

OPERATOR

November 2014 Edition



Inside

From the EO's Desk	2
Russell Mack – Life Membership	3
Profile Of A Member	4
Newest Idiots Member	5
Victorian Conference Wrap Up	6-7
Victorian Conference Reflections	8
Punt Worked Out Grate	9
Victorian Operator of the Year 2014	10
Honeymoon at the WTP	10
Jacobs future looks Bright	11
Activated Sludge Book Launched	11
Birds Eye View	12-13
VIC Charity Golf Day	14
WIOA joins Ice Bucket Challenge	15
Tassie Taste Test and Interest Day	16
Leongatha's Water Voted Best	17
Floating Mattresses	17
NSW Water Interest Day	18
Victorian Interest Day – Wurdee Boluc	18
Veolia operators go on tour	19
Corporate Member News	20
Distillery Creek WTP Replacement	22
WaterAid News	23
New Members	24



The Activated Sludge book authors – Ken, Peter and Kay. More on page 11.

WIOA's newest Life Member, Russell Mack. Read about Russell on page 3.



One of WIOA's 20 year members Dick Shaw with Chairman Jim Martin. Details on page 4.

Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

FROM THE EO'S DESK

Welcome to the jam-packed November edition of Operator and a big thank you is extended to the many WIOA Members who have contributed material for this edition.

WIOA's membership has recently hit 2200 for the first time and it continues to grow each year. Having more people joining and involved makes the association stronger and more relevant for all of our members, but remember we do need your contribution.

WIOA's biggest annual event, the Victorian Water Industry Conference and Exhibition was held in Bendigo in September. It was very strongly supported with attendee numbers at close to record levels. There is a complete wrap up on the event including all the very deserving award winners later in this edition. We have received lots of comments from attendees and exhibitors and a selection of these is also included.

As it brings so many people together, the Victorian conference is an ideal place to recognise those members who contribute "above and beyond" to the Association. At the Awards Dinner, we took the opportunity to award only the sixth Life Membership in our 41 year history to current President, Russell Mack. Apart from being the only member keen (or silly) enough to have put his hand up for two separate stints as President, Russell is one of those friendly, nurturing, astute, fun, and caring types that makes our organisation what it is. It is a well deserved honour for Russell and we have showcased just some of his contribution to WIOA and the water industry on Page 3.

The other WIOA Member to be recognised at the conference for his significant contribution was Peter Mosse. As one of the primary authors and key driver of our latest book – the Practical Guide to the Operations and Optimisation of Activated Sludge Plants, we convinced Peter to attend the President's Dinner on the Tuesday evening so we could do an official book launch. After introducing and recognising all the book authors present including Peter, Kaye White and Richard Brice, we then took the opportunity to embarrass Peter a bit more by inducting him as an IDIOTS member. More about Peter and his induction is also included later.

For many years, WIOA members and award winners from around Australia have enjoyed our annual trip to New Zealand to tour their water and wastewater facilities and attend the WIOG conference. There has been a reciprocal tour on offer for the Kiwis to this side of the ditch, but it has usually been limited to a couple of days either side of the Victorian conference. This year, with the support of Wannon Water, Anthony Evans was able to jump into the driver's seat of the tour bus and very capably looked after the Kiwis for just over a week. Our very sincere thanks are extended to Anthony, Wannon Water and the operators from Melbourne Water, Barwon Water, Gippsland Water, Veolia Water, Goulburn Valley Water and Yarra Valley Water for showing the touring party around your facilities. The tour made a great impression going by the comments from the Kiwi attendees in their NZ newsletter Clarifier. A copy can be downloaded from www.wiog.org.nz/ if you are interested

The WIOA Advisory Committees have been very active staging interest days recently. Interest Days and site tours have been held in Launceston in Tasmania, Port Macquarie in NSW, Oatlands in Tasmania and at Wurdee Boluc (Geelong) in Victoria. Reports and photos from some of these days are included. There are more events planned in November in Young

in NSW and at the Tugun Desalination plant on the Gold Coast. We'll report on these next year.

The 2015 conference venues have been finalised. The NSW event will be held in Orange again from 24-26 March and the technical program for this event is coming together very well. The Queensland conference will be held in Toowoomba from 2-4 June and the Victorian event will be in Bendigo again from 1-3 September. To make all these events successful requires input from you - our members.

WIOA has a long history of raising and donating funds to various charities. The Victorian golf day was staged recently with another \$3000 raised and added to the pool for distribution next year. At the Bendigo conference the whole Committee took on the Ice Bucket Challenge in support of MND Research. The Challenge has not stopped with just those present at the Victorian conference. It has now migrated to Queensland, New Zealand and other water industry organisations as well. As a result of the WIOA team dunkings, over \$1250 was recently donated to MND.

The 2014 WIOA AGM and Weekend Seminar will be held at Club Mulwala on 28 February and 1 March 2015. We look forward to a strong member turnout and we suggest you lock the dates in your diary now.

The Committee has set the Membership fees for 2015 and we advise that they will remain the same as 2014 - \$25 for Individuals and \$220 for Corporate members respectively (GST inclusive). We have sent membership fee invoices to all Members recently which are due and payable on 1st January 2015. We would appreciate a prompt payment by all members or please let us know if you don't want to remain a Member.

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 2015.

George Wall – WIOA Executive Officer

THE LIGHTER SIDE

A Couple of Dummies

At the Exhibitors Dinner at the Victorian Conference, WIOA Director Peter Tolsher and WIOA Committee Member Mark Samblebe were randomly selected from the crowd to assist the entertainer on stage. What followed was a hilarious few minutes with the guys taking the role of lifesize ventriloquist dolls. Led someone to make they comment that they always thought they were "a couple of dummies".



LIFE MEMBERSHIP – RUSSELL MACK

At the recent Victorian Conference in Bendigo WIOA presented our highest individual award to Russell Mack. In receiving the award, Russell became only the sixth ever Life Member of the Association and it was pleasing that four of the other five living Life Members were present.

A brief outline of Russell's involvement with AWWOA, WIOA and the Water Industry is as follows:

- 1986** Commenced employment in water industry.
- 1997** First elected onto AWWOA Committee
- 1998** Awarded the Actizyme Prize for Best Operator Paper at the Shepparton conference on converting chlorine installations to bulk.
- 1999** Awarded AWA – Wal Whiteside Operator of Year at the conference in Wodonga
- 1999-01** Elected Vice President
- 2001-02** Elected President
- 2001** Inaugural Member of WaterWorks editorial committee with first edition produced Dec 01.
- 2002** Instrumental in name change from AWWOA to WIOA and progression of the development of WIOA on a National basis.
- 2002-14** Member of WIOA publication review committee
- 2003-10** Re-elected as a Committee member after finishing his term as President.
- 2005** Inducted as an IDIOTS member
Instrumental in planning and organising the inaugural Operator Exchange with NZ
- 2007-09** One of 6 inaugural Directors of WIOA Ltd
- 2009** Assisted establish the museum in the new WIOA office in Shepparton
- 2011-12** Elected as Vice President
- 2011** Chaperone on WIOA tour to NZ filling in for EO in 2011 and assisting in 2013 & 14
- 2013-14** Elected as President (first member ever to do 2 full terms as President)
- 2013-14** Director of WIOA Ltd

There is rarely a WIOA event including Committee or Board Meetings, Seminars, Conferences, Interest Days, plant tours and even social occasions like the Golf Day, that Russell has missed attending, on many occasions using his own personal leave.

From the EO's perspective, no matter how busy he is, Russell always makes himself and his time available to WIOA (including out of hours).

Russell goes out of his way to provide comments, thoughts and feedback to any requests and does this in a timely and reliable manner. His responses are very constructive, well researched and helpful. Most importantly, in our meetings or where decisions are required, Russell has the gift of being able to listen to all views on a topic.

He can then guide discussions by providing insightful and relevant comments allowing an informed decision to be made.

Through his enthusiasm, commitment, energy, personal qualities and friendly nurturing nature, Russell epitomises the values our organisation aims to display and we are pleased to award him the honour of being the sixth Life Member in WIOA's 41 year history.



1. Russell receiving his certificate in Water Operations from Wal Whiteside in 1990
2. Russ doing an "informal" formal presentation at the 2008 Weekend Seminar
3. Russ in his jocks doing the car driver demo in 2006
4. Russ at the 2014 golf day
5. Four life Members in Bendigo
6. Russell and his very proud wife Heather



PROFILE OF A 20 YEAR MEMBER



Name: Graeme Beasley

Position: Waste Water Treatment

Employer & Location: Gippsland Water - Western Region, Warragul, Drouin & Neerim South.

How long have you worked in the water industry and what attracted you to it? 25 years, a job change

What do you enjoy most about your job?

Work colleagues. Being outdoors

What are the major challenges in your current role? Too many to answer.

How long have you been a IOA member? 20 years

How do you relax? Listen to music. Have a few drinks. Go out with family or friends. Go to see a live band

Where do you live and what's the best thing about it? Warragul, West Gippsland. Great part of the country to live in.

QUICK QUESTIONS

Age: 55

Nickname: Beas

Family Status: Married to Mande.

