

OPERATOR

May 2017 Edition



Inside

From the MD's desk.....	2
Profile of a Member	3
Vale Shane Murrell.....	4
A minute with Committee Member.....	4
No Luck for the Irish	5
AGM	6
Cyclone Debbie	7
NSW Conference Report	8
NSW Conference 2017 Winners	9
Birdseye View Mt Stromlo WTP	10
NSW Operator of the Year.....	12
SA Operator of the Year.....	12
Operations Corner.....	13
Tasmanian Operator of the Year	14
Tasmanian Young Operator of the Year .	14
NSW/ACT Taste Test.....	15
Corporate Member News	16



The Netzsch team being presented the Qld Tradies Cup by Colin Haynes (L).
More on Page 5.



Member profile from Christine Cottee from TasWater.
Read about her on Page 3.

Newly elected WIOA President Adrian Rijnbeek from Xylem and Vice President Heidi Jospovic from North East Water.



FROM THE MD'S DESK

Welcome to the May edition of Operator, yes the year is almost half gone already!! As usual, a lot has been happening in WIOA circles and there is much more on the way.

Our Annual General Meeting and weekend seminar were held in late February with Adrian Rijnbeek elected President taking over from Ryan McGowan, and Heidi Josipovic was elected Vice President. We also welcomed Robran Cock, Simon Page and Sally Taylor onto the Committee for the first time, along with the return of Darren Lord from Tasmania. Our thanks were extended to outgoing Committee members in Neil Crossing and Jill Busch. There were also changes in the Board of WIOA Ltd with Tony Hourigan and Peter Tolsher both deciding to step down after each giving 10 years of amazing service. They have been replaced by two high quality Directors, in Adrian Rijnbeek and Jill Busch.

The special resolutions to change the constitution were adopted meaning that from 2018, all Members will be able to vote for their preferred Committee candidates, and not just those who are in attendance at the AGM.

The Weekend Seminar itself was another great success with the assembled members treated to some excellent technical and product presentations, some "fishy" brain teasers, a few "Las Vegas" activities and a very special guest appearance of Elvis at the dinner. A report covering all the goings on appears later in this edition.

In late March we staged our NSW conference in Canberra. It was enormously successful with the third highest attendance on record at our NSW event. Our thanks are again extended to our excellent Hosts and major sponsor in Icon Water, along with all our other sponsors, the exhibitors and delegates. The award winners announced at the NSW conference also deserve our heartfelt congratulations including Icon Water for winning the NSW/ACT Taste Test. There was additional entertainment at the Thursday Dinner where the footage from WIOA COO Craig Mathisen's interview, aired that night on the Project, was played on the big screen.

We now look forward to heading to Logan for the Queensland conference in the first week of June. All 112 exhibition sites were sold out in less than 2 hours showing how valuable the companies rate the opportunity for interaction with the water industry operational staff. The technical program includes a diverse line up of presenters covering a wide range of topics including input from a number of Queensland Councils. There will also be the inaugural staging of the mains tapping competition at a WIOA conference. Delegate and visitor registrations are still being accepted with registration forms available from the website.

In another exciting first, we will be presenting Certified Operator credentials to five Queensland wastewater treatment operators at the WIOA conference in Logan. As part of a pilot undertaken in conjunction with *qldwater*, they have met all the requirements of the Queensland STP Operator Certification Framework and will be recognised accordingly. The development of a national Wastewater and Recycled Water Operator Certification Framework has also progressed and after being out for industry consultation for some time,

the draft Framework will be considered by the Water Industry Skills Taskforce (WIST) at their June meeting.

In late 2016, WIOA and AWA came to an arrangement to allow the transition of the operators from the NSW Certification Pilot into the WIOA scheme. A number of operators have now met all the requirements and have been awarded certified status. There are quite a few more expected to finish in the next few months. Anyone looking for more information on certification can visit the WIOA website or call the WIOA office.

A group of 15 Australian operators, including award winners from NSW, Queensland, South Australia, Tasmania and Victoria, headed off to New Zealand in early May for the annual 8 day tour of NZ water and wastewater plants. This year, the tour visited plants on the South Island before joining our Kiwi cousins at their annual operations conference in Queenstown. Once again the WIOG team did a fantastic job not only in organising and hosting the tour, but by running such a successful conference with 100% volunteer staff. Look out for a report on the tour from some of the attendees.

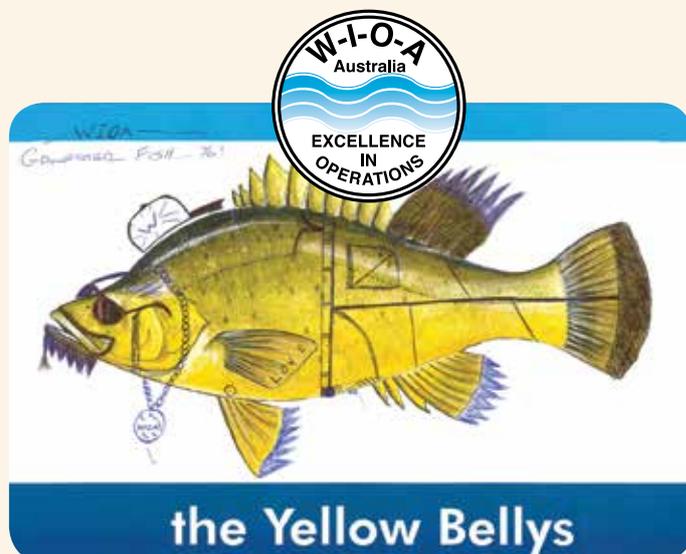
Once again, the WIOA events calendar is rapidly filling courtesy of some great work and assistance by all our State based Advisory Committees. Apart from our three major conferences, there are a variety of interest days and tours either just completed or happening soon, along with some seminars and Water Taste Test events. Although we do understand that not everyone can go to every event, please make sure you support the work of your own members by participating whenever you can.

Until next time,

George Wall – WIOA Managing Director

CREATIVE DOODLING

At the recent WIOA Weekend Seminar and AGM, one of the competition prizes was awarded to the most interesting doodle drawn on the team place mat. The winner was Glen Alford from JHC Group for his gangster fish.



PROFILE OF A MEMBER



Name: Christine Cottee

Position: Acting Area Coordinator / Water & Sewerage Officer

Employer & Location: Taswater, North West Tasmania

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

Approx 5 years in the water industry;

I liked the idea of getting out in the field after years of office work & retail sales in the automotive industry.

What do you enjoy most about your job?

I like the variety of work:

Operating Water & Sewerage Treatment Plants,

Maintaining Sewer Pump Stations,

Maintaining Water Reticulation Systems

What are the major challenges in your current role?

Maintaining team morale whilst short staffed & still getting everything done.

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

I have been a member of WIOA for approx. 3 years. I really enjoy attending the water & sewerage interest days & reading all of the publications.

How do you relax?

Curl up with a good book or watch movies.

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

Originally a Queenslander, my husband and I moved to 'Paradise' Tasmania 13 years ago. I love the cooler weather, gorgeous scenery & being out of the 'rat race' of the mainland. "How's the serenity!"

QUICK QUESTIONS

Age: 47

Nickname: Chrissy

Family Status: Married, no children

Pets: Peacock, chooks & a couple goats

Favourite food: Pasta

Least favourite food: Anything with Anchovies

Favourite TV show: Neighbours & The Blacklist

Worst TV show: Home & Away

Favourite Movie: Terminator & The Castle

Favourite Musical artist/s: ACDC

Favourite book: Bryce Courtney: 'the Potato Factory' trilogy

Favourite team: I hate Football

Ambition in life: LIVE well, LAUGH often, LOVE much.

