

# OPERATOR

November 2017 Edition



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Peter Tolsher is WIOA's newest life member. Read more on Page 4.

Southern Divers win the Best Site in Bendigo. Conference report is on Page 6.



David Frizzell from Toowoomba RC winners of the Best Water in Australia Competition. More on Page 17.

Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

## FROM THE MD'S DESK

A big welcome is extended to WIOA's newest staff member, Kathy Northcott who commenced in the role of Technical Operations Officer on 2 October. In a bit over one month, she has already made her mark on the organisation with her knowledge, ideas and boundless enthusiasm. To help introduce her to our members Australia wide, we have included her profile on page 3 of this edition.

The Ixom Best Tap Water in Australia competition helped promote the water industry during National Water Week and once again it drew a huge following. With more than 500,000 people exposed to the water industry through television, radio and printed news coverage, it helped get the message out about what a great job and all the hard work our operators do to ensure our communities have safe, clean drinking water.

Held in the Brisbane Street Mall in Launceston, more than 150 members of the public tasted a sample from each of the State based Taste Test competition winners. Congratulations to the Toowoomba Regional Council and the Mt Kynoch WTP in Queensland for being judged as having the best tasting tap water this year. They will go on to represent Australia at the Berkeley Springs International Water Tasting Competition to be held in the USA in early 2018. We hope they will do Australia proud and bring home the gold medal.

Our thanks are also extended to all the organisations who participated in the heats held around the country throughout the year. We hope to be able to add the winners from the NT and WA to next year's national competition and we look forward to having even more water businesses enter the State based heats in 2018.

The 2018 conference venues have been finalised. The NSW event will be held in Tamworth from 10-12 April. The Queensland conference will be held in Logan from 5-7 June and the Victorian event will be in Bendigo again from 4-6 September. To make all these events successful requires input from you - our members. Don't wait until the last minute. Start putting together the potential topics for a platform or poster paper now. We will accept abstracts for future conferences at any time.

Whilst on conferences, in September 2017 WIOA successfully staged our biggest annual event, the Victorian Water Industry Conference and Exhibition in Bendigo. For the second successive year the attendance record was broken with more than 1450 people participating over the two days. All 204 exhibition sites were sold-out in just over 24 hours and there were a large number of companies on a waiting list who unfortunately missed out. As usual, there is a complete wrap up on the conference, including all the very deserving award winners, later in this edition.

The Victorian conference was also a great place to recognise the achievements of some outstanding WIOA Members. Peter Tolsher became the 7th Life Member in the Association's history for his considerable efforts over almost 20 years.

David Sheehan was inducted as the 34th IDIOTS member for his contribution to WIOA in roles at the Victorian Department of Health and more recently at Coliban Water. A new award, the Networks Operator of the Year was presented to Russell Sunderland from Goulburn Valley Water. Congratulations also to Operator of the Year, Glenn Taggart from Central Highlands Water, Young Operator of the Year, Mae Jobson from Gippsland Water and John Day from North East Water for winning the best paper at the conference.

It is also pleasing to see the level of interest and input from the various State based WIOA Advisory Committees. Interest Days and site tours are planned or have recently been held in Wonthaggi in Victoria, Quirindi and Jugiong in NSW, Longford in Tasmania, Adelaide in South Australia and Cairns and Kingaroy in Queensland. Reports and photos from some of these days are included in this edition. See the calendar on the back page for details of any of the events programmed for November and for some of the dates already set for 2018. It is really important that Members get behind the State based committees and get along to these events whenever you can.

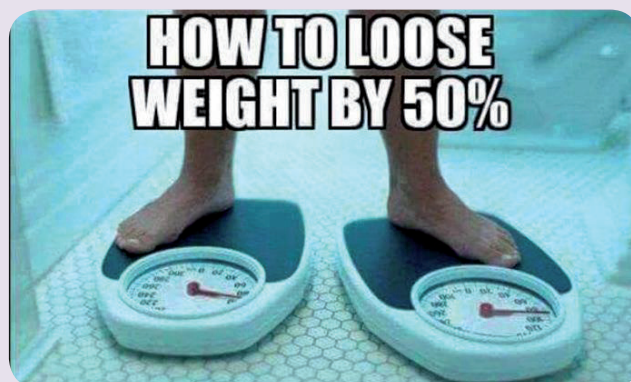
WIOA has a long history of raising and donating funds to charity. The Victorian golf day was staged recently in Tatura with \$2500 raised and added to the pool for distribution next year. The Far North Queensland Group held a Charity Bowls Day on the back of a very successful Interest Day in Cairns and this has raised \$1700 which has been donated to the Cairns Mayor's Christmas Fund. The generosity of all the members and the supporting corporate sponsors who participate in any of our charity events is greatly appreciated.

The WIOA Board and Committee have been doing a lot of work recently on the organisation's Strategic Plan for the 2018-2022 period. There are plans to invest significantly in computer software, new resources and opportunities for Members and stakeholders in 2018.

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 2018.

**George Wall** – WIOA Managing Director

## THE LIGHTER SIDE





## PROFILE OF A STAFF MEMBER



**Name:** Kathy Northcott

**Position:** Technical Operations Officer

**Employer & Location:** WIOA - Shepparton

**Where did you work before WIOA?**

I've worked both as a project engineer in the gas industry, and a cogeneration power station operator in South Australia. I've been a water treatment engineer/operator in Antarctica and a postdoctoral researcher in both Australia and Japan. In my water industry career, I've had senior process engineering roles at both Melbourne Water and Veolia. Before coming to WIOA I was the Research & Technical Manager for Veolia Australia-New Zealand.