Pets: Nil

Favourite food: Like most food. But would have to say roast lamb cooked on the spit.

Least favourite food: Asparagus.

Favourite TV show: Big Bang Theory, MASH or Rockwiz

Worst TV show: Reality TV

Favourite Movie: Gran Torino (Nearly any Clint Eastwood movie)

Favourite Musical artist/s: Where do I start? Anything from Led Zeppelin & Metallica to Adele. I have a very large music collection on vinyl, CD & DVD. So whatever I'm in the mood to play. My ipod is packed with all sorts of stuff. You won't find any Country & Western in my collection.

Favourite book: The Ice Man. Confessions of a Mafia Contract Killer. Richard Kuklinski was one very bent man

Favourite team: Richmond or I support anyone that plays Collingwood.

Ambition in life: Live your life. You're here for a short time not a long time.

Hobbies: Collect Bundaberg Rum memorabilia. Collect Peter Brock memorabilia, have since the 70's. Collect music on vinyl, CD & DVD. Research the history of Gallipoli.

Best Trait: Always helping people

Worst Trait: Call a spade a spade. Gets me into trouble sometimes

Four people to invite to dinner: My wife, Peter Cosgrove, Craig Lowndes and Friends.

20 YEAR MEMBERS

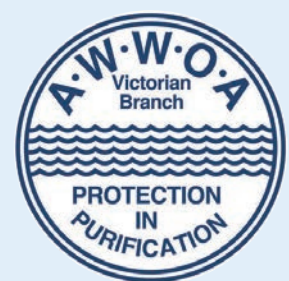
Whilst discussing the 40th Anniversary of the formation of WIOA in 2013, someone asked a fairly innocent question – "has anyone been a member for the whole 40 years, and if not, who has been a member for the longest consecutive time"? Unfortunately, being able to reliably track history was probably not that important to the voluntary Secretary's in the non-computer age of the 1970's to mid 1990's. The records just did not exist or there were large gaps.

WIOA was able to reconstruct our full membership register back to 1993. In doing this, we discovered 26 individuals who have been a member for 20 or more consecutive years along with one Corporate Member. The Committee decided to provide a 20 year Membership lapel pin to everyone achieving this milestone from now on.

The first recipients of the pin as individuals are: Chris Andrew, Graeme Beasley, Ron Bergmeier, Derek Braden, Mick Cook, Anthony Davies, Bob Eden, Malcolm Farnham, Stan Franzi, Richard Greenhough, John Harris, Stuart Harris, Stephen Holland, Richard Kreuzer, Russell Mack, Len Monti, David Reyne, Alex Ross, Richard Shaw, Leigh Strange, Graham Thomson, Chris Tuckett, Barry Waddell, George Wall, John Ware, Neville Whittaker and the Water Industry Training Centre as the Corporate Member.

We do know that Ron Bergmeier has a new member certificate dated 1985 and there may be others who have been a member for as long or longer. If any of the others on the list know exactly when you joined, we'd love to hear from you.

We reckon that the only person likely to have been a member (or Life Member) for the entire period that we have been in existence is Stan Franzi.



NEWEST IDIOTS MEMBER

At the Bendigo conference, Peter Mosse was Inducted as a Delegate of the Inextricably Obstructed Tap Society and became the 28th WIOA Member to join the IDIOTS fold. In presenting the award, John Day did a spiel on Peter and outlined his outstanding service to WIOA over many years.



John Day presenting the pin and trophy to Peter

Peter has been a long term supporter of WIOA and has been a very active member for nearly 15 years.

In 2001, Peter approached the Committee with the idea of creating a Technical Journal so that we could help communicate the good work that operators were doing in the field right around the country. The Committee agreed and WaterWorks was born, with Peter as the editor and George & Russell on the editorial team.

After a number of discussions with AWA and the publisher, the first edition was produced in December 2001 and two editions have been produced each year ever since. Peter has sourced and edited much of the content himself, as well as writing a number of editorial comments over the years. Some of the editorials have challenged the status quo and some have assisted drive operational changes such as the introduction of certification in Victoria.

As if one big idea wasn't enough, Peter came back to the Committee in November 2005 with another suggestion. By this time, Peter had left Gippsland Water, was self employed as a consultant, and was doing lots of work with operators to optimise their water and wastewater plants. Peter observed that there was a real need for some practical guidance books for water treatment operators. Again, the Committee agreed with his idea and the series of 5 Practical Guides to Water Treatment were developed between 2006 and 2009, many with Peter as a primary author.

This project has now moved over to wastewater topics and again Peter is very involved in the production of these books with the Activated Sludge book launched at the Victorian conference.

In 2004, again with Peter's help, WIOA delivered the first of our one day technical seminars covering the operation of Distribution systems. The topics covered by the seminars has been progressively expanded and we now have 10 different seminars which have been delivered at sites all around the country. The Distribution Seminar is by far the most popular and it has been delivered 25 times with more than 1000 operators hearing the good message.

In view of the amount of behind the scenes work Peter was doing on WIOA's behalf, the Committee appointed him to the honorary position of WIOA Technical Advisor in February 2007, an appointment he still holds today. In this role, Peter has been a great sounding board for the staff and they often forward him

technical issues to deal with if they don't know the answer.

Peter has also attended many of the WIOA conferences, including some outside Victoria and has delivered technical papers at a number of them.

Throughout his time as a consultant, we know Peter has been actively promoting the value of being involved with WIOA to numerous organisations and individuals right around the country. There is no doubt that some of the recent growth in membership is a direct result of Peter's introduction of WIOA to these potential members.

WIOA now holds a very strong technical reputation in the water industry Australia wide through WaterWorks, the Practical Guides and the training seminars. Much of this standing comes directly from Peter's involvement and we hope that he will continue helping us to raise the bar for many years to come.

Like all IDIOTS before him, Peter was set a challenge to demonstrate his suitability for receiving the award. For the record, Peter is a keen diver and instructor (underwater version) as well as an archery fanatic where he is also an instructor. His main winter passion is snow skiing which he does whenever he gets a free moment.

To undertake his challenge, Peter was adorned in ski pants, beanie, flippers and a blacked out dive mask. Other IDIOTS strategically placed around the room with duck whistles, were the target for Peter to hit with arrows from his mini crossbow.



Peter in all the gear shooting ducks

Doing it by sound only, he got close a couple of times and fortunately, no innocent bystanders were shot in the process!

Peter undertook the challenge with a heap of flair and enthusiasm and I'm sure you will all agree, Peter is a very deserving recipient of the IDIOTS award.

MEMBERS PRIZE

The lucky winner of the 2014 WIOA members draw (sponsored by Royce Water Technologies) was Clint Szlag from Banana Shire Council. Clint won a \$1,000 travel voucher that we are sure will be put to good use.

Rod Wellings from Royce Water Technologies caught up with a very happy and appreciative Clint recently and handed over the travel voucher. Royce is proud to support the operational people in the water industry. They have confirmed their support for the award for another year and look forward to providing another great prize to a Member in March 2015.



Clint Szlag from Banana Shire (r) with Rod Wellings from Royce

VICTORIAN CONFERENCE WRAP UP

A total of 1,389 people attended the 77th Annual WIOA conference in Bendigo held on 3 & 4 September 2014. The conference was opened by Peter Quinn representing WaterAid. Peter introduced attendees to some of the projects being undertaking by WaterAid to achieve their vision of a world where everyone has access to safe water and sanitation.

The keynote presentation was delivered by Stewart Kreltshheim from CFA Victoria. Stewart has presented at our NSW conference in Orange earlier in the year and was invited back so more of our members could hear his truly amazing presentation on the lessons in leadership from Kokoda to Kilmore.



Stewart Kreltshheim presenting the Keynote Address

Over thirty platform and poster presentations were delivered over the two days and were very well received. The presentations were extremely relevant as they provided some great insight into options to manage a variety of operational issues.

The event concluded with the official awards ceremony, which saw Colin Mynott from South East Water recognised with the major award, the Wal Whiteside - Victorian Operator of the Year. South Gippsland Water won the award for the Best Tasting Water in Victoria for 2014.



AWARD WINNERS

Victorian Operator of the Year – sponsored by AWA

Colin Mynott, South East Water

Victorian Young Operator of the Year – sponsored by IWA

Jacob Bright, South Gippsland Water

Best Paper by an Operator – sponsored by Ecolab

1st Steven Newham, Goulburn Valley Water

2nd Neville Whittaker, Goulburn Valley Water

3rd Andrew Barnett, Water Infrastructure Group

Best Paper Overall – sponsored by Iwaki Pumps Australia

Alister Laidlaw, North East Water

Best Poster – sponsored by Water Industry Training Centre

1st Aaron Mitchell, Wannon Water

2nd Stephen Burns, GWM Water

3rd Russell Sunderland, Goulburn Valley Water

Charity

Host corporations, GWM Water and Southern Rural Water both chose Water Aid to be the recipient of the WIOA charity donation and cheque for \$3500 was presented to this worthy cause.

