

OPERATOR

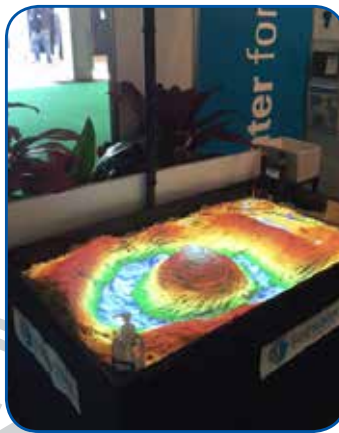
November 2016 Edition



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Kathy Northcott (L) is welcomed into the IDIOTS by Jill Busch.
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A novel sandpit.
Find out more on Page 14.

Eleanor Bray from TasWater at the Interest Day.
More on page 19



Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

FROM THE MD'S DESK

Wow, talk about making a mark during Water Week – the Ixom Best Tap Water in Australia competition held in Marysville, Victoria hit the big time with national television and radio news coverage to more than 3 million people. Congratulations to the TasWater team at the Barrington WTP in Tasmania for being judged as having the best tasting tap water this year. They will go on to represent Australia at the Berkeley Springs International Water Tasting Competition to be held in the USA in early 2017. We hope they will do Australia proud and bring home the gold medal.

Our thanks are also extended to all the organisations who participated in the heats held around the country throughout the year. We hope to be able to add winners from NT and WA to next year's national competition. The opportunity to be judged the "best in Australia" should encourage even more water businesses to enter the State based heats in 2017. Despite the fun side to the contest, the competition honours the hard work of the water operators and their crews who work around the clock to ensure we have safe, clean drinking water.

In October I had the pleasure of attending the International Water Association's World Water Congress in Brisbane. Having not attended the event before, it was noticeable how technical the papers were. Some of the research being undertaken and reported is absolutely at the cutting edge of technology. I sat in on a number of forums including one on regulation. People from all around the world are grappling with the issue of how to guarantee the supply of safe and fit for purpose water and wastewater, the range of technologies available and where and how operators fit into the process.

The other key message from the Congress was the importance of adopting and implementing the Sustainable Development Goals. Although water is specifically mentioned – Goal 6 Clean Water and Sanitation, water is the common thread that links all 17 Goals. Without water, meeting the other goals would not be possible. We intend to discuss WIOA's position in relation to the Goals at our annual Committee and Board strategic meeting in late November.

The 2017 conference venues have been finalised. The NSW event will be held in Canberra from 28-30 March and will be hosted by Icon Water. Putting the technical program together has been unusually difficult this year. After making a plea to the NSW industry and lots of personal chase ups, we have managed to pull together what we think is an excellent program. The Queensland conference will be held in Logan from 6-8 June and the Victorian event will be in Bendigo again from 5-7 September. To make all these events successful requires input from you - our members. Don't wait until the last minute. Start putting together the potential topics for a platform or poster paper now. We will accept abstracts for future conferences at any time.

In mentioning conferences, in September 2016 WIOA successfully staged our biggest annual event, the Victorian Water Industry Conference and Exhibition in Bendigo. In terms of attendance, the industry rolled up in record numbers and there was a really positive vibe around the whole event. Once again the exhibition was a sell-out with a large number of companies on a waiting list, despite increasing the number of sites to almost 200.

As usual, there is a complete wrap up on the conference, including all the very deserving award winners, later in this edition.

There has been a great deal of activity on the certification front recently. The Victorian Department of Health and Human Services has released a questionnaire to the Victorian Water Corporations seeking their feedback on the uptake of certification. There is also discussion under way about whether or not to align with the national Framework.

In conjunction with **qldwater**, WIOA has been contracted to assist with the development of a Recycled Water Treatment Operator Certification Framework. After presenting the concept to the Recycled Water Regulators meeting in Melbourne, they offered in principle support and have suggested that the recycled water competencies could be integrated into a Framework for wastewater treatment operators. We will work on this in coming months and keep the industry informed. We have also commenced a trail of the Sewage Treatment Plant Operator competency Framework developed through **qldwater**. There are a number of participants from Utilities in the South East Queensland area and we hope to be able to certify a number of wastewater operators at the WIOA Queensland conference in Logan in June 2017.

WIOA has a long history of raising and donating funds to various charities. The Victorian golf day was staged recently with just over \$4000 raised and added to the pool for distribution next year. The Far North Queensland Group held a Charity Bowls Day on the back of a very successful Interest Day in Cairns and this has raised \$850 which has been donated to the Mareeba Mayor's Christmas Fund. The generosity of all the members and the supporting corporate sponsors participating at any of our charity events is greatly appreciated.

The 2017 WIOA AGM and Weekend Seminar will be held at Holmseglen at Eildon on Saturday 25 & Sunday 26 February 2017. We look forward to a strong member turnout and we suggest you lock the dates in your diary now.

Finally, the Christmas/Holiday period is fast approaching, so to all our members and readers, please have a safe and enjoyable time and I look forward to meeting as many of you as I can in 2017.

George Wall – WIOA Managing Director



20 YEAR MEMBERS

WIOA recognises any individual or corporate members who have maintained their membership for 20 or more consecutive years, presenting them with a special Membership lapel pin.

This year there are another eight Individual Members who have qualified for the 20 year recognition pin. The recipients of the pin in 2016 are: Tony Ferres, David Hamman, Neil Healey, Wayne Murdoch, Garry Needham, David Tickner, Bruce Williamson and Mark Younger.

Congratulations to you all.



PROFILE OF A MEMBER



Name: Kim Sheree

Position: Waste Water, Recycle Water, Drinking Water Operator. Now Lab Tech in Training!

Employer & Location:

Veolia – Hunter Water Contract.

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

It will be four years in January! My goodness, where did that time go?

What gets me really excited is the big picture stuff – the brains behind the people who think about the long term requirements of a growing population and evolving environment. They think about how to make the most of long term planning and infrastructure to give people the best product that keeps themselves safe and the environment safe on a hundred year projection. I wish I was that cool.

What do you enjoy most about your job?

The ownership and responsibility, and definitely the people – they know a lot about a lot and they are always willing to teach.

What are the major challenges in your current role?

Knowing exactly what everyone needs and when so I can make it happen for them. I really want to gain more skills and knowledge so I can try and keep up with the amazing people I work with. There is never enough time to do everything I want to do in a day!

How long have you been a WIOA member?

I was introduced to WIOA by one of my supervisors Marie, who is also one of my role models in my work group. She encouraged me to write a paper for a conference about my favourite plant, the Mayfield West Advanced Water Treatment plant. It is an RO plant that takes treated Waste Water and sends it to Orica for reuse. It's amazing what you can do when someone believes in you. Since that time I have been a proud member and have met truly incredible, devoted people who are passionate and generous. I also volunteered my time and helped out a little in advance of the NSW Conference in Newcastle.

How do you relax?

Myself and my fiancé have just built a massive deck out the back of the house with an awning. Sunny or raining, this is our happy place/relax zone usually with our Beagle and a cuppa or a glass of whisky (wait am I allowed to mention alcohol or is that the same as swearing on the radio??).

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

Sunny East Maitland. Besides being close to family the house is a 2 km walk to four different pubs! Ha ha brilliant! And ironically it is opposite an old water reservoir ha ha ha ha!!!!

QUICK QUESTIONS

Age: A lady never tells!

Nickname: Kimmy, sometime pronounced Kimmeeeeehhhh!!!!!!

Family Status: Happy & Generous.

Pets: : Budgie named Basil (Faulty Towers) 6 year old Beagle named Bailey (like the drink, very sweet & nice to come home to at the end of the day) and a Beagle pup Brandy who arrives at our home mid-October!

Favourite food: Trusty old Chicken Schnitzel – with a bit of Mushroom Sauce & Cheese on top.

Least favourite food: It's all good!

Favourite TV show: Grand Designs Australia.

Worst TV show: Any of the reality stuff – The telly should be an escape!

Favourite Movie: Grease.

Favourite Musical artist/s: Everything from Patsy Cline, the Bee Gees through to the latest Ministry of Sound!

Favourite book: The Girl In the Steel Capped Boots – Loretta Hill & 'The Brain that changes itself' - Norman D Dodge and WaterWorks of Course!

Favourite team: Up Up Cronulla!!!! The Boys in the Black White and Blue!!!!!! At the time of writing this – 3 sleeps to the GF! Wo hoo! Gunna put on a hectic BBQ.

Ambition in life: To always show gratitude.

Hobbies: I am in training to be a Pilates & Barre instructor!

Best Trait: Hi Vis Orange is totally my colour.

Worst Trait: Annoyingly OCD when it comes to organising and planning stuff – just ask Hubby-to-Be! Wedding is next October and we are just about ready to go! Poor Bugger!

Four people to invite to dinner:

Mum, Dad, the fiancé & the Beagle. If you can't say anyone you already know I'd love to meet all the Gibbs Brothers if they were still alive?

MoU WIOA and WIOG

WIOA and WIOG have signed a Memorandum of Understanding (MoU) for another three years. The renewal of the MOU maintains the strong partnership between our organisations and ensures that both organisations enjoy and increase opportunities by working together in the future.