Hobbies: Fishing (Saltwater) & Camping.

Best Trait: Sense of humour

Worst Trait: Procrastinate too much

Four people to invite to dinner: Jimeoin, Betty White, Bon Scott & Robyn Williams

WIOA LOOK-ALIKES

While watching TV recently, we couldn't help but notice that Jesse, the step dad on Married at First Sight looks remarkably like former WIOA President John Day.



John Day
Former WIOA President



Jessee
Married at First Sight

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

VALE – SHANE (JUMBO) MURRELL 15 AUGUST 1960 – 30 MARCH 2017



Shane (centre) on a plant visit to North East Water in 2016.

Shane's involvement in the water industry began just over 30 years ago when as a young 26-year-old he joined the maintenance team at the Glenelg Wannon Water Board. When Wannon Water was formed in 2004, he took on the role of Team Leader.

In 2008 he was promoted to Treatment Operations Coordinator, a position where he led a team of 12 people and was responsible for water quality and sewerage treatment in the triangle between and including Casterton, Hamilton and Portland – a huge job which has enormous responsibility for providing clean and safe drinking water and wastewater services to the people of these communities.

Shane empowered his staff, led by example, and instilled a sense of independence into the people he looked after and this is evident in the skills and knowledge of his team. He was proud of his staff, defensive of them, trusted them and whilst at times ran a tight ship, was able to skilfully wear his boss hat, while still maintaining strong personal relationships within his team. Shane's home shed always featured strongly as a place both Glenelg Water and Wannon Water staff members would end up...with a long neck, a warm fire, music and a good story.

Shane joined WIOA in 2004 and appreciated the value of our organisation. He encouraged any of his team that attended a seminar or conference to do a presentation at their next team meeting on something that could bring value to their plant. As with all of us in Shane's age bracket, study and training courses weren't high on his agenda but he led by example and was amongst Wannon Water's first group of certified operators. He enjoyed the annual coordinators trip to look at plants in different areas as well as making new friends and contacts in the industry.

Shane was the first Wannon Water employee to complete Certificate 1V, and some of his photos used in his project have been kept and used by Water Industry Training Consultants.

He loved fishing and was good at it, often showing photos of his latest catch. He was also a long standing and active member of the Casterton Football Club where you could find him cooking a steak sandwich on a home game and watching

his boys play as they grew up. The only mark against him was due to him being a passionate Collingwood supporter!

Shane loved his wife Julie, their three boys and his daughter and was so proud them all, and above all, he adored his grandchildren. He loved life. Shane could come across bit grumpy at times but in the last few years he'd mellowed significantly, surprisingly around the time his grandchildren were born. Some say he always had that soft side, and was known for making cups of tea for the ladies in the Hamilton office or just wanting to "help out".

He would always do a walk around the head office & say hello whenever he was in Warrnambool for a meeting. It's a two hour drive from Casterton and Shane was never late but if your meeting was, he was the first to let you know.

Shane's tragic passing is a loss to the whole Wannon Water organisation and Casterton community, but his legacy will be around for years to come.

Contributed by Anthony Evans and John Harris

NEW WIOA COMMITTEE MEMBER – A MINUTE WITH...



Name: Sally Taylor

Position: Area Sales Manager NSW

Employer: Amiad Water Systems

Nickname: Sal

Favorite food: Thai

Favorite team: Roosters (NRL)

Who do you admire? Now that's a hard question, but I could say anyone that can ski better than me (which isn't difficult), my Siamese Cat 'Mr Spock' because he lives the life of a King, and those people that are lucky enough to live on acreage and live the country life in this beautiful country of ours.

Three people you would invite to dinner? Sheldon, Leonard and Amy Fairer Fowler

Thoughts on the water industry at the moment? There is a fair bit of change happening with new Health Based Targets and new findings by the World Health Organisation.

Your involvement with WIOA to date? I have been a member of WIOA for 5 years and attended the last 5 WIOA NSW Conferences.

As a new member on the WIOA committee, what contributions are you hoping to be able to make? I am hoping to be a good line of communication between WIOA and the Operators in my area (NSW) so that WIOA can continue to achieve its goals and mission statements. I visit almost every Treatment Plant in NSW on a regular basis. Additionally, I hope to be able to contribute with my technical knowledge.

NO LUCK OF THE IRISH IN YANDINA

On 17 March, the Queensland Advisory Committee held its annual Bare Foot Charity Bowls Day at Yandina Bowls Club on the Sunshine Coast. The weather was hot and humid, but this did not deter a keen field of over 40 bowlers from hitting the greens. The event also coincided with St Patrick's Day, and we had a few bowlers dress accordingly. As the day progressed, it didn't take long to realise that the luck of the Irish didn't help too many bowlers!

It was really good to see a great roll up, with teams competing for the highly sought after "Queensland Tradies Cup". Congratulations to all the winners, especially the team representing NETZSCH Australia captained by Steve Weir that took home the Tradies Cup by defeating the reigning champs Xylem in a thrilling (maybe a little over exaggerated) Grand Final.

Also a big thanks to the Staff and members of the Yandina Bowls Club who always look after us by cooking lunch on the BBQ, and making sure the bowlers were staying hydrated.

A huge thanks to our Gold Sponsors in Fusion, McBerns, Pensar, Thermo Fisher Scientific, Xylem and also to our other sponsors of the day in Aqseptence, Evoqua, NETZSCH Australia and Royce Water Technologies. Without the support of these organisations the day would not be able to occur, so please support them where you can.

The event raised just over \$2,000 that will be donated to a worthy charity at the WIOA Queensland Conference in Logan in June.

Again, Thanks to all involved to make this another successful event in the QLD Advisory Committees' Calendar.

Contributed by Colin Haynes, Chairperson WIOA QLD Advisory Committee



Best celebration of a decent bowl was clearly won by Arturo from Thermo Fisher Scientific.



Best dressed and best single bowl - the ladies take the prize in Yandina.



Steve Weir captain of the winning Netzsch Australia team on the shoulder of team mates Stuart Derby and Rick Goulding.



Netzsch Australia captain courageous Steve Weir rolls one down in the Grand Final of the Tradies Cup.



A great turn up in Yandina for the QLD Bowls Day.

AGM – THE ONE THAT GOT AWAY

This year I attended my second WIOA AGM, held at the beautiful Holmesglen retreat in Eildon. As soon as I realised it was going to be held so close to Lake Eildon, I quickly put my name down. My fishing gear was packed the very next day and I eagerly awaited the weekend. My fiancé who also works with North East Water, was surprised at how suddenly my interest in attending grew.

I arrived Friday night not to miss the Saturday morning WIOA fishing competition. When I arrived I found George and the others setting up their array of fishing equipment. Strangely enough George didn't bring his boat, I think he realised Snobs creek fishing hatchery was just down the road and a much easier option for landing that trophy fish. For me I spent 4 hours without a bite. Luckily I taught my fiancé well and she caught a massive 6-7 pound brown trout which she got onto the rocky bank we were fishing off twice. Not having a net mixed with her excitement, after the third time to the bank the fish snapped the line....gone....the one that got away. Sorry, but this story will be the only evidence of that fish.

After lunch we were allocated into teams with a fish theme and funnily enough, I was on the 'brown trout team'. After we found our spots, the WIOA AGM commenced. The first part of the meeting was the appointment of WIOA's new President, Adrian Rijnbeek and Vice President, Heidi Josipovic. A big congratulations to both of them. I know they will do the organisation proud and follow on the great work of previous President Ryan McGowan. Peter Tolsher and Tony Hourigan both stepped down from the WIOA Board after 10 years of great service.