Best Exhibition Display – sponsored by WME

Fluidquip

Orica Victorian Water Taste Test

South Gippsland Water

Orica Victorian Water Taste Test Finalists

South Gippsland Water

Gippsland Water

North East Water

Kwatye Prize – sponsored by Thermo Fisher Scientific

Michael Fawcett, South Gippsland Water



South Gippsland Water MD Phillippe du Plessis (R) accepts the Orica Victorian Water Taste Test trophy from George Lech



Geoff Frost (representing the AWA) announcing the 2014 Operator of the Year, Colin Mynott from South East Water



Victorian Young Operator of the Year Jacob Bright (R) from South Gippsland Water with Peter Quinn (representing IWA Vic)



Alex Maderasi (L) congratulates Steven Newham from Goulburn Valley Water, winner of the Best Operator Paper



Alister Laidlaw (L) from North East Water winner of the Hepburn & Iwaki Prize for the Best Paper Overall, with Sulio from Iwaki Pumps



Aaron Mitchell (L) from Wannon Water, winner of the Best Operator Poster, being congratulated by John Park from the WITC



The Fluidquip team, winners of the Ron Bergmeier Award for best exhibition site

VICTORIAN CONFERENCE REFLECTIONS

POSTER PRESENTER

Three things that benefited me from attending Bendigo are:

1. Seeing new products which can improve our standard of work and talking to suppliers about these products.
2. Presenting the poster! I enjoyed the experience of public speaking and getting the chance to share new ideas with a broader audience.
3. I really enjoyed the talk on leadership from Stewart Kreltzhheim from the CFA at the opening of the event."

Russell Sunderland – Goulburn Valley Water



PAPER PRESENTER & OVERSEAS DELEGATE

After winning the best operator paper at the NZ WIOG conference, I was fortunate to be given the opportunity to attend the tour and Victorian conference. One presentation I will not forget was by Stewart Kreltzhheim



John Beale presenting his paper

talking about his many years with the fire service, both good and bad, including 'Black Friday'. A very inspirational and moving presentation.

Eleven technical papers were given on Wednesday and a similar number on Thursday and all were of excellent quality. We enjoyed the exhibitors' dinner on the Wednesday night and being entertained by a real live puppet show.

I presented on Thursday with a good number in the audience including my NZ touring groupies. The rest of the afternoon was spent checking out the Expo with over 180 sites and 137 companies. The total number of attendees was very impressive. That afternoon I was volunteered as a poster paper judge and I found this to be very interesting. That night we attended a great Conference awards dinner with congratulations to all and especially to WIOA President, Russell Mack, who was awarded Life Membership.

I would just like to thank WIOG, WIOA and Merck for giving me the opportunity to join the tour group and attend a great Conference and Expo.

John Beale – Waikato District Council NZ

DELEGATES

Goulburn Valley Water has been a strong supporter of the WIOA conference for many years and we make sure that we get as many operators as possible to attend the event annually either as delegates or day visitors. Apart from networking with other operators within the water industry and the inspection of the exhibition sites, one of the main purposes of attending the conference is to assist the development of our own operators.



Neville Whittaker presenting his paper

It was a pleasure to see two of our staff present excellent posters on some of the initiatives we have introduced recently. Both were winners in my eyes and they did themselves, our team and GV Water proud.

This conference relies heavily on the input of the operators and I can only strongly suggest to all operators that they continue to support this conference with posters and papers on the work they are carrying out during the year. This gives ideas to other operators, improves the value of attending the conference in general, plus it is a great personal development tool as it gets people out of their comfort zones.

For the first time, this year we asked each of our staff, whether attending the full conference or just a day visit, to submit their learning or reasons for attending the conference. We received some excellent feedback on great ideas or products to follow up which may help our organisation in the future.

I would like to congratulate the WIOA staff, board, and volunteers for arranging and conducting a fabulous conference which allows operators to develop and network. Well done and keep up the extremely high standard into the future.

Neville Whittaker – Goulburn Valley Water



EXHIBITORS

The WIOA Vic conference and trade show is by far the best value event of its kind within the water industry of Australia to date. Bar none. The organisers have recognised and stick to a very simple formula, keep the event affordable, provide trade exhibitors with maximum opportunity to showcase their products and interact with the attending delegates. The tone is light and friendly and the delegates obviously do not feel pressurised by the tradies. Knowledge interchange and interaction is the key ingredient, long may it continue.

Peter Diprose – OCS (Australia)

This show was the best for leads over the past 9 years with specific follow up on projects required.



Alan McKenzie – Parchem Construction Supplies

Once again the exhibition provided a forum to meet the people who are at the coal face of Water Industry operations.

Noel McKay – Jonoco

The WIOA Conference and Exhibition is a testament to what a great industry we are involved in. The hard working volunteers of WIOA always present a great conference and exhibition every year. Participants in the paper and poster presentation deliver tremendously interesting and informative information they share with our industry. All the trade exhibitors present great looking and informative booths. All of these combined consistently result in positive comments from delegates and visitors alike. "Another job well done for 2014"

Arthur Kokolekos – Royce Water Technologies

VISITORS

"I enjoyed my first trip to the WIOA conference in Bendigo on Thursday. I spoke to many different sales reps and learnt a little more about water treatment and wastewater. I liked the look and set up of the hydro with the valve worker that was on display and looking forward to giving it a trial if possible.

Thanks for the opportunity to attend this event.

Contributed by Julian Clarke – Goulburn Valley Water



PUNT WORKED OUT GRATE

Grate Engineering is a new Australian company, with a range of patented grate fastening devices. The WIOA Victorian exhibition constituted the launch of our Stay Grate product range, and we wanted to 'make a splash' at our debut exhibition. We also wanted to make our stand attractive to stakeholders and have some fun.

Our marketing team considered purchasing a range of small items (stubby holders, hats, pens, LED lights, calculators etc) and branding them with our logo, however the cost of such products, the fact that many Companies would be offering similar give-aways, combined with their short 'market life' and the likelihood that they would end up in landfill, led us to consider instead giving away a single large prize at WIOA, for a similar overall price.

We decided on a boat! An Australian made Quintrex 300 Punt, fitted with a Yamaha 4 HP 4 stoke motor and all freshwater safety gear. We felt the boat aligned well with the WIOA Conference and Exhibition themes of water quality and management, that many stakeholders in the water industry enjoy fishing and boating, and that the offer of winning a boat may provide a suitable 'lure' for us to engage stakeholders and discuss our product range.

The boat prize draw was open to all attendees and attracted significant interest. The prize was won by Gary Schurr from Coliban Water and we were delighted to deliver the boat to Gary the following day, and wish him and his family many happy times on the water.

Grate Engineering considers that the choice of a boat as a prize draw at the WIOA Victorian Conference and Exhibition was a successful marketing strategy. Our stand was busy, and we made significant contacts and built networks within the Water Industry, as we had hoped. Feedback on our products has been most positive. And most importantly, we all had fun and look forward to our participation in future events.

Thank you to the WIOA staff for their professional guidance and support in our first WIOA Conference and Exhibition, the team at Grate Engineering really appreciated it.

Contributed by Kerry Howard from Grate Engineering



Punt winner Gary Schurr (L) congratulated by David Bowen

VICTORIAN OPERATOR OF THE YEAR 2014

WIOA congratulates Colin Mynott, Water Operations Technician with South East Water, for being awarded the Wal Whiteside, AWA Victorian Operator of the Year Award. The award is due recognition for his contribution to the efficient operation of the water, recycled water and sewerage systems; and ensuring the safety of staff and contractors when entering South East Water assets.

Colin's current role involves working with a team of speciality Technicians that operate across Water, Sewer and Recycled Water systems in the South East Water area. The main purpose of Colin's role is to oversee the operations of South East Waters assets in the field, ensuring they are operating correctly and facilitating their maintenance and repair.

Colin started as a water maintenance operator in the Melbourne & Metropolitan Board of Works in 1978. He has worked at the Board of Works, Melbourne Water and South East Water for a total of 36 years.

Colin has an excellent knowledge in SCADA monitoring and he has contributed to improving the information of the SCADA pages and alarms. For example he has added information on Sewer PS SCADA pages such as spill levels, holding times and set up appropriate alarms for water network SCADA pages. Colin is also a member of, and closely works with the SCADA Improvement Group at SEW. He is the key driver for reducing alarms from the alarm page, especially the repetitive alarms, by issuing jobs to relevant contractors and advising them how to fix them.

Colin is always ready to help others and he is not afraid to express his concerns about any decision if he thinks they are not the best use of SEW resources. He is a person who cares about the future of the organisation and cares about the customers.

Colin possesses many leadership qualities; he is a great listener, innovative and is always ready with a solution. He takes a leadership role in SCADA monitoring & rectifying failures based on SCADA trends & alarms. He adapts well to the changing environment at the work place and with new technology.



HONEYMOON AT THE WTP



A few months ago, my partner and I decided we needed a holiday and what better place to go than the Sunshine Coast! Karyn had never been out of NZ so it was very exciting.

We stayed at Coolum Beach for seven nights, and the highlight of our trip was getting married at Point Perry. Our celebrant nabbed a couple of innocent bystanders as witnesses and the deed was done.

Dinner that night was great and it was a good opportunity to inform the new wife that I had organised a tour of the Noosa WTP. Being an avid water treatment operator how could you go to another country without checking out the local plant? The look of "what the hell do you mean" quickly came over her face, but after I managed to convince her that she may even be interested, Karyn calmed down and all was good.