Pictured signing the document at the Bendigo Conference are George Wall (WIOA Managing Director), Ryan McGowan (WIOA President), Mike Monaghan (WIOG Chair) and Craig Hiddleston (WIOG Executive Officer).



NEW IDIOTS INDUCTEE

At the Bendigo conference, Kathy Northcott became the 32nd WIOA member to be inducted into the IDIOTS fold. Kathy joined WIOA in February 2010 and has been a member for more than 6 years. As you will read, she has certainly packed a lot into that short period.

Kathy has presented papers at the Bendigo conference in 2008, 2010, 2011 and 2012 representing both Melbourne Water and more recently Veolia. She has presented on topics including managing water supplies, membranes and certification. She also presented at the WIOA NSW conference in Newcastle in 2016. Kathy was awarded the Hepburn Prize for the best paper at the 2010 Victorian conference, talking about the operation of the membranes at Bendigo.



What do you call a group of IDIOTS? All the IDIOTS at the event together.

We are well aware that she has both encouraged and helped operators firstly at Melbourne Water and then at Veolia, to write and deliver papers and posters at the conference.

Kathy has written and provided articles for the June 2009, November 2013 and May 2016 editions of WaterWorks. She has also provided a number of short stories and write-ups for the Operator newsletter.

Along with Brionne Gay, Kathy openly shared her knowledge of the membrane process by working with WIOA to develop and then present a one day membrane seminar in Cairns for operators in the Far North Qld region.

In conjunction with the Veolia operators, Kathy also organised two WIOA Interest Days on membranes at the Castlemaine WTP.

It is in the certification space where Kathy has really excelled. Thinking back, it was Kathy who pushed WIOA to stop talking and get on with certify operators in 2012. Like us, she had a strong belief in the benefits of certification. She was able to convince the senior managers at Veolia to join the Wannon Water operators in the Pilot of the Victorian scheme. In the 3 years since, she has done an enormous amount of work around the industry to promote certification, including helping encourage her NSW Veolia counterparts to also participate.

Like WIOA, Kathy has the betterment of the industry at heart and she has certainly kept WIOA staff on our toes to deliver timely outcomes. She is not afraid to let us know if we are not delivering up to her expectations.

Through her contribution, Kathy has played an important role in allowing WIOA to expand and gain the acceptance we now



Kathy at the end of the Heptathlon.

enjoy around the country. We need more committed members like her. Congratulations on your efforts from all of us!

The award presentation was conducted at the President's dinner on the Tuesday evening before the Victorian conference. Following closely after the 2016 Olympics, the theme of Kathy's challenge was along the lines of the modern Heptathlon. Using the services of all the other IDIOTS present, Kathy had to race around the room and answer a series of questions at 5 stations, before collecting or donning another prop until she eventually reached the finish line.

Anthony "McAveny" Evans provided special comments about Kathy along the route and given that she created a new world record for this particular event, she was presented the Gold medal and IDIOTS pin by the most recent IDIOTS member present in Jill Busch. Kathy's

acceptance speech was awesome and definitely from the heart, speaking of her feeling of being part of a big family which is WIOA.



Gold, Gold, Gold for Kathy.

FIRST SOUTH AUSTRALIAN OPERATOR CERTIFIED

Robert Romeo from Trility became the first operator in South Australia to be certified under the national Certification Framework. Rob was presented his credentials at the WIOA Water Interest Day held at the Adelaide Aqua desal plant in August.

Rob is an operator at the Loxton, Berri, Renmark and Barmera water treatment plants.



Rob Romeo presented his credentials by WIOA MD George Wall.

NORTH EAST WATER PRODUCES VICTORIA'S TOP DROP

Myrtleford's water supply has been voted as the best tasting water in Victoria at the Water Industry Operators Association (WIOA) conference in Bendigo on 1 September 2016.

The winning sample was taken from the Myrtleford treatment plant and was judged on aroma, clarity and taste before it was announced as the state's best.

Executive Manager Operations, John Day, said "It's amazing recognition and reflects the hard work by all of our local operators who make sure we provide customers with the best possible product. North East Water recognised in 2010 of the need to improve Myrtleford's water quality and invested in a new water treatment plant. The plant has not only improved the quality of water to award winning levels, it is also helping with the town's ongoing development and tourism."

The award is another feather in the cap for the Corporation. In the last 12 months North East Water was found to have the most affordable water bills in Victoria and Australia. It was voted one of Australia's best organisations for customer service and also won the IAP2 Organisation of the Year (Australasia).



North East Water wins the Ixom 2016 Victorian Water Taste Test.

WATER ON THE AGENDA IN MARYSVILLE

Goulburn Valley Water (GVW) and WIOA celebrated National Water Week with a joint community event in Marysville. After winning the Victorian and the IXOM Best Tasting Tap Water in Australia Competition in 2015, the town hosted this year's national taste test competition and a WIOA interest day.

The interest day was well attended and involved various presentations from GVW staff as well as other industry experts. Craig Mathisen kicked off proceedings with an update from WIOA which was followed by Arash Khorasani from Hach outlining details of a new range of turbidity instrumentation.

GVW staff including Steven Newham, Neville Whittaker and Alan Tyson were involved in various presentations throughout

Arash Khorasani from Hach presenting at the Water Interest Day.



the day. Steven spoke about the Murray River blue-green algae outbreak and the operational challenges of the three-month long bloom. Neville gave a detailed presentation, (delivered in a manner as only Nev can), about a Safe Water Process highlighting practical changes that have been implemented to reduce consumer risk. To round out the GVW presentations, Marysville community member and GVW Corporate Community Reference Committee representative Bruce Ackerman, assisted Alan in a moving presentation about the Black Saturday Bushfires and its impact on the town water supply and community.

The 2015 winner of the Kwatye Award sponsored by Thermo Fisher Scientific, Michael Fawcett from South Gippsland Water, officially launched a new phone app (WTPO Helper) aimed at assisting operators with simple calculations. Suzie Sarkis from the Victorian Department of Health and Human Services outlined the health benefits of drinking tap water and a great day was finished off with a tour of the Marysville Water Treatment Plant facilitated by Heath Vine from GVW.

Community members as well as students from Marysville and Buxton Primary Schools also toured the town's water treatment plant with Heath before they participated in the all-important judging of the 2016 Australian Best Tasting Tap Water Competition. Interest day delegates also had their say in determining the winner, with a huge amount of publicity surrounding the taste test activity. Nev somehow managed to get himself on the National Nine News broadcast.

During the day GVW also recognised the town's 2015 best tasting tap water awards with the installation of a hydration station next to the Marysville Information Centre. Tough competition rules meant that GVW's Marysville plant couldn't enter their award winning water this year, so we congratulate Tasmania for taking out the National title.

Contributed by Jacinta Burke from Goulburn Valley Water



James Blannin (L) from Stevco Seals & Pumps sharing ideas with Ken Welsh from the Nambucca Shire Council in NSW and Garry Bettiens (R) from Barcaldine QLD

A record number of 1,444 people attended the **79th Victorian Water Industry Operations Conference and Exhibition** held at the Exhibition and Events Centre in Bendigo on 31 August & 1 September 2016.

Delegates were officially welcomed by Philippe du Plessis, Managing Director at South Gippsland Water. Opening speaker Dean Barnett from Western Water provided information on the projects being undertaken under the umbrella of the Intelligent Water Network (IWN).

The keynote presentation on fatigue management was delivered by Dr Kirsty McCulloch from the Keil Centre. Kristy's message was a real eye opener that hit home with delegates. It highlighted the importance of sleep and looking after ourselves to ensure fatigue does not contribute to errors and/or near misses or incidents.

At the Awards Dinner on the Thursday evening, Rylee Duffus from Westernport Water was announced the winner of the prestigious Wal Whiteside Memorial, 2016 Victorian Operator of the Year award. Will Egan from South Gippsland Water was awarded the Young Operator of the Year by IWA Victoria.

A number of other water operational employees were recognised at this event including Ben Pohlner from Wannon Water who won the Hepburn Prize for the Best Paper Overall and John deBoer from Melbourne Water who won the Best Paper by an Operator.

This year's exhibition was the largest WIOA has ever conducted with 194 sites demonstrating the latest in equipment, services and process technologies available to the water industry. HP Agency took out the Ron Bergmeier Award for the Best Exhibition Site at this year's event.

The conference hosted the Ixom Victorian Water Taste Test with the North East Water entry from the Myrtleford WTP judged as the best.

Joint conference Hosts, South Gippsland Water and Westernport Water chose Uniting Care Kilmaney and the YAMS Foundation respectively, as the recipients of the WIOA charity donation. Cheques for \$1,500 were provided to each organisation to assist with their good work in the community.

Award Winners

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

Wal Whiteside, Victorian Operator of the Year – sponsored by AWA

Rylee Duffus from Westernport Water.