Thanks to all the companies for their informative presentations: Callum from SECA, Graeme and Paul from Metasphere and Jennie and Ben from Control Components. The presentations were very informative and the hands on experience made it easier for us to understand the technology and think of areas we could apply them to our work. Thank you also to Peter Tolsher and Adrian Rijnbeek who presented on the work they are doing as part of some Standards Australia Committees where they represent WIOA. Peter presented on his recent trip to Ireland for the International Bio-solids Standard meeting where he seemed to have a great time and Adrian presented on the project working on a flushable wipes standard for Australia.

THOUGHTS ON THE WEEKEND SEMINAR

The weekend seminar was again a resounding success. A fantastic array of presenters and displays that would be of interest to all water and wastewater employees, fun and networking opportunities were had by all. Congratulations to the staff of WIOA and the committee for putting on these incredibly successful weekend seminars for WIOA members.

John Harris, Wannan Water

The weekender provides a great chance to further develop relationships and networking, listen to some informative presentations and discussions and as always, have a few drinks and a few laughs.

Glenn Alford, JHC Group

Anthony Evans was a fantastic MC for the weekend and the Las Eildon Saturday night entertainment was a heap of fun. Ryan "The King" McGowan showed his extravert side doing an amazingly energetic Elvis impersonation. Congratulations to the Rainbow Trout team on their team victory in the competitions that were held over the weekend. I am sure if we landed the fish we would have been in the running for a prize... maybe next time!

On Sunday morning we had the opportunity to tour the AGL Hydro Power Station based at the foot of the wall at Lake Eildon. The AGL team who conducted the tour were very informative and helpful in explaining the system and the process, how the use of water generates power, and how it supplies power for the large part of the state.

The WIOA AGM is a fantastic weekend, it's a great networking event, very informative and a lot of fun. I would highly recommend it to all of WIOA's members. Just be prepared for the first timer challenges, I was caught serving people at reception part of the night!

Contributed by Jamie Rossato from North East Water

WEEKEND REFLECTIONS

Well it's Monday morning and I'm back behind my desk in Sydney. I am feeling pretty tired, but it's a good tired, the sort you feel after a good weekend...

I thoroughly enjoyed the WIOA AGM weekend at Eildon in Victoria. As well as the opportunity to present on Metasphere's equipment and services, I made many new contacts (and friends) across the industry, learnt a thing or two about WIOA and how it serves its members, enjoyed demos from other equipment suppliers, danced with Elvis and enjoyed a few beers too. It was great to see WIOA growing as an organisation and focused on promoting and supporting the water industry that everyone in Australia relies upon (whether they know it or not).

I look forward to seeing many of my new acquaintances (Elvis not included) at the WIOA conferences throughout the year.

Contributed by Paul Hart from Metasphere

As a first timer this was a great way to meet some amazing people from all sides of the water industry. There was something for everyone plus a great networking opportunity.

There was a bit of fun thrown in and finished off with an inside look at the Eildon Power Plant which was fantastic. So glad I attended.

Mick Mahoney, Wannan Water

After having been to a few since 2005, it just keeps getting better and better. It's certainly a great mix of business networking and having fun together. WIOA does feel like family and the future looks promising.

Bernd Vetter, Evoqua Water Technologies



New WIOA President Adrian Rijnbeek (L) is congratulated by the outgoing President Ryan McGowan.



Callan from SECA demonstrates their CCTV inspection equipment.



WES Tour group at the AGL plant.



A tense final table at the weekend seminar casino night - Bernd held his nerve and was the eventual winner.



Elvis suprised all with a stunning performance at the Los Eildon Casino night. Elvis was shown great support by WIOA new leaders in Heidi and Adrian.

CYCLONE DEBBIE DUMPS ON LOGAN

The following is a brief outline of the rain event from ex-tropical cyclone Debbie that affected the Beenleigh Wastewater Treatment Plant in Logan.

Thursday 30th March

Rain all day from ex-tropical cyclone Debbie.

Late Thursday night advice was received that flood levels could exceed previous records with potentially up to 1 metre of water through the control room at the Beenleigh WWTP.

Mains power to the site had already been lost and the plant was running on generator power. The decision was made to de-energise the site and, with main supply isolated, the generator was shut down.

Friday 31st March

By 6am vehicle access to the treatment plant was cut and the perimeter fence had already been breached by rising flood waters. The peak of the flood event for the site was around midday. Discussions throughout the day had outlined a site recovery plan for when safe access was achievable.



Aerial photo of Albert and Logan Rivers at their peak.

Saturday 1st April

6:30am saw flood waters recede enough to allow access to the treatment plant. Maintenance and Operations staff assessed the site before re-energising the treatment plant around 10am. The flood waters had not reached anticipated levels but had still completely inundated the recycled water effluent lagoon and the associated tanker filling station, with almost 1 metre of water through the original treatment plant control room (now only used for non-critical storage). Over 300m of chain link fence had also been significantly damaged with some sections completely flattened.

Even though the treatment plant appeared to survive the event, process recovery took a little more time and patience. A significant volume of gravel had to be sucked and shovelled out of the inlet works screens and presses. UV disinfection equipment had to be carefully inspected prior to reinstatement to prevent any potential damage due to the increased flow and debris through the plant. The biological process was still being affected by diluted high flows for a week after the flood. It is estimated that the treatment plant received in excess of 200 ML between 6am Thursday 30 March & 6am Sunday 2 April. Normal dry weather flows are around 11-12 ML.

A month on from the flood event, the effluent quality parameters have stabilised and all equipment and other processes have been reinstated to normal operations, with the exception of the recycled water tanker fill station. Fence repairs are ongoing.

Contributed by David Wickman from Logan City Council

2017 NSW CONFERENCE REPORT



The 11th Annual WIOA NSW Water Industry Operations Conference and Exhibition was staged at Exhibition Park in Canberra (EPIC) on 29 & 30 March 2017. In total, 732 people attended the conference and exhibition that was well supported by Icon Water as event host. Attendees were present from 37 NSW Councils and service providers as well as 7 Interstate service providers.

Delegates were officially welcomed by Rob Allen, Manager Operations Services, Operation Services at Icon Water. The two conference keynote addresses were delivered by Stuart Wilson, Deputy Executive Director of WSAA who talked about the challenges of managing more complex water systems in the future, and Dr Kirsty McCulloch from Human Systems Group who discussed fatigue management issues for operational workforces.

The conference culminated in the Awards Dinner on Thursday evening where Shane Kimber from Shoalhaven Water was named winner of the 2017 NSW Operator of the Year. The team from Icon Water were awarded bragging rights for having the Best tasting Water in NSW/ACT for the next 12 months after winning the IXOM taste test.



Shane Kimber accepting the NSW Operator of the Year Award at the NSW Conference.

WHAT SOME OF THE NSW DELEGATE THOUGHT OF THE CONFERENCE

I find it really refreshing to see my Operators getting so much out of the WIOA conferences. They always come away with so many valid ideas and suggestions and a thirst to continuously challenge what we do and how we do it. It is this mindset that ensures continuous improvement, optimisation and the shared learning that drives our industry forward. Thanks WIOA.

Alan Butler, Port Macquarie-Hastings Council

Great event. Was an excellent opportunity to network with others in the water industry and to share knowledge and experiences through the technical papers and posters.

Shane Dyson, Icon Water

I found that the conference provided me with valuable information from exhibitors and other operators. It's great to walk around all the exhibits and see what's new for 2017 and what I may be able to use to upgrade both my plants.