Being a member of WIOG in NZ and knowing about WIOA I had flicked an email off to try and get some contact details before we left for our holiday. George Wall from WIOA soon had all the information I needed. Several emails between Seqwater management soon had me in contact with Martin Melville, the Operations Supervisor for Sunshine Coast and a tour date and time was organised.

We were made very welcome by all the guys at the plant and Martin showed us around and answered all those questions from an excited tourist. It was a good opportunity to see how others are running their plants, what gear is used and find out the issues they face. I have to give Martin and his team credit for the clean, tidy and impressive plant they all work at.

So a big thank you to George at WIOA for your assistance and also to Martin at the Noosa WTP for making another one of our days memorable.

Adam and Karyn Jamieson, Levin, NZ

THE LIGHTER SIDE

A Politician was seated next to a little girl on the airplane leaving from Canberra when he turned to her and said, 'Let's talk. I've heard that flights go quicker if you strike up a conversation with your fellow passenger.'

The little girl, who had just opened her book, closed it slowly and said to the total stranger, 'What would you like to talk about?'

'Oh, I don't know,' said the Politician. 'How about global warming or universal health care', and he smiles smugly.

'OK' she said. 'Those could be interesting topics. But let me ask you a question first.'

A horse, a cow, and a deer all eat the same stuff - grass. Yet a deer excretes little pellets, while a cow turns out a flat patty, and a horse produces clumps of dried grass. Why do you suppose that is?'

The Politician, visibly surprised by the little girl's intelligence, thinks about it and says, 'Hmmm, I have no idea ...'

To which the little girl replies, 'Do you really feel qualified to discuss global warming or universal health care when you don't know sh*t?'

JACOBS FUTURE LOOKS BRIGHT



Jacob Bright from South Gippsland Water was announced as the 2014 IWA Young Victorian Operator of the Year at the Bendigo conference.

Jacob commenced employment at South Gippsland Water at the age of 19 in the Corporation's Water Treatment Operations Traineeship Program.

As part of this two year program, Jacob was required to complete a Certificate III in Water Industry Operations and participate in identified on-the-job work experience. Due to his ability to understand and implement water treatment principles, Jacob was able to progress with a level of supervision and responsibility beyond South Gippsland Water's initial expectations. This was demonstrated in the successful completion of the Certificate III requirement and then promotion to a full-time Water Treatment Operator role prior to the completion of the traineeship program.

Additionally, during his 2.5 years of employment at South Gippsland Water, Jacob has successfully operated and maintained three full treatment water treatment plants. This includes treatment process steps such as pre and post pH correction, manganese oxidation, clarification, filtration, primary and secondary chlorine disinfection and UV disinfection. The water treatment plants that Jacob has successfully operated are also located in high risk catchments where challenges to plant performance are common. The successful manner in which Jacob has conducted water treatment operations tasks was confirmed following compliance with the requirements of 2012/13 SDWA regulatory audit.



During his employment, Jacob has contributed to the optimisation of treatment water plant operations. Specifically, as part of SGW's filter optimisation program, Jacob has undertaken filter inspections, the installation and implementation of filter to waste processes and the management of filter operations including profiling, monitoring etc. Whilst maintaining a high level of treatment plant performance, Jacob has also been involved in undertaking plant maintenance, participated in after-hours roster duties and demonstrated a strong commitment to OHS by undertaking such activities in a safe manner.

His commitment to his work and developing his knowledge is further demonstrated in his desire to complete studies towards a Certificate IV in Water Industry Operations in his own personal time.

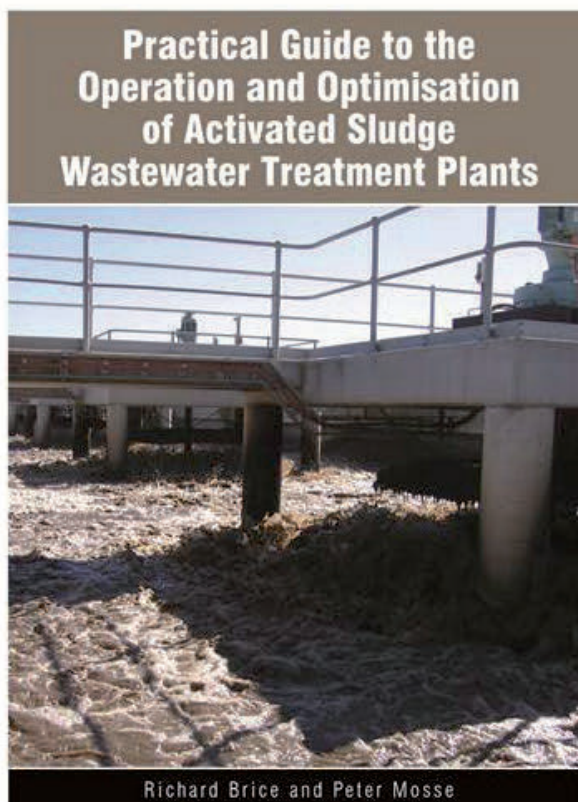
For winning the award, Jacob receives a Perpetual trophy, a smaller trophy to keep and the best bit – IWA Victoria provides an all expenses paid trip to join the WIOA delegation on their tour to New Zealand in May next year. The trip is valued at \$2000.

ACTIVATED SLUDGE BOOK LAUNCHED

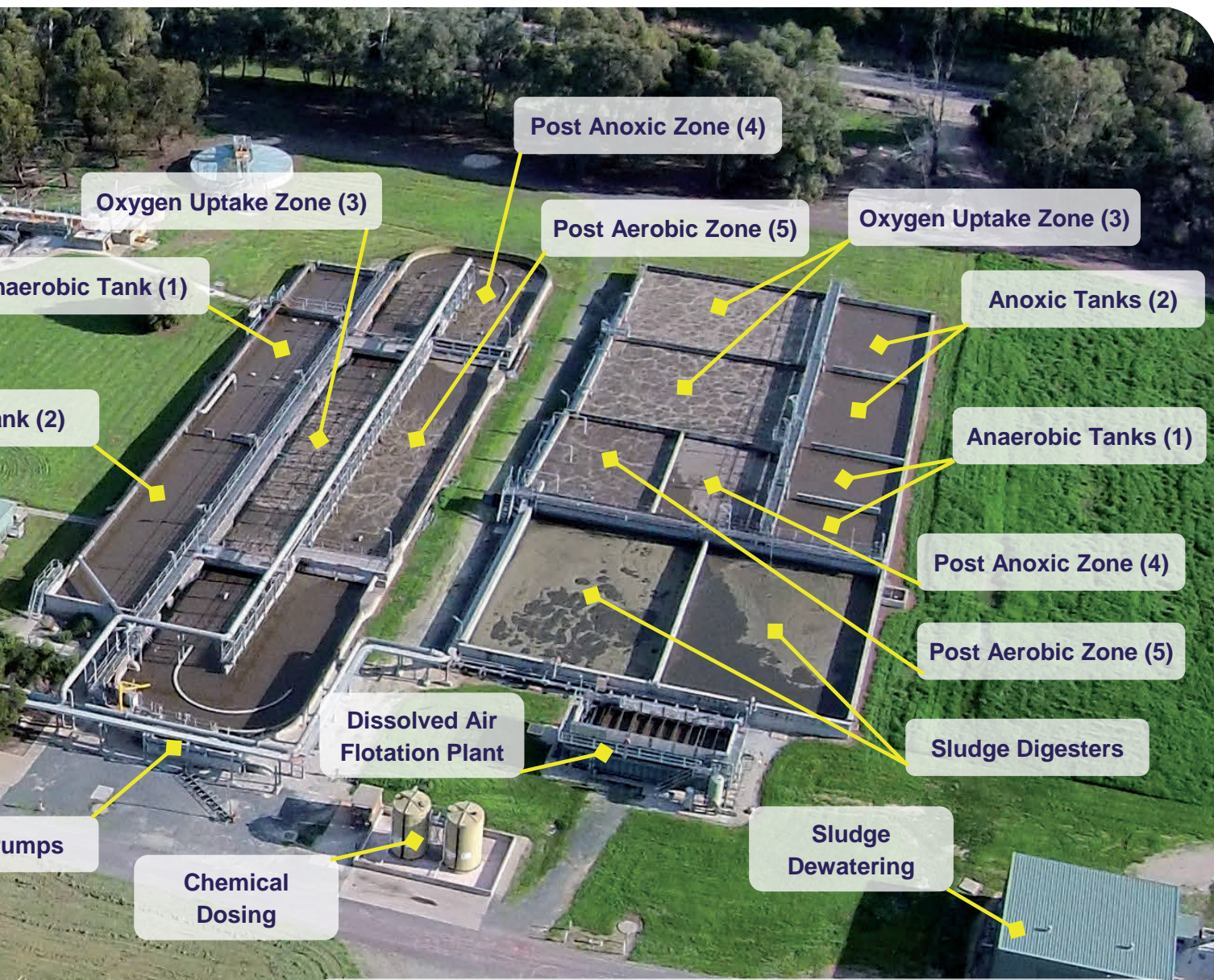
The second book in WIOA's wastewater series, the **Practical Guide to the Operation and Optimisation of Activated Sludge Plants** was launched at the recent Bendigo conference. A number of authors including Peter Mosse, Richard Brice, Ken Hartley, Kay White and Rob Dexter were all valued contributors to various chapters in the book. Peter Mosse did an outstanding job coordinating all the contributions and rewriting a lot of the content to make sure the book was readable and that the content flowed.