Victorian Young Operator of the Year – sponsored by IWA

Will Egan from South Gippsland Water

Hepburn Prize for Best Paper Overall – sponsored by Iwaki Pumps Australia

Ben Pohlner from Wannon Water

Best Paper by an Operator – sponsored by Nalco Water

1st **John deBoer** from Melbourne Water

2nd **Vin Halloran & Daniel Fitzpatrick** from Yarra Valley Water

3rd **Steven Newham** from Goulburn Valley Water

Best Poster – sponsored by Trility

1st **Dale Hogan** from Goulburn Valley Water

2nd **Andrew Povey** from Wannon Water

3rd **Damian Peterson** from Western Water

WIOA Charity Donation

WIOA donated \$1,500 each to Uniting Care Kilmaney and the YAMS Foundation on behalf of Host corporations, South Gippsland Water and Westernport Water.

Best Exhibition Display – sponsored by Utility magazine HP Agency

Ixom Victorian Water Taste Test Winner

North East Water, Myrtleford WTP.

Ixom Victorian Water Taste Test Finalists

- North East Water
- Gippsland Water
- Falls Creek Resort Management

Kwatye Prize – sponsored by Thermo Fisher Scientific

Rodney Priest from Goulburn Murray Water



Victorian Conference Images 2016.

CONFERENCE REPORT



Victorian Young Operator of the Year Will Egan (L) from South Gippsland Water with Joe Adamski (representing IWA Vic).



Winner of the Hepburn Prize for the Best Paper Overall was Ben Pohlner (L) from Wannon Water with Adam Lonergan from Iwaki Pumps.



Best Operator Paper winner, John deBoer (L) from Melbourne Water with Jim Martin from WIOA representing Nalco.



Dale Hogan from Goulburn Valley Water won the Best Operator Poster sponsored by Trility.



The HP Agency team, winners of the Ron Bergmeier Award for best exhibition site.



WHAT PEOPLE ARE SAYING ABOUT THE WIOA VICTORIAN CONFERENCE

EXHIBITORS

We were able to display one of our products at WIOA which lead to a discussion with an existing customer regarding how or where this product could be used. The result of this discussion meant this client took some literature on this product which he planned to present to his organisation as a solution to a problem that they had been trying to identify for some time.

Steve Hill from *Challenger Valves & Actuators*

Always of great benefit talking to the “front line” workers and operators of the various plants. Gives us all a genuine “feed-back” on our products and services. We wouldn’t miss the WIOA Conferences for the world.

Denis Robinson from *Aquatec Maxcon*

By exhibiting at WIOA we are able to attract interest in our new product developments. It puts us front and centre of our customers. We will be back.

Andrew Nicol from *Andzac Water Treatment*

The attendees were valuable contacts. The program was well organized. Staff were very prompt and courteous. Overall, it is an event we intend to participate in.

Dorothy Dellosa from *Flottweg*

DELEGATES

Another great year for WIOA's Victorian conference. A must attend event for operational staff during the course of their time in the water industry.

David Sheehan from *Coliban Water*

Thanks to SA Water for providing me the opportunity to attend my first WIOA Conference in Bendigo. It was refreshing to see operators outside their comfort zone and share their real life experiences in solving a myriad of problems. The large number of high quality vendors provided significant opportunity to learn about new products and services. Congratulations to the organising team for a great event. The plenary on fatigue management in the water industry was timely.

Con Pelekani from *SA Water*

You never stop learning in this industry. There is always obstacles popping up in front of you and not everyone has the ability to work things out quickly. It is great to keep an open mind to other people's ideas

Wayne Hillier from *Westernport Water*

This was the first WIOA conference I had attended. I did not realise how big this event is! I was amazed at the number of sponsors and trade show exhibitors, and by the quality of the presentations. The food and entertainment were great! It was obvious that this event was extremely well run. Congratulations to all involved.

Ben Pohlner from *Wannon Water*

I didn't expect to get this much out of the conference.

Marcus Pilgrim from *Gippsland Water*

The conference has again assisted myself and fellow team members and other GV Water colleges to visit and inspect the latest innovations and technology available within the water industry. The networking with trade exhibitors and other water agencies representatives is an extremely important part of developing contacts and assisting with improvement and sharing ideas within the industry.

Neville Whittaker from *Goulburn Valley Water*

AN EXHIBITOR'S PERSPECTIVE

When we first attended the Bendigo WIOA Conference and Exhibition in 2015 as an exhibitor we were told that WIOA is the annual ‘family gathering’ of the water industry. To be welcomed back by many fellow exhibitors who we really had only met once proved that statement and set the mood for our 2016 expo.



Michael (L) and Simon Wright with the Wrighteye Industries site in Bendigo

As a new business we have new ideas, developments and services that we wanted to show and discuss with clients and potential users of underwater equipment and see the WIOA event as the platform to accomplish this. We have discovered that

people are looking for alternative ways to improve their business models and they are prepared to invest when they find the right solution.

Timewise, WIOA is a very concentrated exhibition. We found that you can work through lots of meetings in a short space of time, and with people that you wouldn't otherwise get to meet. Just how focused the exhibition is can be seen when you arrive at the exhibition centre in the morning. As soon as the doors open, the hall fills up straight away. The open nature of the event meant that we were on our toes all the time with questions and enquires about how we could help organisations improve their customer service levels. In most instances we were able to assist organisations with improving their own underwater operational processes.

The exhibition also provided a great opportunity to firm up existing business arrangements and further expand our already extensive network of contacts.

The atmosphere at WIOA is really busy, focused and professional. It is my impression that WIOA opens the doors of the world to the water industry and for us at Wrighteye Industries, this means we will be attending for years to come.

Contributed by Michael Wright from Wrighteye Industries

VICTORIAN OPERATOR OF THE YEAR 2016

WIOA congratulates Rylee Duffus from Westernport Water for being awarded the 2016 Wal Whiteside, AWA, Victorian Operator of the Year Award. Rylee's nomination was judged by the Australian Water Association as the standout.

What Rylee has been able to achieve and implement in such a short period of time at Westernport Water is directly reflective of his high level of skill and experience. The impact on the business has been remarkable, as demonstrated in water quality results.

Rylee has been able to improve a number of system modifications not only at the treatment plant, also in the distribution network. This includes additions and improvements to Clear SCADA and Citec systems. Being in a position such as this does challenge the individual at times due to the variety and demands, but Rylee has embraced this as a natural leader.

Rylee consistently performs at a very high standard, leading his team by example from the weekly regulatory sampling program to dealing with engineers, contractors and consultants and monitoring all reservoir information data.



Rylee Duffus (L) with Geoff Frost representing the Victorian Branch of AWA.

CONGRATULATIONS CR TOLSHER

Congratulations are extended to WIOA Director, Peter Tolsher for being elected as a Councillor for the Towong Shire Council at the recent Victorian local government elections. Looks like he has a very busy next 4 years coming up.



Cr Tolsher (r) with the other Towong Councillors

VICTORIAN YOUNG OPERATOR OF THE YEAR

Congratulations to Will Egan from South Gippsland Water (SGW) who was announced as the winner of the Young Victorian Operator of The Year Award at the Bendigo Conference.

Will commenced employment at SGW at the age of 19 as part of the Corporation's Water treatment Operations Traineeship Program. As part of this two year program, Will completed a Certificate III in Water Industry Operations and participated in identified on-the-job work experience.

In a short period of time, Will demonstrated a mature understanding of water treatment and as a result of his demonstrated competence, was given the opportunity to participate in the Corporation's on-call/after-hours roster. Will was required to operate multiple water treatment plants with limited supervision, manage treatment plant alarms and respond to relevant customer complaints.

During his 2.5 years of employment at South Gippsland Water, Will has successfully operated 9 of the 10 water treatment plants at South Gippsland Water, an achievement beyond the Corporation's expectations.

Given the high level of development and competency demonstrated during the initial years of his traineeship, Will was appointed to a full-time qualified operator position to operate South Gippsland Water's largest and, arguably, most challenging water treatment plant at Lance Creek.



The South Gippsland team get around Victorian Young Operator of the Year Will Egan

The Lance Creek WTP sources water from a high risk, Category 4 water catchment.

To operate this water supply system, an operator is required to be competent in the operations and optimisation of multiple chemical dosing systems, DAFF treatment operations, centrifuge operations and the SCADA management of multiple clear water distribution system storages.

Will's commitment to his work, his interest in water management and desire to develop his knowledge is further demonstrated in his decision to commence a Bachelor of Applied Science (Chemistry) degree in 2017 with the support of South Gippsland Water.

For winning the award, Will receives a Perpetual trophy, a smaller trophy to keep and the best bit – IWA Vic provides an all expenses paid trip to join the WIOA delegation on their tour to New Zealand in May next year. The trip is valued at over \$2000.

2016 KWATYE AWARD

The winner of 2016 Kwatye Award, sponsored by Thermo Fisher Scientific is Rodney Priest from Goulburn-Murray Water.

Rodney has identified a Research and Development project to investigate and discover the potential uses for metallic additive manufacturing (also known as 3D printing) as part of Goulburn-Murray Water's asset management program.

Rodney will work with the team at the CSIRO Lab 22 facility to learn about 3D technology and investigate how it might be able to be used to repair or replace aged assets which cannot be manufactured through traditional approaches.

The funding will be used to cover travel and accommodation for Rodney whilst he works at the Lab 22 site. Some funding will also be used to contribute to the development cost of producing a testable prototype of an aged Goulburn-Murray Water asset component on a 3D printer at the facility.