Richard Robinson, Oberon Council

The range and number of exhibitors was again impressive. Great opportunity for new members to meet suppliers from the water and wastewater industry under one roof, as well as spend time looking at new innovations in products and services.

Jason Ip, Riverina Water

I feel the WIOA conference should be a part of every operators experience, it has to be the best networking platform with a good mix of nuts and bolts and leisure time, great place to meet and get to know people from all facets of the water industry. Double thumbs up from me!

Paul Gregg, Cowra Shire Council

As a first time presenter of a paper at the WIOA Conference in Canberra I am left with a new found confidence I will certainly call on in the future. It was a great experience. The feedback and support I received from other operators and the WIOA team was just fantastic. To all the operators out there, if you have a project to tell us about you should give it a go. I found the hardest thing about it was waiting for my time slot, but once you are up there it's just like talking to your mates at the pub. Thanks WIOA.

Brock Stone, Gunnedah Shire Council

I was able to track down suppliers of equipment who used to visit our plants when they were new and shiny, but as the plants have aged I had lost contact with them and now require parts which can be quite an ordeal to find the relevant supplier or options for replacement. All on display in one spot. Well worth the attendance.

Max Gray, Trility

It was very interesting to learn more about troubleshooting water operational issues, updating latest technology and the opportunity to network with other Operators, Engineers, Trade Professionals. Also had an amazing experience in presenting my paper and being inspired by great professionals. Would highly recommend others to attend the conference and also participate in presenting Poster /Paper for next WIOA Conference. I would like to thank all the WIOA Committee members who get involved and put on such a great event.

Prakashbabu, Dubbo Regional Council

NSW CONFERENCE 2017 WINNERS

NSW Operator of the Year - Finalists

Paul Gregg Cowra Shire Council
Shane Kimber Shoalhaven Water
Danny Ross Central Coast Council

NSW Operator of the Year - Winner

Shane Kimber from Shoalhaven Water

Nalco Water Awards for Best Paper by an Operator

1st - **Brock Stone**, Gunnedah Shire Council
 2nd - **Shane Dyson & Eric Nielsen**, Icon Water
 3rd - **Danny Roberts**, Port Macquarie Hastings Council

Iwaki Pumps Australia for Best Paper Overall

Brock Stone, Gunnedah Shire Council

WIOA Award for Best Poster by an Operator

1st - **Gary Perrin**, Singleton Council
 2nd - **Aaron Little**, MidCoast Water
 3rd - **Matthew Marsh**, Tamworth Regional Council

WIOA Conference Charity

Presented to - **Kids in Care ACT** \$1,500

Ron Bergmeier Award Best Exhibition Site

Honourable mention **Cadia & QMax Pumping**
WINNER **Reece Group**

PASS Award 2017

Marcus Boyd, Toowoomba RC

IXOM NSW 2017 Water Taste Test – Finalists

Icon Water

Midcoast Water

Port Macquaire Hastings

IXOM NSW 2017 Water Taste Test – Winner

Icon Water



Brock Stone (R), winner of Best Paper by an Operator with George Wall representing Nalco.



Brock Stone (R) winner of Best Paper Overall with Les Szanto from Iwaki Pumps.



Gary Perrin (R) winner of Best Operator Poster with George Wall.



The team from Reece Group, winners of Best Exhibition Site.



Mick Meredith entertains the Canberra crowd on Wednesday evening.



Icon Water team checking out some of the tools in Canberra.



Over 130 sites filled the Exhibition Park in Canberra.



Ilan, Sean and Luke from Goldenfields Water County Council give the NSW Conference the thumbs up.

When it was first built in 1967, the Mount Stromlo Water Treatment Plant contained facilities for the chlorination, fluoridation and pH correction of all water drawn from the Cotter River system.

The 2003 bushfire damage to the Cotter River catchment meant that the existing water treatment plant was not adequate to treat the potentially turbid (cloudy) water drawn from the dams in the burnt-out catchment. A substantial upgrade of the water treatment plant was undertaken to ensure the quality of Canberra's drinking water was protected during the Cotter River catchment's lengthy recovery. During the upgrade the treatment process was enhanced to include processes like dissolved air flotation to be able to treat lower quality raw water.

The new, more sophisticated Mount Stromlo Water Treatment Plant was commissioned in November 2004.

In 2007, UV disinfection was installed as an additional disinfection step to increase the ability to use water from the Murrumbidgee River for town supply. Before the UV system was in place, water extracted from the Murrumbidgee River needed to be restricted to ensure drinking water quality levels could be maintained.

Snapshot

- Icon Water operates, maintains and closely monitors 48 service reservoirs, 25 pump stations and over 3,300km of water pipelines to ensure Canberra receives high quality drinking water.
- The Mount Stromlo Water Treatment Plant can produce up to 250 megalitres (million litres) per day.
- Canberra water use averages anywhere from 100 to 250 megalitres per day depending on the time of the year.
- The clean, green energy from the Stromlo mini-hydro saves over 3,600 tonnes of greenhouse gas emissions each year, by supplying electricity that would otherwise come from fossil-fuel power stations.



- 1 Mini-hydro facility
- 2 Balancing reservoir
- 3 Clearwater tank
- 4 Filter building
- 5 Original control building from 1967 - no longer used
- 6 Control building
- 7 Sludge thickeners



8 Dewatering facility

9 Old sedimentation reservoir from original 1967 plant. Also, the site of Canberra's original water storage reservoir from 1915, converted in 1974. Not currently used

10 Landfill disposal

11 Drying beds - not currently used unless raw water quality is very low



Icon Water award winning water team.

The sample provided by Icon Water from the Mount Stromlo Water Treatment Plant won the Ixom 2017 NSW/ACT Best Tasting Tap Water.

WATER DIRECTORATE NSW OPERATOR OF THE YEAR

Shane Kimber from Shoalhaven Water was awarded the prestigious NSW Operator of the Year for 2017 at the WIOA NSW conference in Canberra. The annual award is presented to reward excellent performance, initiative and all round attention to detail by an operator of a water or wastewater treatment facility.

Shane is the operator at Shoalhaven Water's sewage treatment plant at Callala which includes the Reclaimed Effluent Management Scheme (REMS). This Scheme provides recycled water to several farms from a 600ML dam at the Callala STP

A major role that Shane has played in Shoalhaven Water has been educating and transferring knowledge both to new employees and trainees. With Shane's attention to detail, knowledge of the system and work ethic, Shane has been an excellent mentor to new staff.

The immaculate grounds, performance of the plant and Shane's personality has made Callala STP the obvious choice for public tours. Shane runs all the public tours including open days, water week, school visits, university studies and department training courses. We have continually received great feedback on the way the tours are conducted.

Shane's vast knowledge of the REMS, pump stations and sewerage treatment works process has provided invaluable guidance to students in all forms of higher education, as well as providing constructive feedback to engineering and management regarding enhancements.

Shoalhaven Water noted in their nomination that "Shoalhaven Water has been able to rely on Shane to manage the STP, staff and promote Shoalhaven Water through well-kept plant and numerous tours. Shane is always willing to go the extra mile and help other plants as needed. His commitment to safety at not only his plant but all Shoalhaven Water work sites is commendable".

In addition to his trophy, Shane received funding by the NSW Water Directorate to join the WIOA New Zealand trip in May 2017. The trip includes a study tour of various water and wastewater treatment plants as well as attending the WIOG NZ conference in Queenstown.