**What do you enjoy most about your job?**

The opportunity to get back to my favourite industry (water) and to work with my favourite people (operators).

**How do you relax?**

I watch Japanese anime and read sci-fi novels or manga.

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

Castlemaine. Everything! Great location, great scenery, fantastic cafes, breweries, etc etc....

**Quick questions**

**Nickname:** Kath

**Family Status:** Married

**Pets:** 1 cat, 4 silky chickens

**Favourite food:** Is beer a food?

**Least favourite food:** Oysters

**Favourite TV show:** Gintama (it's a Japanese thing)

**Favourite Movie:** Fight Club

**Hobbies:** Travel, playing the ukulele and the piano, knitting, gardening, reading, bushwalking, Japanese pop culture (anime and manga).

**Best Trait:** Always willing to sharing my knowledge and experience with others.

**Worst Trait:** I've never been any good at cricket, even though it's the sport of kings!

**Four people to invite to dinner:** They'd all be family. Hard to choose 4, but probably my niece and nephew, my hubby and my brother-in-law. We'd have a BBQ and play Phase 10.

## NODP GRADUATION 2017

The 13 graduates from the 2017 WIOA Networks Operator Development Program were presented their program completion certificates and a Tee Shirt at a special function held on Tuesday 5 September. They were each presented their certificates by Mike Rankin from Water Training Australia and were acknowledged by all those present for their hard work and dedication.



*The Graduates*

To promote the NODP for 2018, participants Jason Cass and Andrew Povey presented a summary of their experience from participating in the Program during the Bendigo conference.



*Jason Cass (L) and Andrew Povey presenting in Bendigo.*

# PETER TOLSHER – LIFE MEMBERSHIP

At the recent Victorian Conference in Bendigo WIOA presented our highest individual award to Peter Tolsher. In receiving the award, Peter became only the seventh ever Life Member of the Association.

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

- 1982 Commenced employment in water industry with Tallangatta Shire Council, then Towong Council, Kiewa Murray Water and others, which eventually became North East Water.
  - 1998 Joined WIOA as a member.
  - 2001-04 Elected onto WIOA Committee.
  - 2005-06 Elected Vice President.
  - 2007-08 Elected President.
  - 2009-11 Elected as a Committee member after finishing his term as President.
  - 2007-17 One of 6 inaugural Directors of WIOA Ltd when constituted on 16 January 2007 – resigned Feb 2017 after ten years on the Board.
- 10 years as a Committee Member as well as 10 years as a Board Member.

## Achievements & Awards

- 1999 Awarded the Actizyme (Nalco Water) Award for Best Operator Paper at the Wodonga conference. Paper on the upgrade of the West Wodonga BNR WWTP.
- 2004 Awarded AWA – Wal Whiteside Operator of Year award.
- 2004 Presented paper in Wodonga on further upgrades at the West Wodonga WWTP and the Private/Public Partnership.
- 2009 Awarded the WITC Award for Best Operator Poster Paper at the Victorian conference. Poster on Understanding the impact of environmental flows on our rivers and streams.
- 2010 Inducted as an IDIOTS member.
- 2015 Awarded the Ecolab (Nalco Water) Award for Best Operator Paper at the Bendigo conference. Paper on Newsoil (sludge project for North East Water).



Peter and his very supportive wife Jo.

## Other Service

- 2004 –10 Responsible for organising the Weekend Seminar along with Cynthia Lim.
  - 2004 – 11 Helped organise the Victorian conference competition
  - 2010 Attended the NZ tour as a WIOA Committee/Board member.
  - 2013 – now Represented WIOA on Standards Australia Sludge Committee .
- Contributed numerous articles to Operator & WaterWorks.
- Encouraged colleagues to contribute papers and posters for the conference

In his time as a Board and Committee member, Peter rarely missed attending a meeting. His input was always constructive, well thought out and valuable. When making decisions, Peter has the knack of being able to listen to all views on a topic and then contribute his own insightful and relevant comments, allowing an informed decision to be made.

A fact known only to Board Members is that we require a Board Member to log into our bank account and approve all electronic transactions for payment. Peter completed this task for WIOA on hundreds of occasions from around 2012 to 2017.

No matter how busy he is, Peter always makes himself and his time available to WIOA (including out of hours). He has been an invaluable sounding board for WIOA staff to discuss ideas or issues as his opinion is always respected.

Peter has been a regular attendee at WIOA events including the Weekend and other Seminars, Interest Days, plant tours and even social occasions like the Golf Day. With the support of his employer, he has attended many interstate events and helped with the expansion of WIOA.

Through his enthusiasm, commitment, energy, personal qualities and friendly nurturing nature, Peter epitomises the values our organisation aims to display and we are pleased to appoint him as the seventh Life Member in WIOA's 44 year history.



Five of the seven life Members in Bendigo.



## LATEST IDIOTS INDUCTEE



*Kathy Northcott presenting the pin and trophy to David*

At the Bendigo conference, David Sheehan became the 34th WIOA member to be inducted into the IDIOTS fold. It's fair to say that the overwhelming majority of the previous inductees have had a very hands-on input into the operation of WIOA or our events.

David's nomination comes about through a very different, but still important

involvement with WIOA, going back well over 10 years. WIOA's first official involvement with David was in his Victorian Health Department days in late 2006 when George Wall and Peter Mosse met with him to discuss how we could tighten up on the industry expectations for the training of water treatment operators.

From this initial meeting, followed by lots of persistent badgering, email correspondence and then Committee meetings, the concept of the "Certified Operator" was born. In 2010, the Victorian Best Practice Guidelines for water operator certification were adopted and released to the industry, a truly groundbreaking moment for our industry.