We also thank John Messenger who took on the job principal technical reviewer and a number of experienced WIOA members from various parts of the country helped review and sanity check the document.

The 188 page book is bursting with all the information an activated sludge treatment plant operator would need and is available at \$44 (including GST) plus postage. An order form can be downloaded from the website at www.wioa.org.au/publications/







North East Water

Birds Eye View

West Wodonga Wastewater Treatment Plant

West Wodonga Wastewater Treatment Plant is located adjacent to the Murray River in Wodonga, North-East Victoria. The WWTP was constructed in 1986 with a University of Cape Town BNR process before being upgraded to a 5-stage Bardenpho process in 2003 to increase capacity. The WWTP provides biological nutrient reduction (BNR) in the form of bio-reactors with dissolved air flotation (DAF) to treat up to 20 ML/day of domestic, commercial and industrial influent. Treated effluent is filtered and disinfected before being discharged to the Murray River or pumped to Wodonga for urban reuse at sportsgrounds and by industry.

VIC CHARITY GOLF DAY - A COMPETITORS VIEW

Endress+Hauser **EH**
People for Process Automation



Another warm but perfect day greeted us this year at Euroa Golf Club for the annual WIOA Charity Golf Event with a healthy field of 35 players champing at the bit to show off their prowess on the golf course.

Personally I reckoned I had prowess to burn and brought my 'A' game as I played my 'B' game the day before at my local club. I now realise I have a 'C' game! Whoda thunk? I might have to leave my local club as you may remember Groucho Marx once wrote to the Friars Club of New York and said "Please accept my resignation, I don't want to belong to any club that will accept me as a member." But I digress.

I doubt there were any Groucho's at Euroa as we marched off to our starting tee, full of hope and a pocket full of Mulligan Tickets! A fund raising idea from left field where we could purchase a couple of Mulligans to use, just in case there was the remote possibility that a shot would be duffed. Unfortunately only 2 allowed per person, I wanted a dozen! My golf was more representative from my cricket days, hook, pull and cut! My best drive was from Melbourne to Euroa! But at least I can walk to the first tee, unencumbered by talent, and have a good day.

And a good day it was. Catching up with friends and making new ones isn't a bad way to spend a Sunday arvo, all the while raising money for many good causes. The day raised over \$3,000 that will be donated to worthy charities at the WIOA conferences in 2015.

The Tradies Cup was presented to the leading score from the teams representing sponsors. This year it was won by the team from Odour Management, Cam Waddell, Paul Elliot and Glenn Alford. Overall the Odour Management team finished in third position behind the best score of the day that was had by Jordan Hubber, Andrew Barnett (Water Infrastructure Group) and Tony Handakas (Evoqua Water Technologies) who just pipped the North East Water boys Peter Tolsher, Kevin Freeman and Jason Mullins.

Thanks to WIOA and the Euroa Golf club for presenting a very enjoyable day, which the Water Infrastructure Group and Endress + Hauser were proud to co-sponsor.

Contributed by David Aitken – Water Infrastructure Group



The Tradies Cup won by the Odour Management team of Cameron Waddell, Paul Elliott & Glenn Alford



Winners overall, the team of Tony Handakas, Jordan Hubber & Andrew Barnett



The PAAS sponsored drinks cart got a good workout



All the golf day participants

A LONG SHOT!

Former WIOA President, John Harris took up the challenge to go after the longest drive on the 13th hole and gave his driver a kiss for good luck before teeing off.



John and the lucky driver

After an almighty swing, and amid lots of laughter from his team mates, John proceeded to pick up his ball following his 40 metre drive into the trees, and joined his teammates further down the fairway. He was only 250 metres behind the eventual winner.



John collecting his uncooperative ball

QLD CHARITY DONATION

Members would recall that at the 2014 Queensland conference, WIOA pledged \$1000 to the Breast Cancer Network Australia in support of the Queensland Operator of the Year, Julie Smith. After sending off our donation, we received a nice framed memento which is now proudly hanging on the wall of the WIOA office.

We contacted Julie to find out how her treatments were going. She replied:

"Hi Guys. I had my last chemo on the 19th Sept and I am on tablets now to manage the secondary cancer in my leg. If it flares up it will be more chemo. I go for a scan in Dec and another doctor's visit. I think it will be three monthly check-ups. But I am feeling fine just a bit tired."



WIOA JOINS ICE BUCKET CHALLENGE CRAZE

WIOA COO Craig Mathisen was dubbed in to undertake the ice bucket challenge by the team at MB+B Accounting and he agreed to participate. George & Sherryn got the honour of tipping a rather large tub of iced water on Craig in front of the WIOA office in Shepparton with the process caught on video.



George & Sherryn icing Craig

Craig then nominated all the Committee and Directors of WIOA to undertake the challenge and to make sure they couldn't weasel out, we played the challenge video on the big screen at the conference exhibitors dinner. An appointment with the ice man was duly made for 3pm Thursday with everyone at the conference invited along to be witnesses. EO George and Chairman Jim had another important meeting at the same time so snuck off earlier in the day and took up the challenge.



George & Jim getting dunked.

In front of a very sizable crowd at the afternoon tea break, each of the Committee and Directors progressively dunked one another and then nominated someone else to keep the challenge going. Marcus Boyd, a Committee member from Toowoomba, has also undertaken the challenge.



The Committee & Directors at the conference.

For anyone interested in a good laugh, if you google "WIOA Ice Bucket Challenge" you'll find all the videos.

ABOUT ALS/MND

Motor neurone disease (MND) is the name given to a group of diseases in which the nerve cells (neurones) controlling the muscles that enable us to move, speak, breathe and swallow undergo degeneration and die. MND can be classified into four main types depending on the pattern of motor neurone involvement and the part of the body where the symptoms begin. Amyotrophic Lateral Sclerosis (ALS) is the most common form of MND.

To date over \$2,500,000 has been raised for MND research and to support people living with MND in Australia through the ice bucket challenge. We thank everyone who has got involved in this incredible awareness and fund raising activity for helping to spread the word.

TASSIE TASTE TEST AND INTEREST DAY

The second staging of the Orica Tasmanian Water Taste Test was held in Launceston in August in conjunction with a Water Interest Day organised by the WIOA Tasmanian Advisory Committee.

The Interest Day was attended by almost 50 TasWater operations staff and included an extensive refresher training session on chemicals presented by George Lech from Orica. The session covered a range of chemicals including acids, alkalis and Chlorine gas and described the characteristics, properties, safe storage and handling, emergency response and PPE required. This session was very informative and very professionally presented.



George Lech from Orica presenting

After a hearty lunch, all the attendees including a few extra TasWater office staff who had come for a look, were allocated to four tables. The 15 water samples provided from around the State were randomly split into heats using the four tables. After a blind tasting of all the samples for their table, each person voted for their preferred sample. The winner from each table went through to the grand final. The grand finalists came from Mt Leslie, Oatlands, Bicheno and Waratah.



The heats of the Taste Test

In the grand final, a panel of dignitaries tasted each of the four samples and then also cast their votes. While the votes were being collated, Lester Little from TasWater did a presentation on his PASS award winning invention and provided a summary of his prize which was attending the tour to New Zealand.



The grand final judges

The big announcement saw the Bicheno water supply coming out as the winner of the best tasting water in Tasmania, much to the delight of operator, Phil Tuck.

ABOUT THE BICHENO WTP

The Bicheno Water Treatment Plant is a Dissolved Air Flotation (DAF) system which is designed to treat 3ML/D. Recently a new 220ML off-stream storage dam has been constructed to drought proof the area.

Water is pumped 3km from the Apsley River to our new storage dam 1km from the WTP.

Being able to have a raw water storage that is not affected by river flood events, combined with a regular maintenance program has resulted in an increased reliability and efficiency of the water treatment plant and has enabled a consistent higher quality of raw water to be delivered to the WTP. This has in turn resulted in a better quality final product whilst using less chemicals and other inputs.



The Bicheno operators with the trophy

LEONGATHA'S WATER VOTED BEST

It's official, South Gippsland Water has the best tasting water in Victoria!

South Gippsland Water has entered the Orica Water Taste Test held at the WIOA Victorian Conference in Bendigo each year since the competition began and the Corporation has been a finalist in the past.

To select the entry to submit, the SGW Water Quality Team took samples from each of the Corporations 10 separate water supply systems. Staff then helped with their own blind water taste test to select the sample to submit to the Taste Test Competition.

This year, staff chose Leongatha's sample as being the best tasting water and it would seem that the state judges agree, with the Leongatha sample taking out the state's top honour of the best tasting water in Victoria.

Congratulations to Nik Bergman, the Leongatha Water Treatment Plant operator and the whole of the Water Treatment and Quality Team, who work tirelessly to ensure our high levels of water quality from the catchment to the customer's tap.