The judges were very impressed with the high quality of operators in regional NSW and the Water Directorate would like to congratulate this year's other nominees: Paul Gregg from Cowra Shire Council and Danny Ross from Central Coast Council.



2017 NSW Operator of the Year, Shane Kimber.

SA OPERATOR OF THE YEAR

Daniel Partridge from SA Water was announced as the inaugural winner of the WIOA South Australian Operator of the Year Award at a Water Interest Day held at the Bolivar STP in March. The award is presented to reward excellent performance, initiative and all round attention to detail by an operator of a water or wastewater treatment facility.

Daniel is a wastewater treatment plant operator and has worked with SA Water for the last eight years. Daniel has been an exceptional contributor to the Central Wastewater Treatment team. He is a proactive operator who anticipates variations in plant performance and makes adjustments to the process to prepare for these events. He regularly sets the plant up to minimise the risk of call outs and to minimise the requirements for the weekend operators.

His input to capital projects is regularly sought by project managers and designers due to his practical suggestions, technical knowledge and simplification of process. He has made a valuable contribution to the SA Water Matewatch safety program and identified and implemented a number of improvements as a result.

Daniel was also involved in the upgrade to the Gumeracha WWTP which resulted in a more environmentally friendly use of effluent and provided another source of water for the adjacent customer. This project won the 2016 SA Water environmental award.

He has also identified and implemented a number of process and purchasing improvements which have resulted in savings to our operations particularly in the area of chemical dosing at the Heathfield WWTP and the group in general together with improvements to plant infrastructure to ensure our plants are safer.

Daniel is a key member of the team and has acted as a mentor for one of the newer members of the team and is regularly consulted on plant process by other operators. His performance has resulted in minimal input from the Wastewater Treatment Coordinator.

WIOA was excited that a total of eight outstanding operators were nominated for the inaugural Award and any one of them would have been a worthy winner. TAFE South Australia as award sponsor provided a trophy as well as funding to join the WIOA New Zealand trip in May 2017. The trip includes a study tour of various water and wastewater treatment plants, as well as attending the WIOG NZ conference in Queenstown.



Daniel Partridge from SA Water, SA 2017 Operator of the Year.

OPERATIONS CORNER-A TWO WAY STREET MY PLANT IS OUT OF CONTROL-AND I DIDN'T EVEN KNOW IT!!!!

Periodically I get called in to review a plant that is considered to “be doing pretty good” and “not much room for improvement here”. At one plant, they were quite happy with their effluent ammonia that was typically 0.2 to 0.4 mg/L as nitrogen. Although this was within licence, it may indicate an underlying problem. We did hourly grab samples and found that as the morning peak passed through the plant, the effluent ammonia increased from less than 0.1 mg/L to over 3 mg/L!!!! For the evening peak we had a sample with 2 mg/L of ammonia nitrogen.

Following on from this, we found that the plant was using a somewhat higher than expected chlorine dose for disinfection. Explanation: The high morning peak of ammonia was reacting with the chlorine and reducing disinfection effectiveness for the last, and, occasionally, the second last, coliform grab sample (you have to take five samples over several hours in sterile bottles), resulting in high coliform counts. The solution was to increase the chlorine dose rate for the whole day to compensate for a few hours of problem ammonia levels. Thus there were issues with high free chlorine residuals let alone the cost of chlorine and the safety risks associated with more frequent changeover of drums.

So, we went back to the root cause. Like most WWTP's world-wide, the aeration system was based on using Proportional Integral Derivative (PID) control for the aeration control valves. PID was developed to respond to a “step change” where the required output value goes from one constant number to another constant number. Our output value (the required air flow) is constantly changing over the entire day. So, inherently, PID control is not well suited to aeration control and we only persist in using it since it was originally the only form of control available and we haven't questioned it since.

Now, imagine you are having a shower and you have finally adjusted the hot and cold just right. Then someone gets in the second shower and starts fiddling with the hot and cold taps. You need to readjust and this causes the other shower to need readjustment that interferes with your shower again. Toss in two more showers and you can see that the situation is getting complex. Meanwhile, someone is outside on the main tap to the house adjusting it to maintain a constant pressure just downstream of the main tap. Taps are getting adjusted like mad to compensate for everyone else adjusting taps!!! This is exactly what happens in aeration control with PID. The output for each control loop becomes an input for every other control loop.



Matters are made worse by the system response. We have timed how long it takes for an aeration cell to respond to a change in the control valve setting. Delays of up to 10 minutes can occur. So imagine if you turned the tap and had to wait 10 minutes to see if you got it right. The control system doesn't and it keeps turning things up and then overshoots. It then turns down and undershoots. We call this hunting. To compensate, you either put in a big “deadband” (inaccurate control) or, the control response is “damped” to become very sluggish. Control then becomes a bit like a broken analogue watch; it is correct twice per day!!! There are ways around this using PLC control however, time and page limit has run out of room for explanations here.

Moral of the story. Control logic is probably the easiest and cheapest thing to change on a plant. It may also be the cause of many of your problems and the best fix for many of your problems. Check out control first!!!

Contributed by Peter Griffiths

WINNERS ARE GRINNERS

Through the latter half of 2016, in conjunction with Automation Group, WIOA ran a “show us ya bag” competition where members were challenged to send in photos of the conference satchel in unusual situations. The winner was Paul Gregg (L) and he is pictured being presented his award by Paul from Automation Group.



Show Us Ya bag winner Paul Gregg (L).

INAUGURAL TASMANIAN OPERATOR OF THE YEAR



INAUGURAL TASMANIAN YOUNG OPERATOR OF THE YEAR

Jason Hall from TasWater was named the inaugural winner of the Tasmanian Operator of the Year for 2016. Jason is a Shift Relief Operator at Hobart's Bryn Estyn Water Treatment Plant.

Jason is a self-motivated, model employee. Nothing is a problem for him with any task around the plant. His willingness to make the plant better and safer to operate for the good of his fellow employees and TasWater is commendable. His sensible yet pragmatic approach means he is held in high esteem by both his colleagues and management, in what can be a tense environment with Tasmania's largest and only 24/7 manned water treatment plant.

He is always keen to visit other plants, speak to other operators, and actively seeks more knowledge to help operate the plant more efficiently and effectively.

Prior to working at TasWater Jason completed the Cert III in Water Operations on his own volition, while working with his previous employer in the paper industry. This forward thinking and dedication carries through into his day to day activities at TasWater.

Jason has an innate focus on Zero harm due to his personal integrity and his previous work in the paper industry. He has the courage to raise issues in a professional manner and stand by decisions made.

His manager, Mark Abela says, "He is the consummate quietly achiever, producing solid results without requiring any direct credit. This alone is a very desirable quality that cannot go without recognition, which is why I have no hesitation in nominating Jason for this prestigious award. His willingness to make the plant better and safer to operate for the good of his fellow employees and TasWater is commendable."

Jason received funding by TasWater to join the WIOA New Zealand trip in May 2017. The trip included a study tour of various water and wastewater treatment plants as well as attending the WIOG NZ conference in Queenstown.



Jason recording treatment plant data.

Patrick Cotton from TasWater was named the inaugural winner of the Tasmanian Young Operator of the Year for 2016. Patrick is based in the Smithton team and was nominated by his coordinator, Patrick Greene.

In an extremely short period of time Patrick has become skilled enough to run the Smithton Water Treatment Plant, Smithton Sewerage ponds, execute all PM tasks and lead emergency maintenance teams. Patrick is currently undertaking his Certificate III in Water Treatment.

Patrick has taken the mantle of OH&S rep for the North West team and has suggested many improvements to the working environment that will ultimately improve safety. His paperwork is always complete and on time, and should something not be covered in SOP's, he is the first to raise this and lead the discussion.