In 2011, WIOA was endorsed by the Victorian Health Department as a certifying body, a role we still undertake today.

In 2012, David helped organise a special presentation ceremony at the Health Department Offices in Melbourne where the credentials were presented to the first ever certified operators. That David was able to convince the Chief Health Officer to come along to speak and congratulate the operators, showed how important an event this was.

David has also been an influential driver in the development of the national water treatment Operator Certification Framework and most recently in the development of the Wastewater and Recycled Water Operator certification Frameworks.

We are convinced that David's positive feedback about WIOA's capabilities and suitability to perform the role went a long way towards us recently being appointed the national Certifying Body for all 3 disciplines.

His support and efforts have not just centred on certification. In 2013, David instigated the first Health Department forum into the WIOA Victorian conference program, something which still occurs today. This has become a really important session where operators can be kept informed of current issues from the Health Department perspective.

In 2015, he facilitated WIOA's lead involvement in a joint seminar with the Victorian Health Department and VicWater, tapping into the knowledge of renowned Canadian researcher, Professor Steve Hrudey.

In his role as a Board Member of Water Research Australia, David arranged opportunities for dialogue between our two organisations which has led to the development of the Memorandum of Understanding signed recently. Most importantly, it gives WIOA the opportunity to work closely with WaterRA in getting the results of research work out to the operational community.

As an avid reader of scientific journals, David has provided access to numerous relevant technical articles and resources which we have been able to build into our seminar presentations.

David has also contributed articles to WaterWorks in the past and we are about to publish another article he has written on Health Based Targets.

David saw the value in what we were doing on behalf of the industry and joined WIOA in September 2010. He has been a member for just on 7 years. He is a regular at our conferences, seminars and events and it is true to say that we all enjoy his company.

Through his more technical contribution, David has played an important role in allowing WIOA to gain the credibility and acceptance we now enjoy in the Water Industry nationally.



*What do you call a group of IDIOTS? All the IDIOTS at the event together, including a few from NZ*

All IDIOTS need to undertake some sort of activity to prove their worthiness and being a microbiology expert, David knows about bugs and things buggy! We thought we'd test his knowledge of bugs and made up the WIOA version of the Chase. Fellow IDIOTS members Stephen Wilson took on the compere role and Kathy Northcott took on the role of the Chaser, armed with all the correct answers just in case she needed them. The questions on some of the bugs may not have been what David anticipated but he breezed through things and beat the chaser to the end. Well done!



*David doing the WIOA version of the Chase quiz.*

# 2017 VICTORIAN CONFERENCE REPORT

A record number of 1,455 attendees participated in the **80th Victorian Water Industry Operations Conference and Exhibition** held at the Bendigo Exhibition and Events Centre on 6 & 7 September 2017.

Delegates were officially welcomed by Paul Northey, General Manager Infrastructure Services at Barwon Water. Adam Lovell, Executive Director, WSAA as Opening Speaker talked about the challenges of managing more complex water systems in the future and outlined some of the work being undertaken by WSAA.

The keynote presentation was delivered by Chris Webb, Executive Director, Practice & Assurance from EPA Victoria. He provided a very interesting insight into where the EPA intends to move in relation to regulation and their interaction with the water industry in the future.

At the Awards Dinner on the Thursday evening Glenn Taggart from Central Highlands Water was announced the winner of the prestigious Wal Whiteside Memorial, 2017 Victorian Operator of the Year award. Mae Jobson from Gippsland Water was awarded the Young Operator of the Year and the inaugural Networks Operator of the Year Award was awarded to Russell Sunderland from Goulburn Valley Water.

A number of other employees were recognised at this event including John Day from North East Water who won the Hepburn Award for the Best Paper Overall and the Best Paper by an Operator. Chris Orchard from Central Highlands Water was joyous in accepting his award for presenting the Best Poster at the conference.

This year's exhibition was the largest WIOA has ever conducted with 204 sites demonstrating the latest in equipment, services and process technologies available to the water industry. Southern Divers was announced as the winner of the Ron Bergmeier Award for the Best Exhibition Site at this year's event.

The conference hosted the Ixom Victorian Water Taste Test that saw the Goulburn Valley Water entry from the Merrijig WTP judged as the best.

Joint conference Hosts, Barwon Water, Goulburn Valley Water and Western Water selected WaterAid as the recipient of the WIOA charity donation. A cheque for \$3,500 was provided to assist their work across the globe to support the world's poorest people who do not have access to safe water, sanitation or hygiene.

## Award Winners

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

**Wal Whiteside Victorian Operator of the Year**  
sponsored by AWA

**Glenn Taggart** from Central Highlands Water

**Victorian Young Operator of the Year**  
sponsored by IWA

**Mae Jobson** from Gippsland Water

**Victorian Networks Operator of the Year**  
sponsored by Water Training Australia

**Russell Sunderland** from Goulburn Valley Water

**Hepburn Award for the Best Paper Overall** sponsored  
by Iwaki Pumps Australia

**John Day** from North East Water

**Best Paper by an Operator**  
sponsored by Nalco Water

1st **John Day** from North East Water

2nd **David Bedggood** from North East Water

3rd **Peter Field** from Central Highlands Water

**Best Operator Poster**  
sponsored by Trility

1st **Chris Orchard** from Central Highlands Water

Highly Commended **Danny West** from Westernport Water

**Ron Bergmeier Award for Best Exhibition Display**  
sponsored by Utility Magazine

**Southern Divers**

**Mains Tapping Competition**  
sponsored by Reece Civil and Coliban Water

**Denny Anderson** and **Heath Matheson**, Central Highlands Water

**Ixom Victorian Water Taste Test Winner**

**Goulburn Valley Water, Merrijig WTP**

**Ixom Victorian Water Taste Test Finalists**

- Coliban Water
- Falls Creek Resort Management Board
- Melbourne Water – Yarra Valley

**Kwayte Award**  
sponsored by Thermo Fisher Scientific

**Max Gray** from Trility

**WIOA Charity Donation**

WIOA donated \$3,000 to WaterAid on behalf of the conference hosts.