The South Gippsland Water Team celebrating after winning the Orica Taste Test award

**ORICA VICTORIAN
WATER TASTE TEST
– WINNERS**

2014 South Gippsland Water
2013 East Gippsland Water
2012 Coliban Water

KWATYE PRIZE 2014

Congratulations to Michael Fawcett from South Gippsland Water for being announced as the winner of the 2014 Kwatye Prize at the Victorian conference. Michael's winning project submission includes the development of an industry relevant app for portable devices such as smart phones, iphones/ ipads and windows based phones.

To be known as the Water Treatment Operator Helper, the app will contain a number of useful tools/calculations and timers for water treatment plant operators and anyone in the water industry including:

- Dose rate and plant flow
- Drop test – including dry powder, liquid and gas feed rates.
- Filter flow calculations like backwash rates, hydraulic loadings, DAF recycle rates, detention times
- and a variety of other useful parameters.

It is intended that the app will be made FREE to download.

Michael is now looking for ideas from operators on exactly what type of calculations the app should include. He even has a few gift vouchers to give away to people that provide him with good suggestions. Keep your eye out for details in other WIOA publications in the coming months for opportunities to participate and updates on the project as it proceeds.



VIC Kwatye Award winner Michael Fawcett (R) from South Gippsland Water with Jeremy Bell from Thermo Fisher Scientific

FLOATING MATTRESSES

Queensland Urban Utilities (QUU) has launched a new trial which uses floating wetlands to purify waste water at the Forest Hill Sewage Treatment Plant, near Laidley.

The Queensland-first project involves growing wetlands on specially engineered plastic mattresses, which are then floated on purpose-built lagoons.

QUU spokesperson, Michelle Cull, said it was a natural, cost effective and energy efficient solution to purifying wastewater. The roots of the plants dangle beneath the mattress drawing out nutrients such as carbon, nitrogen and phosphorus," she said.

"The floating wetland is like nature's kidney, cleansing the water by trapping sediment and removing toxins. "It's a great example of green engineering and also has the potential to reduce operational costs at the plant."

This is QUU's second trial of the floating wetlands, after a nest of turtles destroyed the pilot program last year.

"Hungry Brisbane short-necked turtles feasted on the roots hanging underwater, killing the plants. This time around, we have installed nets and meshing to protect the floating wetland, without removing the turtles from their home. So far it seems to be working - the plants are thriving and early water quality test results are promising" Ms Cull said.

The trial will run until the end of the year, and if successful could be rolled out at similar regional sewage treatment plants.

"QUU is committed to finding innovative, natural solutions to waste water treatment. We want to cater for growing populations while not only protecting the environment, but using its natural ability to our advantage."



Michelle Cull and Mike Oakey in front of the Floating mattresses

NSW WATER INTEREST DAY

A great turnout of more than 60 people came together on 23rd September at the Wauchope Water Treatment Plant for the WIOA NSW Advisory Committee's water interest day.



NSW Water Interest Day attendees

Representing our hosts, Danny Roberts from Port Macquarie-Hastings Council was the first presenter and provided attendees with an insightful look at the Hastings Water Supply scheme. Danny's passion for water quality was evident to the group as he discussed the various micro filtration plants, off creek dams and reticulation systems.

Terry Randall also from PMHC redid his award winning paper on the fluoride addition at Port Macquarie. He described routing water one way, then the other, checking fluoride levels and expecting or anticipating levels as it travels across the country side. Leyland Brothers, you got no hope to keep up here. Terry was very good in presenting the flows and processes that had to be considered, and the fact his associates were not part of a push button society, but clear thinkers and operators.

Tony Higson from Evoqua Water Technologies provided a great review of Chlorine usage. We all learn about using these materials, but rarely are we given proper insight.

The final presentation on behalf of WIOA, from Craig Mathisen covered the efforts WIOA takes to have the industry, its people, recognised for their contribution to everyday life.

After lunch, delegates had the choice of attending a tour of either the Fluoride Dosing Facility, or the Port Macquarie Wastewater Treatment works to check out the new filter screen. The fluoridation plant inspection offered a further insight into the operation of this high-quality installation, with plenty of questions from the group.



Attendees at the Port Macquarie WWTP tour

A great day, a lot of knowledge and a lot to gain. I think it is a great idea to take this the next step and group it into streams that make it value plus for each person in their vocation. A big thanks to Evoqua for providing lunch and to the hosts at Port Macquarie-Hastings Council, in particular Danny Roberts and Kim Freeman for their efforts in the successful day.

Contributed by Nick Subotsch – Peerless Industrial Systems

VICTORIAN INTEREST DAY – WURDEE BOLUC

We were up early to make the pilgrimage to Wurdee Boluc WTP for the much anticipated WIOA water interest day. Upon arrival we found that we weren't the only ones to have a long drive with WIOA members from Western Water, Goulburn Valley and Gippsland to name just a few. There were also lots of WIOA's corporate members present. It was great to have so many industry reps on site keen to learn about the treatment process.

The day started off with an overview of the excellent work the Barwon Water Operators are doing. As a result of periodic filter inspections, the boys found that the 20 steel pressure filters require the internal coating to be replaced. With the estimated cost of outsourcing the management of the project skyrocketing they decided to manage the task in-house. Not only did this allow them to save an estimated \$2M, it also meant that they could maintain a high level quality control. An example of this is the use of spacers to make sure every one of the 3,600 filter nozzles (per filter!) are perfectly level.

Peter Hillis from AECOM then discussed risk assessments and efficiency improvements at Barwon Water WTP's. He discussed the benefits of innovative technologies such as low head-loss static mixers and other interesting ideas which sparked some discussion.

After lunch the boys took us for a tour of the treatment plant. As you can imagine they don't do things by halves. Everything here is big. The WTP is fed from its name sake Wurdee Boluc Reservoir. There are 20 steel pressure filters measuring 4x14 meters, pushing out a total of up to 170ML/D. This is followed by Chlorination and Fluoridation then into a pipeline and off to Geelong. This was one of the best hydraulically designed WTP's I have seen, with almost no pumping required, with the entire plant running off the head pressure of the reservoir above.

Many thanks to Josh, Dene and David from Barwon Water and Peter from AECOM. They put on a great day. The work these guys have put into managing a major overhaul of their WTP is fantastic. On behalf of WIOA and everyone who attended, thanks for the great day and keep up the good work!

Contributed by Glenn Jeffrey – Wannon Water



Delegates listening intently



David Hamman describing the plant

VEOLIA OPERATORS GO ON TOUR

For the past few years, as part of Veolia's operator recertification and professional development, there has been a program of site tours for our operators to visit water and wastewater treatment plants around Victoria.

This year we were privileged to have the opportunity to visit facilities operated by Westernport Water, south-east of Melbourne, as well as Wannon Water in the state's South West.

WESTERNPORT WATER

In July a group of Veolia operators visited Westernport Water's Ian Bartlett Water Treatment Plant, located at the Candowie Reservoir in Almurta. This treatment plant features DAFF technology and provides drinking water to local communities, in the Western Port area from the Gurdies in the North, down to Archies Creek and across to San Remo and Phillip Island.

The tour was arranged through Jake Weir (Water Quality Officer). The tour was run by Warren Andrusyk (Water Treatment Plant Operator). Warren gave a comprehensive and accomplished tour of the water treatment plant, describing the history and features of the facility, as well as pointing out some of the unique aspects of the plant. For example, the flocculation tank features unusual paddle wheel style flocculators, powered using a chain made from nylon!

In addition to Warren's detailed knowledge of the water treatment process, Jake gave a fascinating overview of the water quality and water security challenges that Westernport Water have faced in recent years. This has included the result of drought, as well as pathogen, nutrient and organics loadings from local agriculture. Jake and Warren were also able to show us a video of the capital works undertaken to double the capacity of Candowie Reservoir to over 440ML.



Warren (in orange) points out the features of Candowie Reservoir to the Veolia team.



Kelvin Growcott (Veolia) checks out the chemical dosing upgrades at the Ian Bartlett WTP.

WANNON WATER

In August the Veolia team took a trip to Wannon Water to tour the Mortlake water recycling plant, as well as the Camperdown Water Treatment Plant. The visit was arranged through Anthony Evans (Assets & Projects Coordinator). Our first stop was the Mortlake wastewater treatment plant, which is a lagoon

system. Around three years ago a recycled water plant was built onsite by Origin Energy, to provide water to the nearby peak-load gas fired power station. The recycling plant is now operated by Wannon Water.

Ben Marsden (Senior Operator) gave the tour of the wastewater lagoons and recycled water treatment plant, which is an Osmoflo package membrane ultrafiltration process. Whilst being quite small, the recycling plant is definitely an impressive set-up and clearly no expense was spared on the development of the site and construction of the plant. The grounds are kept in immaculate condition by Ben, and he was clearly very enthusiastic about the ultrafiltration technology.

The second stop was the Camperdown Water Treatment Plant. This is another example of DAFF technology and is located in a beautiful part of Victoria, overlooking – would you believe it – a monastery!