He was instrumental in sorting out the MSDS files and in his own time he has studied the O&M manuals for all plants in the Smithton region and has been able to make recommendations on WTP operational changes that will lead to savings in running costs for chemicals.

His dedication to the core values of TasWater are exemplary, as is his willingness to achieve all goals set and his diligence in self-determined maintenance.

Hi coordinator Patrick Geene says, "I have rarely seen someone take to the industry as fast or do so much extra study / work on their own time to advance their skill set. Pat brings a positive attitude to the team and at all times is willing to pitch in and help out where needed with a no fuss and all care attitude. Frankly his progression has been remarkable and I see him as a real asset to TasWater and a great foundation for the future of his team".

Patrick received funding by TasWater to join the WIOA New Zealand trip in May 2017. The trip includes a study tour of various water and wastewater treatment plants as well as attending the WIOG NZ conference in Queenstown.



Patrick Cotton.

CANBERRA HAS BEST TASTING WATER IN ACT/NSW

Icon Water in Canberra was presented the trophy as the winner of the Ixom 2017 NSW/ACT Water Taste Test at the Awards Dinner held on the Thursday night of the WIOA NSW Operations Conference.

Blind tasting began on Tuesday as part of the NSW/ACT Ixom Best Tap Water competition with the grand final and winner announced during lunch on Wednesday. After years of podium finishes, Icon Water was named the winner ahead of the other finalists MidCoast Water and Port Macquarie Hastings Council.

Icon Water Manager of Operation Services Robert Allen said he and fellow staff were thrilled. "We don't have to run a complex chemical removal process in order to get high quality drinking water to the Canberra public," he said. "It is refreshing to drink, almost sweet. It tastes like pure water."

The sample was supplied from the Mt Stromlo Water Treatment Plant and will now go on to represent NSW in the Ixom Water of Origin Taste Test against the Toowoomba Regional Council, winners of the *gldwater* Best of the Best Water Taste Test. The Water of Origin will take part at the WIOA Queensland Conference in Logan in June.

When accepting the award, shift operator Sam Bracken from Icon Water celebrated by doing a "shoey" (drinking some of the great-tasting ACT water from his boot), a celebration that has become the celebration of choice for Formula One driver Daniel Ricciardo.

Queensland lead the Water of Origin 3-1, but confidence levels are high that maybe the ACT can help get NSW over the line this year.

The Mt Stromlo Water Treatment Plant produces up to 250 megalitres per day and features in the Birds Eye View of this edition of Operator (pages 10 & 11).

THE LIFE OF A TRAINEE: ONE YEAR ON

"See that marker post? Grab the shovel, that's where we're digging". From that first task of installing a new water service, I knew a career in the Water Industry was the right choice.

One of the biggest advantages of the traineeship is that I am able to learn on the job as I work, which is reinforced by my TAFE theory lessons.

Thanks to this system I am able to learn in TAFE about what pH and hardness are, however on the job I get to learn what adjustments need to be made and considered to ensure it is correct.

Coming from an office based environment meant that whilst I was aware of workplace safety, it was quite a difference being in the field and seeing the risks faced every day, including even simple tasks. Having the theory aspect allows me to be even more aware of risks that may be otherwise overlooked.

Days such as our dam sampling days, where we are out in the water on a boat make me extremely glad to have left the office for a career in water and wastewater. Even jobs such as clearing a sewer choke aren't so bad when I can see the first hand accomplishment, however small, that I have made.

The structure of this traineeship allows me to gain a wider knowledge of the water and wastewater systems as a whole, by transferring me between the various departments, meaning I can see the flow on effects of all components of the company. Because of this I am able to be constantly learning every day, something I hope I continue to do throughout my entire career.

I would like to thank Port Macquarie-Hastings Council for allowing me the opportunity to participate in this traineeship program.

Contributed by Justin Aide, Trainee, Port Macquarie Hastings Council



Sam Bracken from Icon Water does a shoey when accepting NSW/ACT award.



The winning Icon Water team - 2017 NSW/ACT Ixom Water Taste Test.



The serious business of being a taste test judge.



Justin Aide on the job.

MICRO SCREENING – ALTERNATIVE TO PRIMARY CLARIFICATION?

At WEFTEC 2016, VoR Environmental officially launched the exclusive Hydro MicroScreen™ rotating belt screen.

Using micro screening in lieu of primary clarification is a relatively new concept. Originally developed in Scandinavia during the late 1990s, microscreening was formally recognised as an alternative approach to primary clarification in the 2014 edition of Metcalf and Eddy.

Microscreens typically take 1/10 the footprint of a conventional primary clarifier, use 80% less power in operation, and improve downstream process efficiency. The Hydro MicroScreen™ rotating belt screen was officially launched in Australia in 2016. The technology is typically installed downstream of a coarse screen and grit removal system on larger plants. For smaller municipal plants and most industrial plants, it is used to provide screening, grit removal and primary clarification all in one unit.

The Hydro MicroScreen™ can typically achieve between 50-60% TSS removal, 20-60% BOD removal, 30-40% FOG removal, as well as 10% phosphorus reduction by removing phosphorus in particulate form; this performance has routinely been even higher for industrial users depending on the application. The Hydro MicroScreen™ reduces the insoluble organic loading rate to the biological process and the BOD consumption rate within the process, reducing energy consumption and the aeration requirement.

The Hydro MicroScreen™ produces sludge with 30-50% total solids (TS) without using costly chemicals, saving significantly on handling and disposal costs. The screened solids can be collected and sent straight to anaerobic digestion or other thermal conversion processes.

It has also been successfully used at a tannery in the USA where it dramatically achieved a space-saving solution that paid back in just a few months. The existing primary treatment facility could only dewater sludge to 18% total solids, meaning that 82% of the volume to be hauled and disposed of was water polluted with tanning salts, lime and sodium sulfide. With the Hydro MicroScreen™ haulage and disposal costs were halved, by reducing total solids volume and water content of the material which is transported to a specialist waste processing facility in California. The Hydro MicroScreen™ installation also eliminated the USD \$2000 a month cost of chemicals used for sludge processing. Sludge with as much as 40% total solids is produced without the use of chemicals.

For advice, knowledge or product information visit www.vor-env.com or call 02 9695 1911.



VoR
Microscreen.

NEW TRAINING FACILITY OPENED

Hydro Innovations has just opened a new training centre, called the Hydro Innovations Pump Institute, to assist their customers in the selection, troubleshooting and maintenance of centrifugal pumps. The centre will focus most attention on self priming pumps, but aspects of the curricula offered will include standard centrifugal and submersible pumps.

The Institute covers two floors, and houses a variety of training assets. The main “attraction” is a full size functioning pump station on the first floor, with suction lines going down into a clear wet well system on the ground floor, demonstrating the self priming process very clearly through clear acrylic suction lines. Other training assets include a glass faced pump and a full-size “tear-down” pump.

The glass faced pump is a full size pump with a glass front. This allows observers to see the inside workings of a centrifugal pump, and is capable of demonstrating a raft of troubleshooting scenarios, including air binding, pipe blockages, and many others.

The “tear-down” pump enables training for operators and fitters on disassembly and reassembly of a centrifugal pump, including tips on seal and bearing installation, setting pump clearances, and other key elements in repair and maintenance procedures. The Hydro Innovations team hope that this element of operator training, along with gauge reading and troubleshooting training will help keep pumping assets at their efficient best for long and trouble free time. More information from Sanja Kandic at skandic@hydroinnovations.com.au



Garry Grant,
with the
training
centre's
indoor
pumping
station.