We congratulate Rodney on his ingenuity, as the potential use of this emerging technology is largely unknown in the water industry. We are sure that undertaking this project will provide Rodney with skills allowing him to make more informed decisions in relation to the potential options for aging asset replacement processes.

From both the Thermo Fisher Scientific and WIOA perspective, this type of project, that can provide real operational benefits to the industry, is exactly why the prize was established just over 10 years ago.

Congratulations Rodney.



Rodney Priest (r) from Goulburn Murray Water with David Crossley from Thermo Fisher Scientific.

LIGHTER SIDE - FIXED MY SINK



THE MACQUARIE RIVER:

High flows and its effect on the John Gilbert Water Treatment Plant in Dubbo NSW.

During the winter months of 2016 Central Western NSW received higher than average rainfall events. The level of Burrendong Dam at the beginning of June 2016 was 14% and by the end of August 2016 it reached over 100%.

These events resulted in a number of moderate to major flood warnings for the Macquarie River. Controlled releases from Burrendong Dam combined with runoff flows downstream of the dam saw a number of rises and falls in the Macquarie River at Dubbo which produced some challenges for the operators to maintain customer service levels.



Emile Serrisier Bridge, Newell Highway Dubbo.

Operational challenges and actions for Operators at the Water Treatment Plant included:

- Large amounts of debris meaning regular manual activation of the Johnson Screens was required to maintain pump flow.
- Increased dosing of powdered activated carbon as dissolved organic compounds in the water had potential to effect the taste and odour of the filtered water.
- River water turbidity measurements up to 600 NTU & Colour measurements up to 400 HZU were recorded. The percentage combination of river to bore water was reduced from 70/30 to 55/35.
- Ferric chloride consumed during this period almost doubled compared to normal. Reduced demand on the plant meant that the clarifier flow was kept to a minimum allowing for longer chemical contact time and better coagulation and flocculation. Clarifier desludge times were significantly increased (100 seconds/15 minutes).
- Increased load on the 6 filters required manual backwashing to maintain turbidity to meet required Guidelines.



Macquarie River at the John Gilbert Water Filtration Plant Dubbo.

Contributed by
Prakashbabu Radhakrishnan & Rob Humphries - Treatment Technicians, Dubbo Regional Council.

OPERATIONS CORNER

“Double, double toil and trouble; Fire burn, and caldron bubble”.

When the “cauldron bubbles” at a wastewater treatment plant, this usually involves biological foams coming down the main access road to the front gate. Most process engineers, including myself, have a favourite photograph of a foaming “event”. I, personally, have a collection including one sent to me (gleefully by a fellow industry specialist) of one of my own plant designs foaming to the max.



So, what can we do; a) in the event of such an event and b) to try and avoid such an event. Well, in the case of such an event, the first thing to do is to find out who the culprit is. I have met many engineers that can spot the dreaded “Nocardia” foaming bacteria from 100 paces. Well, for starters, it was never Nocardia, rather it was Nocardia Amarae like organisms, NALO’s, (a subset of the Nocarioforms) and has since been renamed Gordona Amarae like organisms (GALO’s). Secondly, “foams ain’t necessarily foams”. With the same fellow industry specialist from the above foaming episode, we were called in on a project where severe biological foaming was occurring on the secondary clarifiers (grass was actually growing on the foam layer on the clarifiers and it needed mowing!). We were confident that it was GALO’s or, possibly Microthrix Parvicella (I like to throw the scientific names around to impress microbiologists). Well, low and behold, not only was it not GALO, it wasn’t even any of the foaming filamentous bacteria. It was in fact, a common filamentous bulking bacteria.

All of this is a long winded way to say, first off, if you have a foaming problem, find out who you are dealing with. A lot of severe “foaming” events are caused by a combination of foaming bacteria and a lot of entrained filamentous bulking bacteria. It is often difficult to do something about the foaming bacteria however, often, the bulking bacteria can be addressed once the culprit is identified. This happened on one plant where the mechanical foam harvester could not keep up with the “foam” production.



Following identification of the causative organism, the appropriate corrective control action (change of internal recirculation rate) was identified and the filamentous bulking organism eliminated. The foam harvester could then manage the remaining “true” foaming bacteria.

Just a word to the wise, when it comes to managing filamentous bulking bacteria, don’t rely on the “guidelines” for chlorine dosing. Some mates did this at their plant and promptly killed all of the protozoa with pretty disastrous results. So, if using the chlorine sledgehammer approach (I don’t unless in extreme cases), use gentle taps with the sledgehammer and build up slowly.

Okay, it is all very good to have a cure, so how about prevention. Well, how do you keep yourself well? Have a regular check-up! Regularly check the biomass so you can see if the bad guys are there or are increasing. This way you can take a small corrective action rather than the “knee jerk”.

As a last quote on regularly checking the health of your wastewater plant, I defer to the literature;

“In the past 30 years there has been a tremendous amount of research on the fundamentals of the activated sludge process which the engineer has never made use of because he never understood them or the researchers never translated their results into practical terms which the engineer could understand. This vast storehouse of information has lain dormant like the pirate treasure of old waiting for someone to uncover the key to its use in the field”

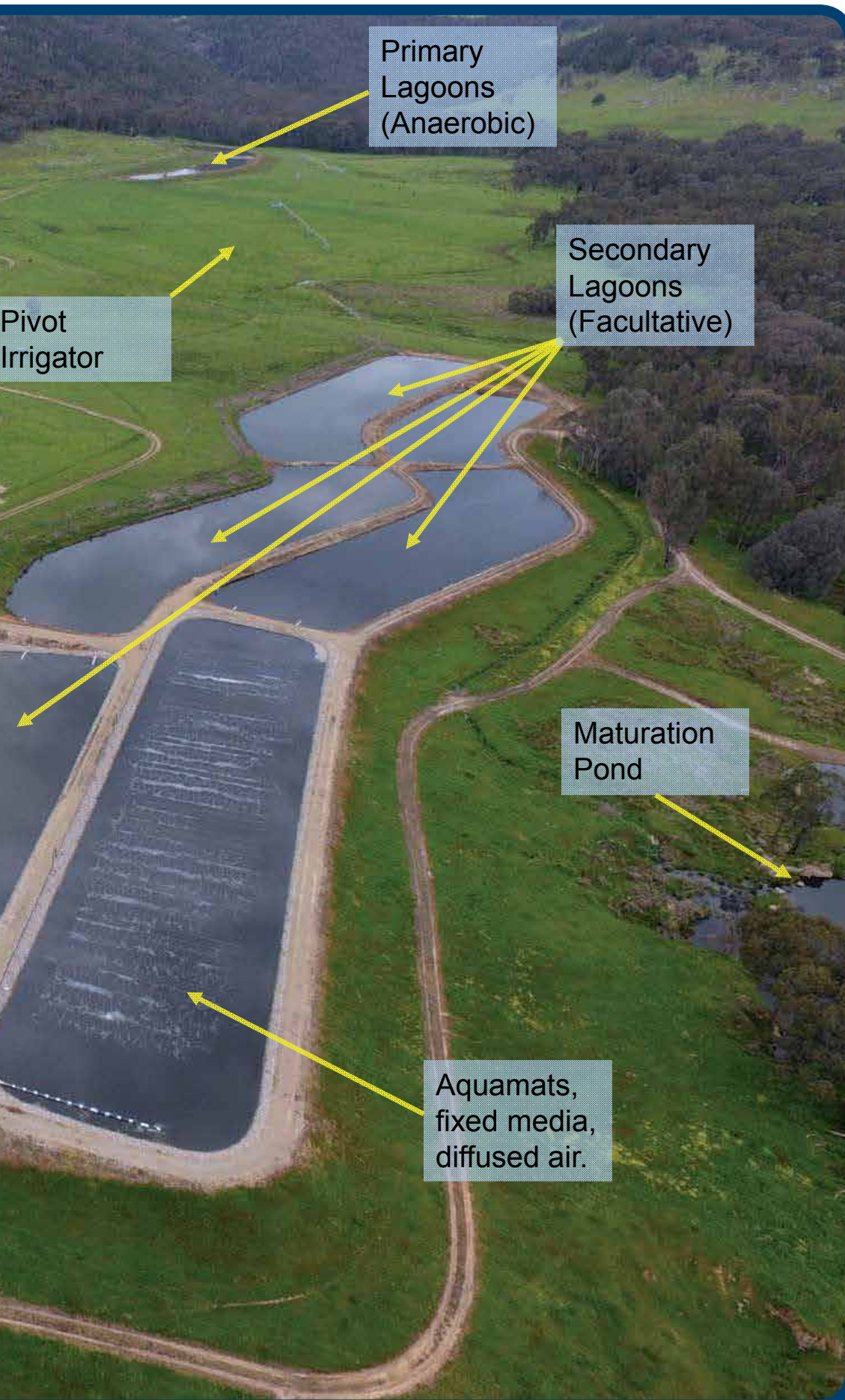
Written by Prof Ross E McKinney in his book “Microbiology for Sanitary Engineers” - in 1962!!!!!!