The tour of the Camperdown plant was run by Matt Sinnott (operator). Matt was one of the first operators in Victoria to achieve certification through WIOA under the Victorian Operator Competency Best Practice Guidelines. Running a site tour for our crew contributed towards his ongoing professional development and recertification points. He was ably assisted on the tour by Bendall Chisholm (Eastern District Treatment Coordinator) and Aaron Mitchell (Operator). We finished up the tour with a fantastic BBQ lunch arranged by Anthony and an enthusiastic discussion about the upcoming WIOA Bendigo conference.



Gavin Allen (Veolia) inspects the Mortlake ultrafiltration plant.



The Veolia team, with Ben Marsden (Wannon Water) fourth from the left, at the Mortlake water recycling plant

CONCLUSION

From the perspective of the Veolia team, we have found the annual site tours to be a fantastic learning and development opportunity for our operations and process people. They are also a lot of fun and a great chance for networking with friends and colleagues in the industry.

A very big thank you to Jake and Warren at Westernport Water, as well as Anthony, Ben, Matt, Bendall and Aaron at Wannon Water for making this year's site tours so interesting and rewarding.

Contributed by Kathy Northcott – Veolia Water

WHITE PAPER ON VARIABLE SPEED WASTEWATER PUMPING

For the last 10 to 15 years, the wastewater industry has been undergoing a fundamental shift towards variable speed pumping. It's easy to understand why: the ability to adjust pump speed according to input should, in theory, spell smoother operation, energy savings and lower maintenance costs. However, operators have reported disappointing results and some have seen no benefits at all. A ground breaking, new white paper aims to explain why and provide a road map out of this mire.

"There's a lot of misunderstanding out there and also a lot of lack of understanding – basically a lack of knowledge," says Stefan Abelin, co-author of "Variable speed wastewater pumping," the white paper he presented at Singapore International Water Week in June.

Abelin has been working directly with customers, investigating why their upgrades hadn't yielded the expected cost and energy savings. "The cost of adding a variable speed pump control system, or including it with a new purchase, can be on par with the cost of the pumps, so there's a significant cost associated with it," he says. "It has the potential to give several positive benefits, but it is really important that the system is understood and engineered correctly throughout the process."

WHAT CAUSES ENERGY INEFFICIENCY?

According to the white paper, when a variable frequency drive (VFD) is installed, there are two factors that typically drag down energy efficiency: partial clogging of the impeller (due to longer run cycles and less back flush) and operation deviating from the pump's best efficiency point.

The paper gives advice for correcting these problems. But that's just the beginning of the story. After years of studying customers' applications and performing lab tests, the engineers at Xylem came to realise that getting the most out of a VFD would require checks and adjustments to a number of facets of a system.

What is ground breaking about the new white paper is that it is the first to address all of these areas. Though only 12 pages long, it is a comprehensive distillation, three years in the making, covering technical aspects of system curves, pump and motor selection, process control, electrical issues, control strategies and more.

So just as with the other findings in the white paper, Abelin and his colleagues will be working to get the word out. "It's an educational trip we're starting here," he says.

A copy of the white paper can be downloaded from the WIOA website at: www.wioa.org.au/operator_resources/tools.htm



BRISBANE BACKFLOW DEVICES

Many Brisbane suburbs are vulnerable to water inundation. Stormwater systems have been identified as high priority sites for backflow device installation across many flood prone areas. Up to 40 backflow prevention devices have been installed across 12 Brisbane stormwater systems benefiting about 1500 properties.

The largest and most challenging device required for the Brisbane City Council (BCC) Backflow program, has been installed in Milton and supplied by AWMA. The Milton gate alone is designed to protect approximately 452 local properties across Milton, Rosalie and Auchenflower, including the Milton State School.

Installing flood-prevention devices on drains and pipes is generally straight forward. The Milton Drain however, proved to be quite a challenge. The very popular bikeway and pedestrian access required isolation, as did the large trapezoidal shaped drain that extended all the way up to the bridge above. A concept report by Cardino Group proposed twin sector gates with secondary flap gates. AWMA went forth and designed:

- a 6m wide x 4m high duplex /316/2507 stainless steel dual leaf top sealing isolation penstock;
- two 2200mm duplex non return (flap) gates;
- one 2200mm 316 pedestrian gate.

The structure is subject to 7.5m bi-direction head pressure. The prepared design was subjected to third party RPEQ structural certification by GHD and designed in accordance with AS4100-1998, AS3990-1993, AS1170.0 & AS1170.2.

In June 2014 officials unveiled the Dual Leaf Penstock installed in Milton. The specialised penstock is operated via a powered actuation system, and designed to withstand 7.4m water pressure.

More information on the BCC stormwater project is available at www.brisbane.qld.gov.au/environment-waste/water/backflow.



awma
Water Control Solutions

AWMA backflow gate being lowered into position

The completed backflow system



EMERSON INTRODUCES MAGNETIC FLOWMETER FOR UTILITY APPLICATIONS

Emerson Process Management has introduced the Rosemount 8750W magnetic flowmeter for water, wastewater and utility applications. The robust, easy-to-use flowmeter helps utility operators reduce lifecycle costs and unplanned shutdowns.

The Rosemount 8750W offers diagnostics that help users take advantage of improved installation, maintenance and process management practices. The 8750W diagnostics allow meter verification, stability in noisy applications, and ground and wiring fault detection.

The Smart Meter Verification diagnostic available with the 8750W allows users to verify calibration without shutting down the process and without the need for complicated external equipment, reducing the time and cost associated with meter verification procedures. The Smart Meter Verification diagnostic proves the health of the magnetic flowmeter system as required by regulatory agencies and also provides the necessary documentation required by environmental agencies for regulated flow measurements.

The diagnostic also provides the documentation needed for critical applications like effluent flows. To simplify use, all diagnostic information can be quickly accessed through the easy to use Local Operator Interface (LOI), the 475 Field Communicator or AMS Suite predictive maintenance software.

The fully welded construction of the sensor with isolated terminal blocks and hermetically sealed coil compartment make the 8750W sensor dependable for utility and water applications. In addition, the dual compartment transmitter housing and self-draining conduits keep the electronics isolated from moisture and contamination.

Visit www.rosemount.com/8750w to learn more about this product.



ORBITAL CLEANER FOR TANKS WITH SMALL OPENINGS

Breconcherry's latest orbital cleaner is extremely compact in size, enabling it to fit through tight openings and deliver a thorough clean. Tecpro Australia is proud to offer the Breconcherry Twister – a revolutionary new small size orbital cleaner that can fit inside tanks with openings as small as 100mm (or 4 inches).

"The Twister is an important addition to our range of jetting tank washers," said Graeme Cooper, Managing Director of Tecpro Australia. "It creates a vigorous clean in tanks with openings that were previously too small for standard orbital cleaners."

Its hygienic design and self-cleaning functionality make it valuable for use in industries where sanitary conditions are essential, such as pharmaceuticals, food and beverages.

"The Twister will clean a 16m diameter or 8m radius," said Mr Cooper. "It rotates on two planes. This creates horizontal and vertical jets that gives the interior of the tank a 360 degree clean."

Designed and manufactured in the UK, the Twister is highly durable with few maintenance requirements.

"It contains no ball bearings and this prolongs its service life," said Mr Cooper. "The water flow spins the turbine which drives the gears."

The Twister operates at a working pressure of between 4 to 10 bar. It features a nozzle diameter of 3mm and 4mm, and has a maximum operating temperature of 96 degree Celsius.

It is manufactured from Stainless Steel 316L (1.4404) with PTFE or C-PTFE, and the unit weighs approximately 2kg.

"The Twister has an economic flow rate and a consistent spray pattern that makes it very efficient and reliable to use," said Mr Cooper. "Its launch in the market has made it possible for orbital cleaning to be used in tanks that were previously inaccessible due to narrowness of entry."



The Breconcherry range of tank cleaning equipment is available throughout Australia and New Zealand through Tecpro Australia. For more information about Tecpro's complete range of hose reels and stainless steel products, please visit www.tecpro.com.au

Tecpro
AUSTRALIA
Technical Solutions You Can Rely On

DISTILLERY CREEK WTP REPLACEMENT

In 2008, Esk Water (now part of TasWater) entered into a design and construct contract to replace the existing Distillery Creek Water Treatment Plant in Launceston.

The plant was a Candy Rapid Gravity Filtration Plant, with a capacity after upgrades in the 1930's, 1950's and 1960's to 40ML/d.

The oldest part of the plant was a series of horizontal flow basins and seven gravity sand filters, known as the "old plant". The "new plant" consisted of twelve vertical upflow contact clarifiers and four gravity sand filters.

Raw water to the treatment plant is harvested from two water courses. Initially water is diverted from the St Patricks River by tunnel and channel into Distillery Creek. The two water sources combine and water is drawn from the creek approximately 1km upstream of the treatment plant and the entire inlet works are gravity feed. Raw water quality can vary in colour from 5 to 250 Hazen Units and turbidity from 2 to 100 NTU.