Victorian Conference Images 2017



# VICTORIAN CONFERENCE 2017 AWARD WINNERS

## AUSTRALIAN WATER ASSOCIATION



Victorian Operator of the Year Glenn Taggart (R) from Central Highlands Water with Lindsey Brown from AWA Victoria.



Victorian Young Operator of the Year Mae Jobson (L) from Gippsland Water with Paul O'Donohue representing IWA Victoria.



Victorian Networks Operator of the Year Russell Sunderland with Mike Rankin from Water Training Australia (L) and George Wall.



Winner of the Hepburn Prize for the Best Paper Overall, John Day (R) from North East Water with Ben Tillbrook from Iwaki Pumps



Best Operator Paper winner, John Day (R) from North East Water with Jim Martin representing Nalco Water.



Adam Medlock from Trility (L) with Best Operator Poster winner Chris Orchard from Central Highlands Water



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



# VICTORIAN 2017 CONFERENCE FEEDBACK

## What the Delegates Thought

### **Kruse Rothnie - Gippsland Water**

Attending the WIOA conference is a great opportunity to interact with the broader water/wastewater industry in a more relaxed setting without the stresses of work. The lunches and dinners also provide ideal chances to network with not only the businesses that supply our industry but with the operators facing the same challenges giving you a chance to compare ideas, learn and create partnerships for the future. Everyone who works within this industry should attempt to attend the next conference.

### **Mick Mahoney - Wannon Water**

Being involved in the network operations side of the industry it was great to hear members from my team that attended comment on how diverse and inclusive the conference was for them. The opportunity to network and the variety of trade stalls really stood out. Having the tapping competition really added some interest and fun, while showcasing the capabilities and skills of our operators.

### **Emma Carden - DHHS**

Fantastic event for people of all levels in the water industry. If you want to see what is actually happening on the ground, it is a must attend.

### **Justin Rigby - Remedy AP**

The culture and camaraderie of water industry attendees is warm and inclusive. Its admirable how WIOA has cultivated this spirit over its journey. Its something that many industries could aspire to.

### **John Harris - Wannon Water**

The platform papers were of a very high quality and very much issues that every Water Corporation experiences. The quality and standard of papers being delivered by Operators now are equal to the best in the World as they are real life experiences and not research documents. The poster papers were also one of the best I have seen delivered at a conference. An exceptional cross section of issues that were worked through for outstanding results.

### **Stuart Silvester - Wannon Water**

What's old is new again ! Never miss the chance to discuss working issues and possible ways to resolve them. By listening to those who comment on your issues, you may have a resolution. Or just a good tip from someone who has been there before.

## Exhibitor Comments

### **Bernd Vetter - Evoqua WT**

80th conference for WIOA in Victoria, I wish I will be as active, vibrant and switched on if I ever reach that milestone. Again, great show and organisation. The one not to miss.

### **James Blannin - Stevco Seals & Pumps Victoria**

As far as exhibitions go for the industrial pump market this show rates as the best in Victoria giving great exposure to our business directly with operators in the water sector

### **Roger Summerill - High Risk Safety**

I think the turnout should be highlighted, the delegates, visitors and exhibitors. We can't forget the NZ guys what a bunch of fantastic people. At the High Risk Safety stand we had over 35 good solid leads which my staff are following up as I write this email.

### **Paul Neville - CRS Water**

If your business is the water industry, this is the conference and exhibition for you.

### **Roy Craig - Polymaster**

Love the WIOA Conference, very valuable every way you look at it

### **Simon Tannock - AlgaEnviro**

The exhibition displays and information are a great way to see what is new and different as well as to say hi to old and current clients and friends. With so many people spread so far in the industry, this is a great event for catching up, learning new things and meeting the people who are serious about making this industry leading edge.

### **Rod Aumann - Danfoss**

This event continually impresses with the number of people, both customers and exhibitors alike, to bring the whole water industry together.

### **Callan Hill - SECA**

WIOA is a great opportunity each year to show new products to operators and end users of our diverse range of drain cleaning, testing, inspection and pipe rehabilitation equipment.



Chris Orchard from Central Highlands Water presenting his award winning poster.



Ron from Bergmeier Environmental surrounded by Emoji's in Bendigo.



## VICTORIAN OPERATOR OF THE YEAR

Congratulations to Glenn Taggart, Water Treatment Operator from Central Highlands Water (CHW) for being awarded the 2017 Wal Whiteside, Victorian Operator of the Year Award.

Glenn was judged as the standout nominee this year by the award sponsor, the Australian Water Association, for his demonstrated commitment to the production of Safe Drinking Water over a long period of time.

Glenn has worked for CHW for 30 years starting out in a combined role in maintenance and as a water quality sampler before progressing to the role of Water Treatment Operator at the Maryborough and Avoca WTPs. When the Maryborough Water Board was amalgamated with Central Highlands Water, Glenn retained his role as operator of the Maryborough plant but he also moved on to operate the Daylesford WTP, Lexton WTP, Dean, Waubra and Learmonth Disinfection Plants.