Contributed by Peter Griffiths

BIRDS EYE VIEW Facilities Members Operate

Beechworth Wastewater Treatment Plant





The Beechworth WWTP is located approximately 3.5 km north west of Beechworth. Wastewater inflows to the Beechworth wastewater system are predominately derived from domestic sources. The Beechworth Wastewater Treatment Plant (WWTP) consists of primary, and secondary lagoons, a maturation pond and a polishing process.

The plant treats approximately 300ML of wastewater per year, reusing approximately 90ML across 55ha of irrigable land during the warmer months, with the remainder discharged to Reedy Creek via Spring Creek. In 2014, North East Water committed to process improvement by the installation of media, "Aquamats", and aeration in Lagoon 4 of the secondary lagoons. The additional surface area provided by the media provides a habitat for treatment bugs, with the aim of sustaining their population, compensating for their reduced treatment effectiveness during the cooler months.

SHARING INNOVATION

The **qldwater** annual Innovation Forum was held on 14 and 15 September 2016 in Brisbane.

After a short trip to Colleges Crossing, day 1 started with the Ixom Best of the Best Queensland Water Taste Test. This was followed by the inaugural Live Mains Tapping Competition where operators from Queensland Urban Utilities, Logan Water and Gold Coast Water went head to head competing for the coveted title and trophy. The winning team was Gold Coast Water with a super-fast time of 1 minute 49 seconds.

The Innovation Forum was held on Thursday 15 September with over 100 individuals from all over Queensland (and beyond) attending. It provided a great opportunity for networking and interaction with representatives from DEWS and DEHP and showcasing our industry's successes and challenges.



*Kevin Flanagan
from Toowoomba
RC presenting*

The topics and standard of presentations on the day was outstanding.

I really enjoyed the presentation by Kevin Flanagan from Toowoomba Regional Council who talked about the trials and tribulations of the amalgamations at Toowoomba that included evaluating options for infrastructure efficiency and examples of the post flood recovery in the region.

Cameron Jackson from QUU provided a couple of passionate sessions on the Beaudesert Stream bank remediation and the strategies for licensing improvements across treatment plant.



*Operators
going head
to head in
tapping
competition*

Having also just recently attended the Vic Water Innovation

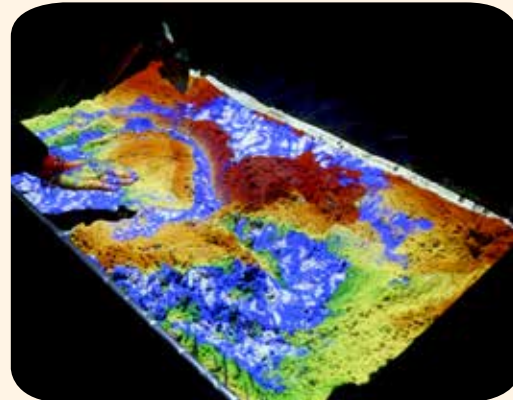
forum, it is obvious that there are a lot of innovative thinkers and projects being planned and conducted in the water industry. Being able to share these projects, the successes and failures, provides an enormous learning opportunity for the industry as a whole.

Contributed by Craig Mathisen WIOA - COO

SEQWATER'S SANDPIT

Forget the fairground rides, animal parades and spectacle of sideshow alley – one of the most popular attractions at this year's Royal Queensland Show (affectionately known as the Ekka) was found at Seqwater's display, where visitors were given a hi-tech glimpse into water catchments.

To help people understand how water catchments work, the bulk water authority stand featured an 'augmented reality sandpit', which captured the attention of thousands of Ekka goers.



At first glance, the display seemed like an ordinary sandpit – the only things missing were the buckets and spades.

Through the power of a projector – and the sophisticated software behind it – the sandpit became a virtual topographical map that instantly adjusted to the contours of the sand.

A Microsoft Kinect camera, mounted above the sandbox, automatically gauged the distance to the sand and projected contour lines and colours onto the scene – cool colours for depressions, warm colours for peaks.

It allowed users to create their own hills, valleys and lakes. When users hovered their hands over the sand creating clouds, virtual rain poured down mountains and into the blue water.

WIOA member (and IDIOTS member) John Granzien had the pleasure of doing a stint on the first Saturday of the show. He had a ball interacting with other Seqwater staff that he had never met before and all the little kids and older kids alike were amazed by the interactive exhibit which was a fun and interesting way to give people a hands-on lesson about water catchments.

The site received a large amount of attention as both young and old were keen to get their hands in the sand and learn about how their water was sourced, stored and supplied.

The augmented reality sandpit was developed by researchers and partners of University of California Davis and was popular among young and old alike.

The installation on show at Seqwater's stand was built by researchers at the Queensland University of Technology's Institute for Future Environments.

Contributed by John Granzien from Seqwater

MARYSVILLE STILL CELEBRATING AWARD WINNING WATER

Goulburn Valley Water (GVW) was formally presented with their Silver Medal from the Berkeley Springs International Best Tasting Water competition held earlier in the year.

The award was presented for the Marysville Treatment Plant that came second in the Municipal Water category, headed only by the sample from Clearbrook, British Columbia in Canada.

WIOA also presented the GVW team an Ixom Australian jumper that was then framed and presented to the Marysville community at the Australia's Best Tasting Water competition held on 19 October. The framed jumper now has pride of place at the Marysville Visitor Information Centre where a brand new hydration station has also been installed to recognise this wonderful achievement.



Goulburn Valley Water recieved a special presentation for winning a Silver Medal at Berkeley Spring

The entire Marysville community are still boasting that they have the "second best water in the world" and they can now "choose tap" and fill up their water bottles in the main street.

WIOA will enter the sample from Barrington in Tasmania as this year's Australian Champion in the Berkeley Springs International Water Tasting competition in 2017. Hopefully they will go one better and bring home GOLD for Australia.



The Marysville community participating in Water Week activities.

GIVEAWAYS PUT A SMILE ON FACES

WIOA member Jeff Pekin from GWM Water asked if there was any way we could assist the Horsham Table Tennis Access All Abilities Group with any promotional merchandise from the Victorian conference.

So we put the call out before exhibitors commenced packing up in Bendigo and the resultant support was fantastic. Thanks to Haywards, Omega Chemicals, Professional Diving Services, Evoqua Water Technologies, Swan Analytical and others, we were able to provide Jeff with a couple of large boxes full of giveaways for the group.

The Horsham Table Tennis Association has been involved in supporting Special Needs Athletics for over twenty years, practicing the techniques of table tennis each Monday night. Individuals aim to participate in the Annual Kerri Tepper Tournament for Special Needs Players in late August. This event is named after 2 time Olympic representative Kerri Tepper, who came from Murtoa in the Wimmera and played junior table tennis in Horsham.

Playing table tennis helps to keep their fitness levels up and gets the body moving, as well as providing important interaction with others on and off the court.

Manners, meeting others, sportsmanship and just having a go are part of the enjoyment that these very special people provide their committed helpers like Jeff. They are all winners, and the small rewards the WIOA community was able to provide through t-shirts, drink bottles, caps, cups, hats and key rings, helped to put a smile on their faces for just having a go.

WIOA is pleased to be able to assist in such a small way and watched as members of the Horsham All Abilities Group competed in the Annual Access All Abilities Football & Netball Carnival in Mooroopna on Wednesday September 7. Wearing Richmond colors, the Wimmera Whippets as they are proudly known, had a great day out.

Lots of discussion on how goals were kicked and how members of the Wimmera Whippets should have got a free kick were shared on the 4 hour bus trip back to Horsham.

WIOA salutes the work of dedicated volunteers across the country and congratulate Jeff from GWM Water on the support he provides to his community and the All Abilities Group.



Jeff Pekin (L), Tom Leembruggen and Andrew Lang (Wimmera Whippets) and Craig Mathisen from WIOA with drink bottles supplied by Haywards.

VICTORIAN CHARITY GOLF DAY

The Annual WIOA Charity Golf Day was held at the Camperdown Golf Club for the second consecutive year, with a stark contrast to last year's weather. Golfers were greeted with a very wet 14 degree day compared to last year's sunny 34 degrees! The course was a victim of the very wet winter, with only the back 9 holes in play. Wannon Water sent down another bus load of golfing tragic's, with the pressure on to defend the "Tradies Cup" and Marshmallow challenge.

The day started with a number of very poor excuses from some of the non-attendees and a few snags in bread, which settled the nerves for many of the want-to-be competitors for the Marshmallow challenge. With a slight tail breeze, there were some very commendable marshmallow drives. The overall winner was Ash Burns from Wannon Water, who launched a 70m marshmallow bomb with a 4 iron. The prize was wearing a bright pink high-vis vest for the day, which also helped soak up some of the rain.



Winners are grinners - MJK team of Rick Baillie, Noel Stewart and Richard Godycki.