The original plant only used Alum to treat the water with post dose lime used to correct pH. Fluoride and chlorine was added before the storage reservoirs. The plant was manned 24/7 as there was no automatic control valve on the inlet to the plant. This meant if the inlet valve had to be adjusted and the outlet valves on the filters also had to be adjusted by hand. The operator did this when the water level in the storage reservoirs rose or fell, depending on the outflow demand. Due to its age machinery, valves, pipe work, etc needed upgrading and with WHS and water quality issues, it was time to replace the plant with a new one.

Before planning started on the new plant, management called a meeting with all the water treatment plant operators to discuss a wish list for the new plant. Items discussed included for example the access to site, type of plant and equipment.

Water Treatment Australia won the contract to build the new plant and the DAFF process was chosen largely on price. The new plant has a capacity of 30ML/d upgradable to 40ML/d by building an extra floc and DAFF cell on the northern side. Using the existing raw water main and inline screens, water flows into a rapid mixing chamber where preliminary alum and polyelectrolyte are mixed before passing into the flocculators. The floc tanks have retention time of approximately 30min each and there are 2 tanks per train. This is important as in winter, water temperature is low and colour and turbidity are high. Polyelectrolyte is only used occasionally when the water is hard to treat.

Water from the floc tanks then flows to the DAFF cell. On the way it is injected with an air water mix, the air bubbles attach themselves to floc particles and float to the surface of the tank forming a sludge blanket. This blanket is decanted every hour. Water then passes through multimedia filters to remove any remaining floc particles. Post-lime, fluoride and chlorine are then added to the filtered water.

The filters are periodically backwashed with air and water individually. The backwash water, along with other wastewater produced during the treatment process, is discharged into the wastewater holding tank and then discharged into the existing sludge line.

The plant supplies the central and western suburbs of Launceston, approximately 15,200 premises.

Filtered water turbidity target is less than 0.1 and the plant easily meets this target.

The plant is manned 8.5hrs a day and a 4 week roster is in place for after hours call back and weekend work.

Contributed by Chris Hall – TasWater



Crises like Ebola show the critical need for effective public health systems in our region.

WaterAid Australia endorses calls for increased support to address the Ebola crisis in West Africa and also appeals for increased attention to be paid to effective public health systems amongst our nearest neighbours.

Prime Minister Tony Abbott's recent stop in Papua New Guinea to discuss arrangements for the potential spread of Ebola highlights how vulnerable Australia would be to outbreaks like the one we are witnessing in West Africa if the disease came to our region.

"The Ebola epidemic in parts of West Africa continues to devastate the lives of thousands of people. As the scale of the epidemic grows there is the real threat of the disease spreading further across the globe and into the Asia Pacific region," said WaterAid Australia Chief Executive Mr Paul Nichols.

Concerns about the quality of health services in our region are shared by WaterAid's international partners. "Weak health systems in Papua New Guinea and Timor-Leste raise questions about the preparedness of countries in our region to address an Ebola outbreak in the Asia Pacific. Recent outbreaks of drug-resistant tuberculosis in Papua New Guinea are evidence of this threat," warned Professor Mike Toole, infectious disease specialist at the Burnet Institute.

The Australian Government already makes a considerable contribution to health in the region. "Ongoing investment focused on strengthening health systems in the Asia Pacific is critical to preventing the spread of communicable diseases across the region. Ensuring access to safe water and adequate sanitation, as well as the practice of good hygiene behaviours are an essential part of this process," said Mr Nichols.

Nearly half of all health facilities in low-income countries lack a reliable and safe water supply. As a result, maintaining the level of hygiene needed to prevent the further spread of the Ebola virus - which is transmitted through contact with body fluids - is extremely difficult for health workers. "Access to safe water and adequate hygiene education is critical to containing the virus, along with the appropriate isolation, treatment and contact tracing of patients," said Alison Macintyre, WaterAid's health adviser.

This lack of basic services is putting the lives of all those caring for Ebola patients at risk, while also hampering efforts to control the spread of the virus. WaterAid has had to scale back its programs in Liberia and Sierra Leone as a result of the disease.

With hundreds of millions of people worldwide living without clean water and sanitation, the crisis highlights the imperative for the global community to secure universal access to these basic services, in the face of a very real public health risk.

Without urgent and sustained action across the developing world to bring these services to hospitals, homes and schools, further public health catastrophes are inevitable. So while the world deals with the horrific consequences of the current Ebola epidemic, WaterAid will re-double our efforts to secure more - and sustained - investment in water, sanitation and hygiene, the very basics of human development, dignity and health.

From the WaterAid website - www.wateraid.org/au

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NEW MEMBERS

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

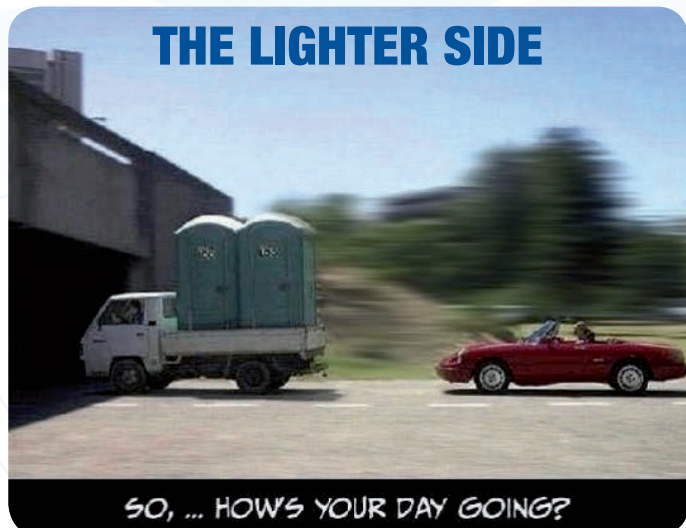
New **Individual Members** include:

Mark Bates, Darren Henderson, Stuart Stagg, Malcolm Smith, Matthew Turner, Russell Bates, Rick Woulfe, Neil Smith, Emma Sawade, David Cook, Stephanie Badger, Krish Pande, David Nixon, Bryan Vautier, Bevan Hudson, Col Ford, Herbie Henderson, Matthew Driver, Stephen Burns, Julian Clarke, Graeme Hosie, Bryce Wellington, Jeff Campbell, Ian James, Elise O'Keefe, Callum Pohl, Tyrone Muir, Wayne George, Peter Kanthers, Graeme Dick, Kym Wilson, Suzy McDonald, Daniel Fischer, Nigel Binney, Duncan Whitfield, Greg Embleton, Kel Sleep, Todd Barker, Jason Cass, Jaysen Considine, Ben Holland, Brad Angwin, Greg Baud, Peter Brennan, Martin Chatfield, William Egan, Craig Hogan, Megan Hoskins, Peter Houston, Rod Jewell, Leo Lacanaria, Todd Lomax, Kerry Matthews, Nathan McRae, Jake Motherwell-Wallace, Rod Murray, Shane Murray, Jason Redmond, Thomas Robinson, Hugh Sullivian, Lester Trewin, Sebastian Vethanayagam, Brett Vurlow, Brian Wigg, Karl Williams, Lindsay Woodhams, Luke Poke, Grant Pritchard, Ryan Holt, Jack Fowler, Barry Brady, Scott Bremner, Bruce Williams, Peter Wood, Suzanne Nurroo, Peter Jones, Michael Ludlow, Ben Janson, Raymond Borg, Michael Bowkett, David Leoncini, Luke McCosh, Benjamin Falconer, Dominique Wisniewski, Steven Gore, Dwayne McAlpine, Lewis Cooper, Brian Tamin, Jack Shill, Wayne Reynolds, Colin Ross, Andrew Richmond-Smith, Seamus McGrady, Al Blackwood, Dwayne Pretli, Roland Heatley, John Lawton, Lloyd Boulton, Clint Goldie, Bruce Pountney, Stephen James, Greg Hamill, Gavin Green, Les Barwick, Neil Bonnar, Jake Milligan, Brian Alston, Andrew Passafaro, Stephen Howarth, Graeme Kerlin, Dean Prest, Ron Krischer, Josh Mclenaghan, Barry Ellery, Stephen Abbott, Greg Hickson, Ernst Bruynius, Malcolm Taylor, Josh Batchelor.

New **Utility Corporate Members** include:
Wyang Shire Council.

New **Corporate Members** include:

Vent Master Valves, Toxfree, Loop Organics, 360 Engineering, Smart Lock, Water Services Australia, Envirotech Water Solutions, SICK, Geofabrics Australasia, Clearpond, Vision Super, Detection Solutions, Indratel, RCPC Corporation, Professional Diving Services, DKSH Australia, MASS Products, Rockwell Automation, Swan Analytical Instruments.



COMING EVENTS

2015

24 February Water Quality Seminar with Steve Hrudehy, Melbourne

28 February PASS Award applications close

28 Feb/1 March WIOA Weekend Seminar & AGM, Club Mulwala

20 July Kwatye Applications close

2015 CONFERENCE AND EXHIBITION SCHEDULE

25 & 26 March 9th WIOA NSW Water Industry Operations Conference & Exhibition, Orange

3 & 4 June 40th WIOA Queensland Water Industry Operations Conference & Exhibition, Toowoomba

2 & 3 September 78th WIOA Victorian Water Industry Operations Conference & Exhibition, Bendigo

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NEXT EDITION

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