Glenn is a quiet achiever, getting on with the task at hand, ensuring the safe production of water to the communities he serves at all times. His commitment to OH&S is outstanding, often finding better and safer ways to get to the final outcome.

If you asked Glenn today why he does his job, the likely answer will be in relation to the community he serves. He won't go spruiking that because of the type of person he is, but the evidence is in his actions. He honestly has a passion for the water treatment game and fully recognises that the work he does on a daily basis impacts the community.

Glenn's skills and capability as a drinking water operator form a significant component of CHW's risk mitigation in relation to drinking water production. Glenn's role is fundamental within the water treatment team and the business recognises that his long term operational knowledge of CHW's drinking water systems are an asset to CHW.

WIOA also congratulates the other finalists who should be very proud to have been nominated for this prestigious award. They were David Bedggood from North East Water and Dion Bull from Gippsland Water.



*Victorian Operator of the Year, Glenn Taggart.*

## VICTORIAN YOUNG OPERATOR OF THE YEAR

Congratulations to Mae Jobson from Gippsland Water who was announced as the winner of the Young Victorian Operator of The Year Award, sponsored by the Victorian Institute of Water Administration at the Bendigo Conference.

Mae commenced employment at Gippsland Water at the age of 18 as part of their Operations trainee program. As part of the 2 year program, Mae was required to complete a certificate in Water Industry Operations (water and waste) and participate in on the job operational and process work experience.



*Mae hard at work.*

Mae has demonstrated a mature understanding of water and wastewater operations and was able to demonstrate an ability to operate a range of treatment plants taking into account detailed process and operational knowledge of the process and risk management principles. During the trainee program Mae was successful in obtaining a full time position at Gippsland Water as Water Treatment Technician and was appointed ahead of many time served and experienced operators.

Mae's demonstrated capabilities that saw her enter the on-call roster for 4 WTP's in the central region and take responsibility for the day to day operations of Willow Grove and Rawson WTP's with limited supervision immediately upon being appointed to the role. In the 2 years at Gippsland Water, Mae has successfully operated and maintained the two WTP's within Gippsland Water's risk management framework with public health and provision of safe drinking water to customers being her No.1 priority.

Mae's experience at Gippsland Water WTP's extends to the operation of a wide range of plant processes and she is fully conversant with the response requirements as part of Gippsland Water's, Water Quality risk management framework

Congratulations also to the other 2017 finalist in the Young Operator of the Year Award, Will Kidd from North East Water.

For winning the award, Mae receives a Perpetual trophy, a smaller trophy to keep and the best bit – IWA Victoria provides an all expenses paid opportunity to join the WIOA delegation on their tour to New Zealand in May next year. The trip is valued at over \$2500.



*The Gippsland team celebrating with Young Operator of the Year Mae Jobson.*

## VICTORIAN NETWORKS OPERATOR OF THE YEAR

Congratulations to Russell Sunderland from Goulburn Valley Water (GVW) who was announced as the inaugural winner of the Victorian Networks Operator of The Year Award, sponsored by Water Training Australia, at the Bendigo Conference.

This award is to be presented annually to one of the participants in the WIOA Network Operator Development Program (NODP). The aim of the award is to provide encouragement to all NODP participants to be engaged fully in the Program and to recognise the achievement of the most outstanding participant each year.

A number of activities are reviewed by the judging panel in order to determine the most outstanding participant including:

- Completion of all the projects and activities assigned after each Workshop session.
- Completion of at least one presentation during the program.
- Proactive participation in all aspects of the Program and contribution to the discussions during the Workshops.
- Completion of at least two presentations to their workplace team about the Program and their progress in it.
- Demonstrated growth in both technical and leadership fields.
- Provision of appropriate feedback from employers outlining the progress of their participants whilst undertaking the Program.

There were a number of exceptional candidates in this year's NODP group and any one of at least half a dozen participants could easily have been worthy winners. After considering all the activities above, Russell was the stand out for the judges. Out of all the candidates, the judges thought that Russell had embraced all aspects of the program and participated fully. True to the aims of the NODP, there was no question that Russell went from being shy and quiet at the start, to confident and very technically competent by the end. We are sure he will have a long and distinguished career in the water industry.

Unfortunately, Russell could not be present at the conference to receive the award in person as he was holidaying in Ireland. He made a fantastic, humble and very gracious acceptance speech by video which was played at the conference. In another ironic twist, Goulburn Valley Water provided the materials to make up the perpetual trophy presented to the winner each year. Russell was given the task of actually making the trophy and then he got to receive it himself!

For winning the award, Russell receives the Perpetual trophy, a plaque to keep and the best bit – Water Training Australia has provided a grant of \$3000 to be used by Russell for an appropriate professional development opportunity of his choice.



*Russell proudly displaying the trophy.*

## MAX WINS KWATYE AWARD

The winner of 2017 Kwatye Award, sponsored by Thermo Fisher Scientific is Max Gray from Trility in South Australia.

David Crossley from Thermo Fisher Scientific presented the award to Max at the Bendigo conference.



*Max Gray (L) being presented the giant cheque by David Crossley from Thermo Fisher Scientific.*

Max has identified a Research and Development project to investigate the applications and use of Remote Operated Vehicles in conjunction with high resolution and thermal imaging cameras in the water industry.

Remote Operated Vehicles, particularly drones, have been used in the water industry for a number of years. Max's project is designed to further develop the potential uses of the technologies into a wider range of water industry applications.

To ensure old ground is not covered, the project will include a desktop investigation into the current use of ROV's within Australian Water businesses. This will include the types of vehicles uses and their current and potential future applications, and allow Max to gain valuable insights into the technology.