The teams of 3 for the Ambrose Challenge were drawn out, with a shot-gun start. This was also the opportunity to purchase the "Mulligan cards" and a new twist to the comp with 2 pieces of string, which could be used to bring a ball back in to play, or make-up for a short putt. Congratulations to the overall winning team of Ash Burns (Wannon Water), Craig Steele (Siemens) and Craig Scott (PAAS) with a magnificent nett score of 58.2. Closest to the pins went to Ash Burns and Les Johnson from Wannon Water, and the longest drive to Craig Mathisen from WIOA. John Harris from Wannon Water was out to defend the "Tradies Cup" and drafted in a couple of Branch Managers to assist. Unfortunately John drafted in the wrong blokes and came second to the MJK Team, consisting of Noel Stewart, Rick Baillie and Richard Godycki from Barwon Water. In an ironic twist to the day, the main prize in the raffle – a golf bag, was won by Marilyn, the only non-golfer present. Maybe she'll take it up one day.



Raffle winner Marilyn.

After presentations and a delicious meal for tea, the bus trip home for us was very entertaining with a

couple of stops called for, as well as plenty of stories from the day that just kept getting better as the trip went on. A big thankyou to John Harris and Anthony Evans for organising the day for us and getting us there and home.

The course was in reasonable condition given how wet it has been, with a big thankyou to the Camperdown Golf Club and their members who braved the weather and put on a great day.



Overall winners - Ash and the 2 Craigs.

The refreshment cart did not have the demand it had last year, however, Marilyn Wall did a fantastic job getting around to all the groups and keep up our hydration. Finally, a big thank you must go to the WIOA team for organising such a great day, the sponsors that make events like this possible and all the golfers who travelled from other water Corps and businesses around the state. The highlight of the day was the total raised for charity, with nearly \$4000 to be donated in 2017.



Brollies were the order of the day.



FAR NORTH QUEENSLAND INTEREST DAY

WIOA staged its annual FNQ Interest Day and optional charity bowls afternoon in Cairns on Thursday 6 October 2016.

Water and wastewater staff from far northern councils attended what was not only a very technically informative day, but a great opportunity for these guys to network with their peers and other water industry representatives.

The day included an exciting array of speakers and presentations with a number of operational staff from the far north talking about their systems. The Keynote this year was delivered by Stuart Doak from Livingstone Shire Council who spoke on the project which has led to significant improvement in water quality in the town of Blackwater.



Stuart Doak presenting

The Interest day was sponsored by IDEXX Laboratories and Cairns Regional Council. They

were supported by McBerns, Thermo Fisher Scientific, Aqseptence, Hydramet, Xylem, Grundfos Pumps and Glacier Filtration who sponsored the charity bowls afternoon.

Juliet Robert from major sponsor IDEXX presenting



The winners of the Tradies Cup was the team from Aqseptence which included Zac Floyde-Smith, Glenn Campbell from Cassowary Coast RC and Mark Gwynne from Cairns RC. The long bowl from corner to corner was won by John Van Ryt. Each year WIOA has rotated the responsibility for nominating



Winners of the tradies cup Aqseptence – Mark Gwynne, Zac Floyde-Smith and Glenn Campbell.

a charity to receive the proceeds from the Bowls afternoon and this year it was Mareeba Sire Council's turn. A cheque for \$850.00 was presented to a very appreciative Mareeba Shire Council Mayor, Cr Tom Gilmore. The donation will go to the Mayor's Christmas Appeal.



Cec Honeyball from Xylem prepares to roll one down

Morris Hamill (l) & Loui Macri (r) presenting the cheque to Mareeba Mayor, Cr Tom Gilmore



WINNERS ARE GRINNERS IN WIOA FOOTY TIPPING

Congratulations to our footy tipping winners for 2016 - AFL: Andrew Wundke from GWM Water and NFL: Bret Mendham from SEQ Water. Both our winners received a much sought after WIOA prize pack and we look forward to even more members participating next year.



Andrew Wundke

AFL FOOTY TIPPING

Andrew took the lead in the AFL competition in Round 12 and although a few got close he was never headed and eventually won the competition by 3.

146 Andrew Wundke - GWM Water

143 Matthew Leach - North East Water

143 Jason Mullins - North East Water

NRL TIPPING

After having led all season, Col Haynes was pipped at the post when he could only manage 5 correct winners in the final round. Bret Mendham came home with 7 winners and found himself at the top of the table when it mattered most.

138 Bret Mendham - SEQ Water

137 Col Haynes - Unity Water

131 Sherryn Wall - WIOA

MEDIA FROM IXOM BEST TAP WATER IN AUSTRALIA COMPETITION

IXOM

The quality of our tap water along with the importance that operators play in providing safe drinking water to our communities was put under the national spotlight during Water Week. Thanks to the hard work undertaken by WIOA, taste test sponsor Ixom and a PR firm commissioned by Ixom to help promote the Best tap Water in Australia competition, the resultant media coverage was extraordinary.

iSentia was used to measure the reach of media coverage of the Ixom 2016 Best Tap Water in Australia Competition that was held in Marysville on Wednesday 19 October 2016.



Craig with the media at the taste test.

The event was celebrated on television on National Nine News as well as on The Project on Channel Ten. Overall 60 items appeared in the media across Australia with more than 30 interviews conducted with journalists from newspapers, television and radio.

Targeting media at all levels - local, state and national, the PR focused on generating news media and lifestyle stories with an emphasis on there being a fun side to the competition as well as a more serious undertone: honouring the hard work of those people who ensure safe, clean drinking water is delivered from our taps every day.

The campaign reached an audience of over 3 million people. WIOA even received phone calls from a couple of states not in the competition asking how they could be involved next year.

It is a good news story, something the water industry can celebrate. The competitiveness between states in providing the samples from each of the state based competition winners really helped the story along.



Neville Whittaker tasting the samples at the Australian competition

SHOW US YA BAG

We have received some great entries in the Show Us Ya Bag competition, from Tokyo to the MCG from the Big Desert National Park to the Bridal Vale Falls in the Blue Mountains. The bag even made an appearance at the Great Race in Bathurst and on a cruise ship!

There is still time to come up with that winning creative shot that includes this year's conference bag, for your chance to win an iPad (valued over \$800) donated by the Automation Group. The competition will close on **30 November 2016**. Entries can be emailed to craig@wioa.org.au



Paul Gregg from Cowra shows his bag in the Blue Mountains

David Reyne from Central Highlands Water took his bag to Bathurst



WIOA LOOK-ALIKES

Most people who have Dreadlocks probably get the Sideshow Bob reference, after the character from the Simpsons. Why would WIOA be any different!



Will Egan
South Gippsland Water



Sideshow Bob
The Simpsons

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

TASMANIAN INTEREST DAY

Around 15 operators attended the WIOA Interest Day at Hobart's Bryn Estyn Water Treatment Plant on Wednesday 19 October 2016.

Mark Abela, TasWater's manager of water treatment and dams, started the day with an overview of taste and odour issues faced by Tasmania over the last two summers. He focused particularly on Hobart's bulk water system and the water treated at Bryn Estyn Water Treatment Plant.

Due to unusually dry weather and warm temperatures in the months leading up to the 2014-15 summer, TasWater received complaints about the tap water tasting and smelling "earthy and musty".

Water testing results showed that for the first time here, methyl-isoborneol (MIB) and geosmin levels in the Derwent River had reached beyond the taste threshold for many customers. Although not harmful to health, under the Australian Drinking Water Guidelines, a water corporation aims to meet certain aesthetic requirements for customers.

Mark explained how TasWater changed from its original "DIY carbon dosing plant", consisting of a carbon slurry being mixed in two large tanks in the driveway of the treatment plant, to the new purpose-built powdered activated carbon dosing plant.

Fran Smith spoke generally about TasWater's laboratory testing and how it has changed as a result of the taste and odour issues. As testing for MIB and geosmin can take time, a 'tasting panel' of highly calibrated employees was established to provide instant results.

Over the lunch break, Lorraine Bullbeck from the Australian Water Quality Centre supplied us with some... refreshments. We were presented with a number of water samples, containing different levels of MIB and geosmin. We were invited to see how well-calibrated our tastebuds were by sampling the water.

Lorraine told us that at least 60% of taste is actually smell! This is why foods seem more bland when you have a cold. Usually people will start to notice MIB odour and taste once it goes over 10 nanograms per litre.



Taste & Odour sampling.

The other focus for the day was on the severe weather and flooding experienced across Tasmania in June 2016. Eleanor Bray, TasWater GM retail and customer services, and Garry Lanham, TasWater water service operator, shared images and discussed the impacts of the severe weather on our wastewater and drinking water systems.

Contributed by Kate Beard, TasWater.

SA INTEREST DAY

The Adelaide Aqua team at the Adelaide Desalination Plant were the hosts for the WIOA South Australian Water Interest Day held on the 24th of August 2016.



Delegates at the event

The day was opened by WIOA's MD, George Wall who talked briefly about WIOA and their activities in SA and around the country before introducing the Speakers.

The day was sponsored by Evoqua Water Technologies. Craig Chamulko from Evoqua spoke about the ultra-filtration submerged membrane technology that Evoqua supply and how this technology was tailored to the requirements of the Adelaide Desalination Project.

Craig Chamulko from Evoqua presenting.

Tim Kildae from SA Water, a marine biologist, gave a very interesting overview of the environment before and after construction and modelling of impacts from Brine disposal.



Ambrose McGrath was among two Adelaide Aqua operators who gave a concise description of the plant operation and the energy recovery systems in place.



Banks of membranes.

