAR 2040

Mapal's first large-scale project in Australia took place in Blackmans Bay WWTP as part of the BMD Acciona (Kingborough) Joint Venture for the Design and Construction of the TasWater Sewerage Upgrade Project at Kingborough WWTP.

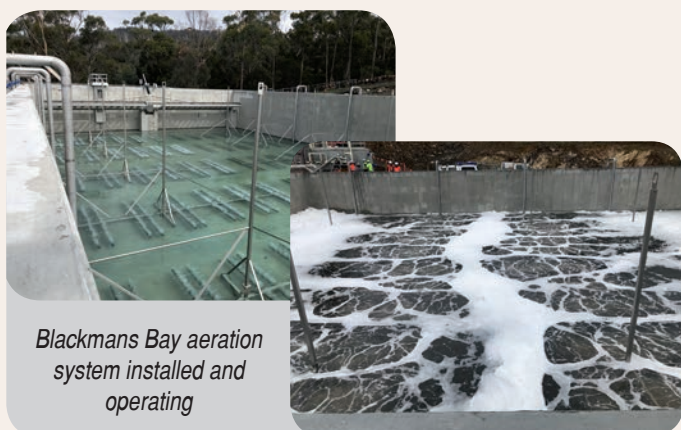
Looking forward to 2040, the project included aeration for both a bioreactor and an aerobic digester.

The Blackmans Bay bioreactor was designed with the IDEA (Intermittently Decanted Extended Aeration) process in order to enable wastewater treatment capacity beyond the year 2040, at the daily flow rate of 8,500m³/d. Mapal's aeration challenge was to increase the daily flow rate of the WWTP and improve the effluent quality, including nitrogen removal, in order to meet EPA regulations.

The solution was to provide 36 retrievable fine bubble aeration units. 28 units were installed in October 2018 in the bioreactor. Each unit was equipped with tubular diffusers with a stainless-steel inner tube and EPDM membranes. The additional eight aeration units, made from 316 SS with EPDM fine bubble membranes, were installed in the aerobic digester in May 2019. Each aeration unit was equipped with a purge system that uses the positive air pressure to continually remove any condensate or water penetrating the unit.

The aeration units in both the bioreactor and the aerobic digester, were designed for the maximum airflow rate for 2040, with the number of diffusers required up to 2025.

The retrievable units enable increasing or removing the number of diffusers as needed. This is done in live reactors with no need to drain the aeration basin or stop the process in any way, thereby supporting the project's aim to provide additional diffusers for future increase in the oxygen demand in 2040.



Blackmans Bay aeration system installed and operating

Mapal Aeration Solutions is an Israeli based company that provides floating & retrievable wastewater aeration solutions, based on its patented fine bubble aeration technology, for industrial and municipal wastewater treatment plants. To date, Mapal has been involved in four projects in Australia. More information on the Blackmans Bay project is available from <http://bit.ly/2Mp2Dv5> and more information on Mapal is at www.mapal-ge.com

MEMBRANE AERATED BIOFILM REACTOR (MABR)

Operators who have attended any WIOA state-based trade shows this year would have seen that **Aquatec Maxcon Group** have launched a brand new innovative packaged treatment plant called a Membrane Aerated Biofilm Reactor (MABR).

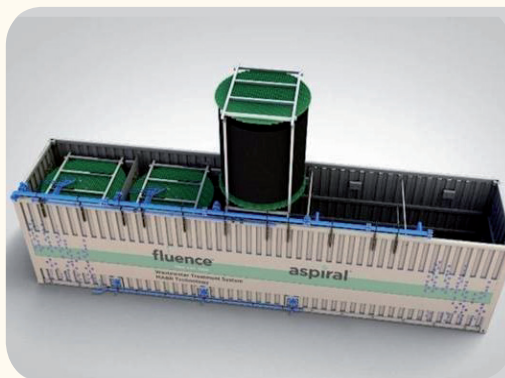
Are you looking for an energy-efficient wastewater treatment solution? MABR could be just what your operation needs. This system is used specifically for the low energy removal of Nitrogen and Phosphorous from wastewater.