This will enable Max to make an informed decision regarding the suitability of a wide range of devices prior to the purchase of a ROV unit and high resolution thermal imaging cameras.

The project outputs will include a report detailing equipment effectiveness within each area investigated and if there are potential benefits for the industry to use this type of equipment to make the job easier and potentially safer.

Two user guides/checklists will be developed covering:

- The selection of technology and what to look for regarding a variety of applications
- The legal requirements for the operation of ROV's in all States of Australia

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



*Max with the Kwatye artwork in the background*



## MERRIJIG ENJOYS THE BEST TAP WATER IN VICTORIA

Goulburn Valley Water (GVW) officially regained its title as the supplier of Victoria's best tasting drinking water by winning the Ixom 2017 Victorian Water Taste Test at the WIOA conference in Bendigo in September. This is the second time the GVW team has achieved this feat having previously won the award in 2015 with a sample from Marysville.

Water businesses from around the State were invited to participate in the Ixom Victorian Water Taste Test. Using a blind taste test approach and under strict tasting guidelines, water samples were judged for colour, clarity, odour and taste. After making it through some tough preliminary rounds of judging, the Grand Finalists were narrowed down to the samples from Goulburn Valley Water, Coliban Water, Falls Creek Resort Management and Melbourne Water for their sample from the Yarra Valley.



*The Goulburn Valley Water Team celebrating after winning the Ixom Taste Test award in Bendigo*

Ultimately it was the water from the Upper Delatite Water Treatment Plant in Merrijig that was recognised as the best tasting tap water in the state.

The Upper Delatite, or Merrijig, Water Treatment Plant, uses micro filtration technology to supply drinking water to the towns of Merrijig, Sawmill Settlement and Upper Delatite, with raw water for the plant sourced from the Delatite River.

GVW Manager Operations Steven Nash said that the award is a great achievement and acknowledges the work that the very dedicated team of engineers and operators put into producing safe, reliable and great tasting water for our communities.

GVW will install a Hydration Station at the water treatment plant which is situated near a popular walking track, to acknowledge the town's award winning water and so that residents and visitors will have free access to the award winning drop.

### Ixom Victorian Water Taste Test – Winners

- 2017 Goulburn Valley Water
- 2016 North East Water
- 2015 Goulburn Valley Water
- 2014 South Gippsland Water
- 2013 East Gippsland Water
- 2012 Coliban Water



*The "expert" judging panel doing their thing.*



*GVW Manager of Operations Steven Nash addresses the media*



*Source water for the winner – the Delatite River.*

## WIOA VP WINS FOOTY TIPPING



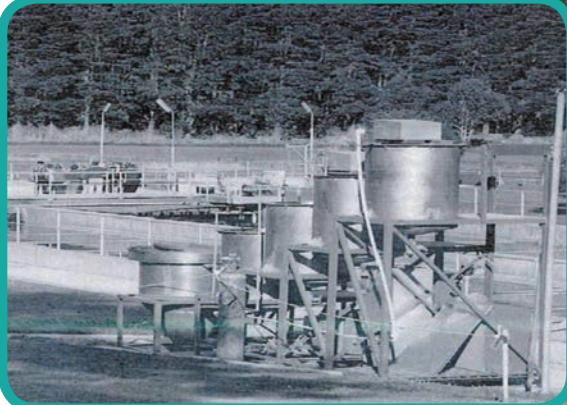
WIOA Vice President, Heidi Josipovic has scored a victory in the WIOA 2017 AFL footy tipping competition. Going into the last round only one ahead, it was Geelong's win over the GWS Giants that sealed victory for Heidi over all the other competitors.

Heidi ended the season in 4,974th place out of the 196,661 Australia wide entries, putting her in the top 2.5% of footy experts in the country.

1 HEIDILEE	Heidi Josipovic	132
2 JAMESONN	Jamie Rossato	131
3 MARSHALL7695	Lee Marshall	130

# BIRDS EYE VIEW - Facilities Members Operate

## Ballarat South Wastewater Treatment Plant, Victoria



BNR pilot plant prior to the BSWWTP becoming a full-scale BNR treatment facility.

- 1 Inlet Works (Grit Screening)
- 2 Primary Sedimentation (PST)
- 3 Pre-denitrification
- 4 Anaerobic
- 5 Aeration Tanks
- 6 Anoxic Zone (Bio-Reactor)
- 7 Swing Zone
- 8 Clarifiers 1 & 2
- 9 Clarifier 3
- 10 Clarifier 4
- 11 Lagoons A-D
- 12 Lagoon E
- 13 Prefermenter & Primary Solids Handling
- 14 Dissolved Air Flotation (DAF)
- 15 Digester Complex
- 16 Belt Filter Press & Polymer Dosing
- 17 Lime Dosing
- 18 Solids Collection
- 19 Foul Water Lagoons
- 20 Overflow Balance Tank
- 21 Recycled Water Plant
- 22 Electrical Supply