Chris Copley explained how desalinated water mixed with surface water from Happy Valley and the water quality challenges met through commissioning an ongoing operation. He then spoke on how the water is introduced into the Adelaide water distribution system.

The day concluded with a lunch supplied by the days sponsor, Evoqua and a tour of the Adelaide Desalination Plant led by the Adelaide Aqua operations team.

The Adelaide Aqua team were very knowledgeable. Many questions were thrown their way, few of which went unanswered which is a great testament to the operations team.

Seeing the advanced process and engineering first hand was very enlightening.

Contributed by James Thonder from Allwater

CORPORATE MEMBER NEWS



NO MORE GREEN WATER

Australian made and manufactured water disinfection technology could have prevented the Rio Olympic organisers from being left red-faced by the green, foul-smelling pool water that forced the temporary closure and draining of an Olympic diving pool and severely disrupted athletes' training.

Elena Gosse, the CEO of Australian Innovative Systems (AIS), said that an automatic, in-line Chlorine generator like the ones AIS produces could have ensured the Rio pool water stayed clean and clear and saved the organisers from embarrassment.

"The bright green water was due to the presence of large amounts of green algae which is a symptom of inadequate disinfection and not enough Chlorine. If Chlorine levels were initially properly maintained, the situation would not have happened as the algae could not have grown."

Pool management in Rio has publicly stated that incorrect chemicals were used in the pool, diminishing the ability of the Chlorine to do its job of keeping the water clean and clear.

"While Olympic officials originally closed the pool and tried shock-dosing the water, unfortunately the wrong chemical was used which then effectively destroyed all of the Chlorine. The only option then left was to drain millions of litres of water from the pool," Elena said.

"Chlorine remains the only widely-approved, residual disinfectant for public swimming pools world-wide and is actually the hero when it comes to water disinfection. Free Chlorine kills germs and helps to protect swimmers from waterborne disease and pathogens."

AIS' chlorinators use a process known as electrolysis, where water passes through electrolytic cells which convert the minerals and salts present in the water into Chlorine. The Chlorine is then distributed directly into the water keeping it clear and germ and bacteria free and ensuring there is no chance of running out of Chlorine. AIS' technology also eliminates the risk, hassle and expense of traditional Chlorine storage and dosing.

With AIS' technology already in place in over 55 countries world-wide including large aquatic centres, theme parks, municipal facilities and competition swimming pools, Elena said that the Rio situation should be a "wake-up call" for FINA. "Unbelievably there is no world-wide standard for pool water quality when it comes to competition swimming facilities, Elena said.

"FINA simply defers to the standards of the governing health authority of wherever the competition pool is located."

Elena said that AIS had a number of its water disinfection systems installed at the Gold Coast Aquatic Centre (GCAC), the venue for the Gold Coast 2018 Commonwealth Games, but not in GCAC's competition swimming pools.

"We will continue our industry education campaign about the benefits of inline water disinfection and hope by the time the next Olympics takes place that tried and tested technology such as ours is adopted so Rio's green pool never happens again."

www.aiswater.com.au



Green pool from Rio.

ACCESS TO CLEAN WATER AND SANITATION FOR ALL



Support WaterAid's joint campaign with Global Citizen to encourage our leaders to ensure Australia plays its part in helping meet the United Nations' Sustainable Development Goal 6 for clean water and sanitation. Goal 6 aims to ensure availability and sustainable management of water and sanitation for all.

SUSTAINABLE DEVELOPMENT GOALS



Will you join WaterAid and Global Citizen and #Gofor6? The aim is for Australia to reach 50 million people with access to clean, safe water and improved sanitation by 2030. Australia has an important role to play in the Asia Pacific region. Click on the following link to take action today - www.globalcitizen.org/en/action/set/gofor6/

ASSESSING THE ACCURACY OF LAB RESULTS



Many water industry operators do their sampling, send them off to the lab, and trust that the results that they get back are accurate. However, there are times that the results that the lab provides are not an accurate depiction of the quality of the sampled water or wastewater product.

Developing skills in the interpretation of lab results will enable you to more easily determine if you have actually exceeded one of the thresholds in your sampling regime, or if your lab results are likely to blame. This could save you a large amount of time and money so you don't have to unnecessarily investigate and rectify a fault that never occurred.

There are a variety of ways to accomplish this:

- Compare your current results to those previously collected to determine if there are any trends or variations. If laboratory results are substantially different compared to historical trends, it is a good opportunity for operators to explore if this variation is due to a change in the sampled water, or is due to a laboratory result.
- Compare them to some form of typical or background concentration. Depending on the source of the sample, guidance for typical concentrations for a number of test parameters can be found for drinking water (e.g. Australian Drinking Water Guidelines or ADWG), wastewater treatment systems (e.g. the Australian Recycled Water Guidelines or ARWG), or for general water quality of waterways (e.g. ANZECC Water Quality Guidelines).
- Compare the total versus the dissolved fraction (the total should be greater, if not, an error may have occurred). If using this method, don't forget to take pH into consideration!
- Consider the concentration of compounds compared to the concentration of elements.
- When checking the accuracy of laboratory organic results, ensure that the total petroleum hydrocarbon concentration (TPH) is less than the total recoverable hydrocarbon (TRH) results.
- Another issue commonly encountered in incorrect laboratory results is the nitrogen compounds not balancing with the total nitrogen concentration. Any occasion where the nitrogen results do not balance (apart from small differences associated with method accuracy) should result in the laboratory results being checked to assess the cause of the error.
- Undertake Quality Assurance/Quality Control (QA/QC) sampling by using quality control samples such as the use

of reference sites for comparison, control samples, field spikes or field, transport and container blanks.

- The accuracy of the laboratory analysis can also be readily checked by looking at the anion-cation balance. Since water is neutrally charged, the sum of anions should roughly equal the sum of cations. The anion-cation balance is normally expressed as percentage. If the anion-cation balance is $>5\%$, this may indicate an error in analysis, and the results should not be relied on for subsequent interpretation until they are investigated.

Ultimately, these methods remind us that laboratories and laboratory results are not infallible. If your results indicate you have exceeded a sampling threshold, taking the time to check the accuracy of those results can be incredibly helpful.

Extract from Simmonds & Bristow Training Newsletter (7 Nov). Article written by Dr Travis Robinson
info@simmondsbristow.com.au

AIR-MET SCIENTIFIC - GREEN INITIATIVE

Recycled Cardboard Packaging

Air-Met Scientific recognises that their operations have both direct and indirect impacts on the environment and is committed to reducing their environmental footprint in the course of doing business. Environmental sustainability and conserving the environment is a key priority to the team at Air-Met.

Externally, they strive to promote a cleaner, healthier and safer environment by supplying and supporting occupational health, safety and environmental monitoring equipment.

Internally, they strive to minimise their environmental footprint on the planet and communities in which they serve. From product sourcing to internal operations, Air-Met is constantly looking for ways to operate their business in a more environmentally friendly and sustainable manner.

As part of their goals, Air-Met has recently purchased a cardboard box recycler which produces a bubble wrap equivalent by using scrap cardboard. This in turn helps the environment and saves money on packaging – cost savings which we can pass onto their customers.

So be on the lookout, as you may start seeing some of the new packaging incorporated in your deliveries.



ULTRAFILTRATION AT TOOLEYBUC

Municipal councils all over Australasia are seeking optimum ways to address challenges posed by water resources declining both in quantity and quality under pressure from local populations and the needs of industry and agricultural users.

One council that has successfully used advanced ultrafiltration technology to deliver a high standard outcome for its district is Wakool Shire Council which draws its water from the Murray River and treats it in the small town of Tooleybuc, NSW, right on the border with Victoria.



Tooleybuc Bridge

Working together with CST Wastewater Solutions' delivery partner Envirotech Water

Solutions, Wakool Shire Council replaced the old plant with a new ultrafiltration plant to provide potable water for Tooleybuc's town water supply. The entire plant was installed in just 2 weeks of on-site work and achieved results exceeding Australian standards.

Another big advantage for councils like Wakool is that on-site attendance and maintenance is very low, with only one day a week being required. This produces both cost-efficiency and OH&S benefits.



The new plant has a capacity of 0.5 ML/day (over 20 hours) with a peak flow of 6 l/s. The water is treated for turbidity, colour, protozoa and viruses using CST's advanced ultrafiltration technology. The technology reduces turbidity from 8 NTU to <0.1 NTU and colour from 15 to 5. Australian Drinking Water Guidelines specify that acceptable drinking water needs to be <5 NTU and <15 true colour, so the Tooleybuc plant well exceeds the ADWG standards.

Improving turbidity by over 80 times and significantly reducing the colour to exceed Australian Guidelines is an excellent result for the project, which is widely applicable to councils and municipalities across Australia.

The Pentair X-Flow ultrafiltration plant installed at Tooleybuc is a new generation of low-pressure membrane filtration technology engineered to produce water from all kinds of water sources using ultra-filtration (UF) and, more recently, Nano-filtration (NF). X-flow's strength is the integration of critical process steps to ensure a Fill Circle Membrane Technology partnering approach encompassing all key process and operational steps including membrane manufacture, engineering design, installation and commissioning support and ongoing operational support.