Observing
the flow
through
transparent
plastic
pipes.

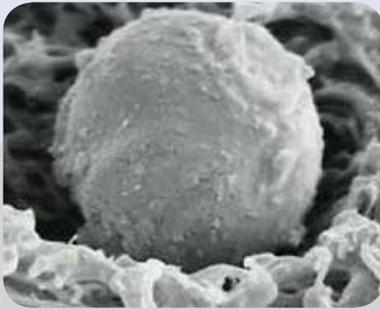


Cutaway
self-priming
centrifugal
pump.

WHEN BAD THINGS HAPPEN TO GOOD PLANTS...

It is universally accepted that turbidity is a good indicator of overall water treatment plant performance. This is further evident in the *Australian Drinking Water Guidelines: Draft Framework on Microbial Health Based Targets (HBT)*, where default recommended LRVs (Log Reduction Values) for Bacteria, Virus and Cryptosporidium are attributed to water treatment processes based on the plant's performance, in terms of turbidity.

For example, a conventional water treatment plant will have 3.5 LRV for Cryptosporidium, provided the individual filter turbidity is less than 0.2 NTU for 95% of the month, and not greater than 0.5 NTU for more than 15 consecutive minutes. Operating a regional water treatment plant consistently below 0.2 NTU may be difficult during times of flooding rains, process upsets or component failure.



Cryptosporidium Oocyst.

With the imminent introduction of HBT into the Drinking Water Guidelines, maintaining overall plant performance in terms of turbidity, will be increasingly important to ensure the minimal acceptable risk of microbial infection – one μ DALY – which

is approximately equal to 1 case per year of mild diarrhoea (lasting 3 days) for every 1000 people.

How do you ensure the consistent performance of a water treatment plant during challenging times? Reducing the flow rate, optimising coagulant dosing, investing in additional disinfection (e.g. UV) or additional filtration are some of the options available to treatment plant operators. However, the ideal solution will be one that offers turbidity reduction, additional disinfection (i.e. LRV for Cryptosporidium), small foot print, high efficiency (recovery) and a low operating cost.

Amiad is proud to offer the Automatic Microfiber (AMF) filter that has been certified by NSF for 2.15-log Cryptosporidium reduction.



Amiad Microfiber (AMF) filter.

This certification validates what we've known for the last 20-years (on more than 70 municipal installations), that the AMF microfiber filter is the most compact, efficient and cost effective self-cleaning cartridge filter for Cryptosporidium reduction. Please contact Amiad at sales@amiad.com or 1300 426 423.

INTRODUCING THE NEW SPACE-SAVING FSD ROTARY SCREW COMPRESSORS

Kaeser Compressors has just launched its latest generation FSD series rotary screw compressors. The new space-saving models house a number of product refinements and enhancements which together are delivering impressive power and efficiency to the end user.

Air-cooling of rotary screw compressors can be significantly more cost effective than water-cooling and this advantage is now made available for larger drive powers over 250 kW with Kaeser's new FSD series of rotary screw compressors. The radial draws in ambient air directly through the cooler without being pre-warmed to ensure optimum cooling performance. FSD compressors can be used in ambient temperatures as high as + 45°C. All FSD models are also optionally available as water-cooled versions.

In every model, the thermostat-controlled radial fan for fluid cooling helps achieve further energy savings. It is integrated into Kaeser's Electronic Thermo Management (ETM) system, which is another significant innovation in the new FSD series.

ETM regulates oil temperature to ensure a safe and consistent differential from the dew point temperature, thereby avoiding unnecessarily high compressed air discharge temperatures and leading to additional energy savings. With the heat recovery option, a second ETM system assures optimised and even more efficient usage of the available heat energy.

This optimised efficiency results from the newly refined screw compressor blocks equipped with high efficiency and flow optimised Sigma Profile rotors. The Kaeser Sigma Profile achieves power savings of up to 15 percent compared with conventional screw compressor block rotor profiles.

The screw compressor block is directly driven by an energy-saving IE4 super premium efficiency motor that operates at a low speed of 1490 rpm. Direct drive not only eliminates the transmission losses associated with gear drive, but also reduces energy consumption, maintenance requirement and sound levels.

The new FSD series rotary screw compressors are service friendly, with excellent accessibility to all maintenance components resulting in ease of maintenance, reduced operating costs and increased availability. The user-friendly Sigma Control 2 compressor controller provides additional energy savings, reduced maintenance requirement, as well as improved operational reliability and compressor availability by dynamically adjusting the flow rate to match actual compressed air demand.

The FSD.3 series rotary screw compressors are available air- or water- cooled, with drive power 250 & 315 kW, working pressures 7 to 15 bar and free air deliveries from 29.2 to 58 m³/min. They



KAESER FSD compressor.

are available as a standard machine fixed speed machine or with Sigma Frequency Control. For more information visit www.kaeser.com.au or phone 1800 641 611.

NON-CONTACTING RADAR LEVEL TRANSMITTER

At a time when experienced personnel are retiring and processes are being run closer to their capacity, Emerson Automation Solutions has launched a new non-contacting radar transmitter that helps operators increase reliability and safety. The SIL 3-capable Rosemount™ 5408 Non-Contacting Radar Level Transmitter uses enhanced technology and Human Centered Design to deliver accurate, reliable measurement and ease-of-use, supporting greater worker efficiency and plant safety.

To reduce complexity and enable less experienced workers to easily manage their level measurements for tank monitoring, process control and overflow prevention, the Rosemount 5408 has been designed to simplify operator tasks. Pictorial instructions and a highly intuitive software interface guide the operator through installation, commissioning, proof-testing, operation and maintenance. Enhanced on-board diagnostics support preventive maintenance, and provide actionable information, streamlining the troubleshooting process. The ability to perform proof-testing and site acceptance tests remotely saves time, increases worker efficiency and reduces the reliance on highly experienced staff.

“With a changing workforce demographic and increasing pressure to improve plant efficiency, companies require instrumentation that is extremely reliable and easy to implement and operate,” said Andreas Hessel, Rosemount strategic product manager, Emerson Automation Solutions. “The Rosemount 5408 takes level measurement a big step forward in both areas, offering the most advanced and simple-to-use radar available.”

With the need to run plants closer to capacity it is essential that instrumentation provides greater measurement accuracy and reliability, especially in critical overflow prevention applications. To support this, the Rosemount 5408 uses two-wire Frequency Modulated Continuous Wave (FMCW) technology that uses a continuous echo to maximize radar signal strength and produce a more robust and reliable measurement. In addition, radar-on-chip technology replaces a circuit board, thereby removing sources of EMC noise which cause signal disturbance, improving measurement accuracy and reliability.



To further enhance measurement reliability, a unique embedded power back-up removes vulnerability to intermittent power losses.

Supporting efforts to increase plant safety, the Rosemount 5408's SIL 3 capability enables it to be seamlessly integrated into a safety instrumented system. ATEX and IECEx approvals allow installation in hazardous locations.

More information at www.emerson.com/en-us/news/automation/1704-rosemount5408

BENCHMARKING URBAN WATER UTILITIES



Each year the Bureau of Meteorology (BOM) prepares a benchmarking report to support industry innovation, improved service delivery and efficiency in Australia's urban water utilities.

Covering 182 pricing and service quality indicators, the “National Performance Report 2015–16 for Urban Water Utilities” compares 86 water utilities providing services to over 20 million people across Australia.

Results show the median annual volume of residential water supplied remained consistent with previous years, increasing just 1 per cent to 182 kL per property.