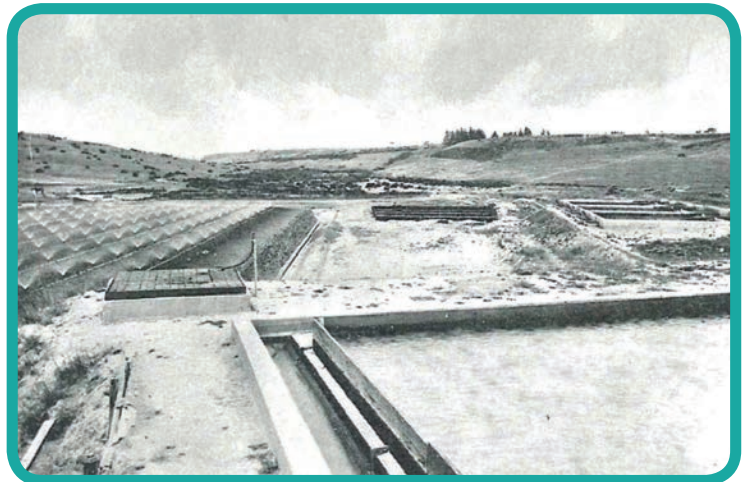




# The History of the Ballarat South Wastewater Treatment Plant

From a small reference in the 1918 Ballarat City Sewerage Scheme report mentioning that “22 acres had been obtained below Mt. Pleasant”, to over 300 acres today, the Ballarat South Wastewater Treatment Plant has grown from its initial humble begins to become Australia’s first full scale bacteria nutrient removal (BNR) plant.

The “Disposal Works” as it was originally known consisted of 2 pre-sedimentation tanks, 4 open air digestion tanks and an oxidation bed complete with standing sprinklers to disperse the settled effluent of the 1800 first Ballarat house connections. Today we treat over 5500 ML from the 57,000 houses and business connections.



The disposal works started operations by July 1925 with 1,800 properties connected to the system. The photo above captures 1 of the 2 primary sedimentation tanks (Volume 410 m<sup>3</sup>) open air sludge digestion tanks and oxidation beds.



By late 1950's the “Sebastopol Treatment Works” as it was now known, had changed very little with the exception of an enclosed inlet works shed, another primary sedimentation tank and workshops.

## qldwater ANNUAL FORUM

The 2017 **qldwater** Annual Forum took place on 6 & 7 September 2017 with this year's theme being "No Pain, No Gain". The forum focused on creating an environment with regulators and other decision makers which enables innovation, whilst encouraging members to trial new ideas and deliver the most efficient and cost-effective outcomes for customers.

On day one, Queensland Urban Utilities (QUU) hosted a visit to Brisbane City Hall Museum and photo library with talks on the history of the city's water and sewerage infrastructure. We then jumped on the bus to the historic Spring Hill reservoirs and the old Tower Mill where we were given an insight to the original water supply systems.

Next stop was the Eagle Farm Pump Station and rising mains which feed the Luggage Point STP, including operational issues with wet weather flows. Big thanks to the Operators onsite for their time taken to tour the facility. Back on the bus and on to the QUU Luggage Point Sewage Treatment Plant and Innovation Centre. Here we had a few presentations which included innovative projects and a Vendor Pitch session which included Royce Water Technologies, Antec and Aqseptence Group.



*Tower Mill next door to the reservoir at Spring Hill.*



*Inlet screens at the Eagle Farm pump station.*

The Ixom "Best of the Best" Queensland Water Taste Test was also held with Livingstone Shire taking out the top gong! Congratulations to all involved.

Day 2 saw us gather at the Allan Border Field Conference centre in Albion, for a day of presentations and discussions including the following topics:

- Keynote address - Experiences from the Energy Sector including restructuring of Energex and Ergon
- Automated Metering discussion
- Department of Energy and Water Supply (DEWS) Session
- Queensland Water Regional Alliances Program buried infrastructure research project
- LGAQ ratepayer analysis – how to elevate the investment priority for water and sewerage
- QUU Utility of the Future program
- Innovation and risk across asset life cycles
- Current opportunities for resource recovery from sewage.

A big thanks to Dave Cameron and the **qldwater** staff involved, QUU staff for their involvement on day one site tours, especially Ken Vaheesan and Col Hester. A special thanks to WIOA for giving me the opportunity to attend.

**Contributed by Colin Haynes, Unitywater**

## NEREDA - CRISP, CLEAN AND IMPRESSIVE

A big shout out to the South Burnett Regional Council, and Aquatec Maxcon for supporting the WIOA interest day and tour of the new Kingaroy WWTP and its state of the art NEREDA process. Also, well done to Adam and Andy from South Burnett Regional Council for the great job on the barby.

I can say on behalf of the operators from across the South East Queensland region who were fortunate to attend, that the facts and figures presented on the day were impressive.

To be tested at a very young age by the left overs of Cyclone Debbie at the end of March 2017 and come out the other side was testament to the commitment of Nerida, Andy and the dedicated team at South Burnett Regional Council including Aquatec Maxcon.



*Andy from South Burnett RC taking the tour.*

The Kingaroy STP has become a showpiece within the wastewater Industry. Although this technology is different from standard industry practices, it is maintaining high standards for our communities and environment.

The day was a fantastic demonstration of the changing of the guard in how technology is advancing the wastewater Industry. This was evidenced by the commitment of the plant operator Andy Watson and matched by the enthusiasm and support of the Aquatec Maxcon engineers who have watched the NEREDA process evolve and exceed all expectations.



*Tour of the Kingaroy WWTP.*

The investment in the Nereda technology is the largest ever made by the South Burnett Regional Council. Nereda is an innovative advanced biological wastewater treatment technology that purifies water using the unique features of aerobic granular biomass. Unlike conventional processes, the purifying bacteria concentrates naturally in compact granules, with excellent settling properties, as a result of the large variety of biological processes that simultaneously take place in the granular biomass.

The Kingaroy WWTP is a 12,500EP Nereda Plant that was commissioned in May 2016. Thank you for sharing with WIOA members an impressive display, delivery and commitment to the ever-changing industry.