The MABR plants are ideally suited for decentralised treatment sites but can also be used in large applications. The MABR system is particularly beneficial when discharging wastewater into a waterway, as it biologically removes Nitrogen and Phosphorus without the addition of chemicals and the need for high recycle rates. Adding chemicals incurs an additional cost and high recycle rates consume a lot of energy.



MABR rolls

Best of all, the Aspiral Packaged Membrane Aerated Treatment Process is extremely operator friendly. The system can be operated remotely and comes standard in many configurations, including tertiary treatment. These wastewater treatment plants feature technology that's neighbourhood friendly with low noise and odour levels, making them ideal for decentralized treatment. They're also packaged in standard shipping containers and offer fast installation and quick set up.



MABR configuration

Contact Product Manager Zak Floyd Smith at Aquatec Maxcon if you want to know more about the MABR system or if you'd like to arrange a presentation. Alternatively, you can visit the Aquatec Maxcon website www.aquatecmaxcon.com.au/ for more information.

NEW MEMBERS

Welcome to the following people and companies who have recently joined our Association as a Member or Corporate Supporter.

New **Individual Members** include:

Andrew Rathjen, Alex Malliff, Nathan Brown, Daniel Hales, Konrad Robert Lyons, Daniel Price, Emma Carden, Kendall Francis, Ben Gazzola, Julianne Krake, Jacob Nielsen, Darren Smith, James Beutel, Barry Gowlland, Matthew Flint, Roy Lane, Matthew Worrall, John Quinn, Dean Rousell, Jonathan Herron, Michael Oakey, Mark Tosh, Amanda Wearne, Michael Dobie, Damien Mortimer, Amira Haruwarta, Allan Murray, Gokhan Yakup, Hieu Lam, Gary Anderson, Jacob Way, Grant Smith and Philip Goodfellow.

New **Utility Members** include:

Redland City Council.

New **Corporate Members** include:

Field Machine Tools, Membrane Systems Australia, Phillro Industries, Saltwater Environmental Engineering, Mapal Green Energy, Welcon Technologies, Absolute Lifting & Safety, Ozira, Alternative Lining Technologies Australia, Fusion Commercial, NOV Australia and Nobles.

WOMEN OF WATER BREAKFAST

After a long drive to Bundaberg from Ipswich on Tuesday for the WIOA conference, the next morning it was "up and at em" early to be at the Women of Water (WOW) breakfast by 7.00am. We had a truly yummy breakfast at the café and thank you to Hanna Instruments for sponsoring this event.



WoW Breakfast participants

It was so inspiring to meet these women who work in the industry. We all introduced ourselves and chatted away for the next hour or so.

The one thing that truly amazes me about the water industry is how many women there are in higher roles. That is engineers and leaders etc. Their knowledge and support is so helpful and they are always friendly. The more people I meet that work in the water industry, the more I realise how very lucky I am to be a part of it.

Contributed by Leah Jones, QUU

COMING EVENTS

- 4 September **Ixom 2019 Victorian Best Tasting Tap Water Competition**, Bendigo
- 11 & 12 Sept **qldwater Annual Forum**, Logan
- 11 October **FNQ Operations Interest Day and optional Barefoot Bowls**, Cairns
- 19 October **Ixom 2019 Australia's Best Tasting Tap Water Grand Final**, Dunkeld, Vic

2019 CONFERENCE AND EXHIBITIONS

- 4 & 5 Sept **82nd WIOA VIC Water Industry Operations Conference & Exhibition**, Bendigo
- 9 October **Water Industry Safety Event - WISE**, Coburg

2019 COMMITTEE

President Heidi Josipovic Mob 0429 701 237	Vice President Mark Samblebe Mob 0400 126 141	Managing Director George Wall Ph (03) 5821 6744 Mob 0407 846 001
Chair NSW Advisory Committee Lindsay Walsh Mob 0427 105 421		Ryan McGowan Mob 0440 055 508
Chair QLD Advisory Committee Colin Haynes Mob 0419 763 054		Elise O'Keefe Mob 0438 346 852
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Chair VIC Advisory Committee Anthony Evans Mob 0419 103 885		Grant Waite Mob 0447 450 513

NEXT EDITION

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