Surface water remains the dominant water source in Australia, but there was a 7 per cent increase in recycled water supplied by medium-to-large utilities, including many large regional utilities and councils. This increase reflects an overall long-term trend of reduced surface water availability and a commitment to diversify supply sources in the face of growing demand.

The report provides analysis on water resources, finance, pricing, assets, health, environment and customer numbers, and commentary on how they are affected by recent climatic conditions, utility size and water source availability.

Other highlights include:

- The median typical residential bill for water and sewerage increased by 4 per cent to \$1,386 per property. While there is a long-term trend of increases, the rate of increase has been 4 per cent for the last two reporting years.
- Total capital expenditure by Australian urban water utilities has remained steady in recent years. In 2015–16 utilities spent \$3.12 billion on water supply and sewerage services, a 1 per cent (\$41 million) increase from the previous year.
- The median combined operating expenditure for water and sewerage has shown a steady increase, up 3 per cent to \$920 per property.
- The number of total complaints for water and sewerage services remains relatively low at 5 complaints per 1000 properties.



BOM Selected statistics from the 2015–16 report.

Now in its 11th year, the report is published on behalf of the regulators and lead water agencies in each State and Territory. The independent and public report helps consumers and governments decide if water sector operations are efficient and cost effective.

Discover how your water provider performed at www.bom.gov.au/water/npr/index.shtml

KWATYE AWARD

ThermoFisher
SCIENTIFIC

The Kwatye Award is an exciting opportunity for WIOA members to nominate to undertake a professional development activity, project or opportunity.

The Kwatye Award is open to all financial Individual WIOA Members. The Award funding of up to \$6,600 is available for undertaking the development activity and can be spent on:

- Course or program fees
- Texts or resource materials required
- Travel, accommodation and living expenses
- Other costs associated with the activity, project or opportunity.

Applications will be accepted from individuals or teams, provided all members of a team are individual WIOA members. An independent judging panel will review the applications and determine the Award winner.

Entries for the 2017 award close on 20 July, so visit the WIOA website, download a copy of the application form and submit it today!

The winner will be presented at the Victorian conference.



CERTIFIED OPERATORS

A special presentation was held on 11 May 2017 at the Bootawa Water Treatment Plant where the Certified Operator credentials were presented to 14 NSW water treatment operators. Following a BBQ lunch, George Wall from WIOA made the presentation to 10 operators from MidCoast Water and to four from Kempsey Shire Council. George noted that being certified is helping raise the bar for the whole industry.

Both Graham Watkins from MidCoast Water and Peter Anderson from Kempsey spoke about how proud their organisations are of their highly skilled and well trained operators. Murray Thompson, who delivered the majority of the training on behalf of North Coast TAFE, congratulated them for their professionalism and commitment to ongoing skill development.



The MidCoast Water operators.



The Kempsey operators.

FISHY TALES

A number of WIOA members consider themselves keen fisherman, so once the Weekend Seminar location at Lake Eildon was announced, it was only natural that some type of piscatorial competition would ensue.

The intrepid fishers were up early on Saturday morning (some earlier than others), dusted off their gear, visited the bait shop and headed either for the Pondage or Lake Eildon itself. Early reports indicated that new President Adrian had caught a dozen or more fish, but there was a surprising lack of evidence – too small apparently.

Mick Mahoney landed a carp from the lake near the weir wall but the other half dozen or so hunter, gatherers in the group would have been pretty hungry if they had to live off their catch. Out of desperation, a new spot was needed. Mick, Rabbit and JH found a great spot and caught two nice sized brown trout. The twenty bucks spent at the fish farm was well worth it. There were also reports of a massive trout landed (see Jamie's WE Seminar write-up), but again a lack of evidence was provided.

To everyone's surprise, and shame, Brooke Samblebe and the kids managed to land a decent sized rainbow trout AND provided photographic evidence. Better luck next time boys.



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:

Brian Johns, Kerry Jones, Thomas Anderson, Heath Matheson, Mark Johnson, Paul Neville, Richard Robinson, Joel Warnes, Arama Rapana, Erik Van Den Arend, Myrka Robichaud, Kazi Mahmud, Rohan Vernon, Stephen Dwyer, Pierre Mears, Andrew Dorman, Lincoln Fisher, Noel Hawken, Marcus Healy, Soon Bee Quiek, Mark Abela, Liam Tohill, Michel O'Briend, Elizabeth Quarrell, Katherine Reid, Mike Gallant, Sam Townrow, Robert Curtis, Josh Sligar, Layke Rossiello, Victor Little, David Lowe, Silke Andel, Stephanie Luscombe, Brian Gemmill, Ryan Joyce, Elizabeth Haeusler, Kim Falster, Kai Attree, Garth Chambers, Beau Tucker, Luke Townsend, Sean Tiernan, Ian Basham, Andrew Cole, Tiffany Rees, David Brookes, Patricia Marsden, Tony Corby, Robin Davis, Michael Blackwell, Nigel Bruce, Ben Button, Matthew Colley, Nick Cooley, Paul Dac, Chris Edwards, Jamie Flack, Dion Grace, Tony Grueber, Jason Hall, Wayne Harris, Ken Hunt, Dean Reynolds, Dale Richardson, Robert Richardson, Josh Rieper, Craig Roberts, Graeme Russell, Brett Szymanski, Hedley Thompson, Amanda White, Anthony Ruge, David Binello, Colin Gray, Bill Cuthbertson, Sebastian Newman, Duane Donnelly, Morgan Cartridge, Trusten Hahn, Shay White & Sean Sill.

New **Corporate Members** include:

Solo Water, Southern Divers, Carbon Activated, Gentrack, Ganden Engineers & Project Managers, Filtec, AVFI, pH Water Consultants, Enviro H2O, Universal Corrosion Coatings, The Tank Factory, Air Eng, HLP Controls, HyQuest Solutions, Remedy Asset Protection, Layfield Environmental Containment, East West Dive & Salvage, Total Hydrographic, Dredging Solutions & Clearpond.

ROYCE MEMBERS DRAW

Congratulations to **Sylvain Momo** on being the lucky winner of a \$1,000 travel voucher, just for being a member of WIOA.

Sylvain is a Graduate Chemical Engineer who has worked as a process Technician for a couple of companies that has helped him familiarise with Australia's corporate culture. Having recently returned from Cameroon where he volunteered as a project coordinator for a water bore drilling program in rural areas, he is currently looking for opportunities to get his hands dirty with water treatment and wastewater treatment projects. If you are in need of an extra pair of hands and would like to contact Sylvain, contact Craig at the WIOA office and we can put you in touch.

With generous support from Royce Water Technologies, the name of one individual member is drawn from the barrel at our NSW conference and that person receives this fantastic prize. Another good reason to maintain your WIOA membership.



Lucky Members Draw Winner - Sylvain (L) with Tim Curtis from Royce Water Technologies.

COMING EVENTS

- 13 July** Operations Interest Day & Ixom South Australian Water Taste Test, Adelaide
- 2 August** Water Interest Day & Ixom Tasmanian Water Taste Test, Launceston
- 6 September** Ixom 2017 Victorian Water Taste Test, Bendigo
- 18 October** National Taste Test Grand Final, Tasmania

2017 Conference and Exhibitions

- 7 & 8 June** 42nd WIOA Queensland Water Industry Operations Conference & Exhibition, Logan
- 6 & 7 September** 80th WIOA Victorian Water Industry Operations Conference & Exhibition, Bendigo

2017 Committee

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NEXT EDITION

Article Contribution Deadline for the next edition is 7 July 2017

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