For further information in Australia and New Zealand, please contact Mr Michael Bambridge, from CST Wastewater Solutions, <http://www.cstwastewater.com/>

Q-BOAT IN QUEENSLAND

The Teledyne OceanScience Q-Boat showed its stuff in a demonstration on the South Johnstone river in Innisfail, Queensland. The versatile and re-configurable Z-Boat becomes a Q-Boat when a Teledyne RDI ADCP is integrated. The Q-Boat provides a fast and safe way to conduct river gauging operations without the need for personnel to enter rivers or work from busy traffic bridges or other high risk locations.

UVS General Manager, Mark Hegarty said that the Q-Boat attracted a great deal of interest at the demonstration. "The capability of the Q-Boat is easy to see", said Mark, "It can perform river transects under remote control so that the operator does not need to enter the river or to rig cable ways or other infrastructure".

Many hydrographic authorities are now starting to consider the use of robotic tools like the Q-Boat to remove staff from high risk locations such as flooding rivers, debris in river or the risk of crocodile attack which is present in Australia's north. The Q-Boat is an example of robotics that removes people from the "dull, dangerous and dirty" work of gathering data in the field in difficult locations. More information is available on the UVS website <http://www.uvs.com.au/>



BlueZone Group CEO, Neil Hodges (left), and the observer group at Innisfail



EMERSON MULTIPHASE FLOW METER

The New Emerson multiphase flow meter gives customers flexible, easy and cost-effective monitoring through the Roxar MPFM 2600 M multiphase flow meter. The Roxar MPFM 2600 M is a flexible and easily manageable wellhead measurement solution based on a field-proven technology platform. The meter meets the needs of many challenging applications and can be a cost effective solution for more constrained budgets. The meter is ideal for customers with direct and continuous wellhead multiphase flow monitoring needs.

The Roxar MPFM 2600 M is part of the scalable Roxar multiphase product family and provides flexibility as fields mature and conditions change. The compact meter can be easily retrofitted in the field, delivers straightforward installation and commissioning, and has been specifically designed to meet operators' capital expenditure and varying field requirements.

"The MPFM 2600 M is designed to help operators manage costs and increase efficiency while enhancing production and making smaller fields more viable," said Patrick Babka, vice president and general manager, Roxar, Emerson Automation Solutions. "It is also ideal for applications requiring one multiphase meter per well, allowing operators to track multiphase flow from all of their individual wells accurately and cost-effectively."

The MPFM 2600 M can identify and measure non-symmetrical flow in varying flow regimes, providing improved measurement uncertainty monitoring and reliability. The meter includes the advanced signal processing, field electronics and electrode geometry innovations of the third generation MPFM 2600.

Different modules can be placed into a variety of configurations and software modules are available to help with challenging applications including flow back measurements, well testing and allocation metering. These customized configurations include a venturi which extends the operating range of gas void fractions (GVF) to 100% (MPFM 2600 MV), a compact gamma system for improved accuracy (MPFM 2600 MVG), a formation water salinity measurement system, and a special operating mode for wet gas wells.

More information at <http://www2.emersonprocess.com/en-US/news/pr/Pages/1610-RoxarMultiphaseFlow.aspx>



OPTIBAR LC 1010



measure the facts

New submersible level probe with ceramic diaphragm

- Continuous hydrostatic level measurement in water wells, rainwater basins, or tanks
- Robust stainless steel housing and high overload-proof ceramic diaphragm for long operating life
- Measuring ranges from 100 mbar / 10 kPa / 1.5 psi to up to 10 bar / 1 MPa / 150 psi
- Corrosion-resistant TPE cable for versatile use from water to wastewater applications.

The OPTIBAR LC 1010 features a robust 316L stainless steel housing and a high overload-proof ceramic diaphragm for long operating life. For safe and easy cleaning on site, the diaphragm is flush mounted. With a diameter of 22 mm / 1", OPTIBAR LC 1010 can be used also in small vessels. It comes with pre-configured measuring ranges from 100 mbar / 10 kPa / 1.5 psi to up to 10 bar / 1 MPa / 150 psi, customer-specific ranges are available on request.

For versatile use from water to wastewater applications, OPTIBAR LC 1010 features ATEX and IECEx certification and a corrosion-resistant TPE cable that is also approved for use with potable water. Next to the electrical lines for the 4...20mA output, the TPE cable houses an air hose to be used for differential pressure level measurement with closed vessels. With open vessels, the air hose can be capped for absolute pressure measurement. As options, OPTIBAR LC 1010 can be provided with an integrated 3-wire Pt100 temperature sensor, alternatively with HART 7 communication for convenient configuration. More information is available from the KROHNE Australia website at www.krohne.com



Optibar LC1010

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:

Bryce McGowan, Phillip Bell, Frank Percy, Lisa Kinross, Ryan Bennie, Hieu Lam, Jim Civiti, Con Mavrelis, Scott Jordan-Legg, Rajas Patankar, Fikret Alpozgen, Jamie Grundy, Sylvia Campbell, Fred Weir, Lanie Martin, Julie Atkinson, Jason Lynch, Greg Fowler, Sri Prasanna, Leon Stackpole, Angus, Bowles, Brett Harvey, Des Lamb, Anthony Cole, William Brown, Garry Ballard, Manjit Randhawa, Daniel Marsden, Paul McLeod, Jim Russell, Ben Buurman, Andrew Bradley, Bradley Coppin, James Gorman, Chad Johnson, Kriston Nilsson, Patrick Glennen, Josh Scoble, Ashley Cox, Nerida Campbell, David McKean, Warren Jago, Craig Ellis, Matthew Boyle, St John Lees, Julie Rissman, Jay Gordon, Richard Dixon, Kaushalya Wijekoon, Lee Wieden, Dave Mason, Jake Puglisi, Garry Mugridge, Steve Kinane, Peter Kilpatrick, Rodney Muddle, Scott Haylett, Steve Bailey, David Cross, Paul Donohue, Lisa Caldwell, Gareth Kennedy, Peter Quigley, Bridey Pearn, Amanda Walker, Ben Pilkington, Benjamin Paul, John Martin, Kaine Parsons, Matthew Hammersley, Neville Barry, Sam Cartwright, Chris McCallum, Michael Obah, Shane Faulkner, Levi Eyles, Mervin Jarret, Ross McHenry, Brad Barr, Matthew Cotter, Lorri Hill, Adrian Jackson, Ryan Lambert, Ross Liversidge, Colin Mackay, Dominic Moylan, Mark Newman, Daniel Rebesco, Tristan Salau, David Southcombe, Christopher Blake, Jenith Jesuthasan, Jessica Williams, Craig Hiddleston, Mark Whitfield, Terry Hales, Wendy Trueman, Emma Schmitz, Brad Richards, Kevin Hall, Scott Kitwood, Tim Clancey, Dylan De Hommel, Daniel Rodaughan, Frank Thomson, Gerard Hartigan, Gavin Pearson, Emily Beyer, Justin Ellis, Ben Fallows, Paul McGawon, Matthew Shire, Peter Brigante, Kendall Niblett, Paul Yeo, Andrew Willmott, Stewart Germon, Rohan Geddes, Edward Fox & Rob Chisholm.

New **Corporate Members** include:

Luminultra Apac, Bluescope Australia & New Zealand, SWAN Pneumatics, Kobold Messring GmbH, RPL Trading, Water Treatment Services, Olympus Australia, Aegis, Glacier Filtration, Southern Commercial Divers, Vinindex, Turtle Tough, Burjen, Pentair Environmental Systems, AWS Services, Fitt Resources & Sudel Industries.

BEYONDBLUE - DADVICE TO SUPPORT NEW DADS

Any parent will tell you that raising kids is one of the biggest, most rewarding challenges you'll face in life. They'll probably also tell you that things feel hardest when it's all new and you're still figuring out how to dismantle the pram without losing a thumb.

While there is much love, joy and humour in becoming a parent, new dads can do it tough and often without professional support. To help stressed-out dads, beyondblue has launched a new web series, Dadvice.org.au, with funding from the Movember Foundation.

Dadvice features 12 new fathers sharing the joys and sleep-deprived disasters of their babies' first weeks of life in a series of dad video diaries hosted by comedian Ben Lomas.

New dads can also sign up to the Dadvice survival guide and receive regular emails packed with tips, practical advice and support.

Check out the Dadvice and the other support programs conducted by beyondblue at: www.healthyfamilies.beyondblue.org.au

COMING EVENTS

2016

- 20 November** Victorian Networks Operator Development Program nominations close
- 24 November** QLD Wastewater Interest Day, QUU, Luggage Point

2017

- 28 February** PASS Award applications close
- 25 & 26 February** WIOA Weekend Seminar & AGM, Holmseglen at Eildon

2017 CONFERENCE AND EXHIBITION SCHEDULE

- 29 & 30 March** 11th WIOA NSW Water Industry Operations Conference & Exhibition, Canberra
- 7 & 8 June** 42nd WIOA Queensland Water Industry Operations Conference & Exhibition, Logan
- 6 & 7 September** 80th WIOA Victorian Water Industry Operations Conference & Exhibition, Bendigo

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NEXT EDITION

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