**Contributed by Bill Collie, Queensland Urban Utilities**



## FAR NORTH QUEENSLAND INTEREST DAY

WIOA staged its annual FNQ Interest Day followed by the optional "Trility" charity bowls afternoon in Cairns on Thursday 6 October 2017

All up, nearly 60 water and wastewater staff from far northern councils and equipment suppliers attended what was not only a very technically informative day, but a great opportunity to network with our peers and other water industry representatives.

The Keynote address this year was delivered by Alister Laidlaw from North East Water in Victoria who gave a great presentation on the use of drones in the water industry. It would have been even better to see the drone in the air but unfortunately, the venue was in the flight path of the Cairns international airport making it a no-fly zone.



*Alister Laidlaw presenting.*

There were a range of other presentations including Ron Bergmeier from Bergmeier Environmental giving some great tips on managing lagoon desludging projects and Bill Kelly from Kelly's Australia who talked about remote cleaning of water reservoirs. Shaun Johnston from Burdekin Shire Council described some issues they were working on relating to iron and manganese in bores and Aron Smith from Cairns RC did a rerun of his presentation from the Qld conference in Logan about using online nutrient analysers to optimise both chemical dosing and aeration systems in wastewater plants.

The technical part of the day was sponsored by Bergmeier Environmental, Kelly's Australia and Cairns Regional Council. After an awesome lunch, those that had time stayed on for the Charity Bowls afternoon sponsored by Trility, Factor UTB, Xylem, Reece Civil, Thermo Fisher Scientific, Glacier Filtration, Merck, Grundfos, HP Agency and Water Treatment Services.



*The assembled delegates listening to the presentations.*

The winners of the Tradies Cup was the team from Bergmeier Environmental which included Ron Bergmeier, Mick McLeod from Aurukun Council and Morris Hammill from Mareeba SC. The long bowl from corner to corner was won by Hayley Paton from Cassowary Coast RC.



*Winners of the tradies cup Bergmeier Environmental – Mick McLeod (L), Morris Hammill and Ron Bergmeier with David Ollerton from Trility.*

Each year WIOA has rotated the responsibility for nominating a charity to receive the proceeds from the Bowls afternoon and this year it was Cairns Regional Council's turn. The cheque for \$1,700 was allocated to the Mayor's Christmas Appeal.



*Hayley Paton collecting her prize for the long bowl.*



*Networking between ends.*

Contributed by Mark Gwynne, Cairns Regional Council

## FNQ CHARITY DONATION

A cheque for \$1,700, the proceeds from this year's FNQ Charity Bowls afternoon, was recently presented to the Cairns Regional Council Mayor's Christmas Cheer Appeal. The annual fundraising drive raises money to pack and distribute festive hampers to make Christmas a little brighter for those in need within the Cairns community.

This year, the Council will be providing hampers to some 700 families and older residents who might otherwise go without on Christmas Day. WIOA's donation will help ensure all Cairns residents have a merry Christmas.



*WIOA Committee member Simon Page (L) presenting the cheque to the Mayor of Cairns, Cr Bob Manning.*



## ONE FOR THE GIRLS ON THE GREENS

The Annual WIOA Victorian Charity Golf Day was held at the Hill Top Golf and Country Club in Tatura on a sunny Sunday afternoon, a stark contrast to last year's wet weather.

The day started with a few snags in bread, which settled the nerves for many of the want-to-be competitors keen to show their prowess on the greens. The much sought after Tradies Cup was delivered by defending champions MJK led by Noel Stewart and they were pretty confident of defending their title and going back to back.

The teams of 3 for the Ambrose Challenge were announced and a shot-gun start followed. This was also the opportunity to purchase the "Cheats Packages" that included mulligan cards, a piece of string which could be used to bring a ball back in to play or make-up for a short putt and a bonus raffle ticket.



*All the golfers raring to go.*

It proved to be a day for the girls! The overall winning team was a group of 4 ladies (friends of WIOA) who beat the blokes at their own game with a terrific score of 56.8 to win by almost 2 shots. Congratulations to Trish Mathisen (Craig's wife), Robyn Woodhouse, Tanya Nightingale and Karen Hall. The team from North East Water of Peter Tolsher, Ian Butler and Mick Fleming came in second on 58.7 just ahead of the team from Willprint on 58.8.



*Overall winners  
– Trish (L),  
Tanya, Karen and  
Robyn.*

The Willprint team however had the last laugh. As a gold sponsor of the day and ably led by skipper Ian Almond who teamed up with Peter Curtis and Jeremy Patt, they were clearly the best score of the sponsors teams and were duly awarded the coveted Tradies Cup.



*The Willprint  
Team, winners of  
the Tradies Cup –  
Peter (L), Ian and  
Jeremy.*

Nearest to the pins went to Mick Fleming, Michael Firman, Peter Curtis and Robert Woodhouse, and the longest drive sponsored by ADC Plastics went to Roger Mottram from Harry the Hirer.

During the day the PAAS refreshment cart kept up with players demands with Marilyn and Sherryn doing a fantastic job getting around to all the groups and keeping up the hydration levels. We are not sure if the PAAS team may have over indulged in their own hospitality, as they came home in last position and were awarded the NAGA (not a golfers ar\*\*hole) and were presented the prize of a first aid kit to dress their wounds on the way home.



*The hydration cart in action.*

The course was in terrific condition and a big thankyou to the Hill Top Golf Club and their members who supported the event and put on a great day including a delicious meal of fish and chips after golf.

Finally, a big thank you must go to the sponsors that make events like this possible and all the golfers that travelled from other water corporations and businesses around the state. The highlight of the day was the total raised for charity, with more than \$2,500 to be donated in 2018, an awesome result.



*Not sure if the  
Harry the Hirer  
team were still on  
the course?*



*Not very good  
etiquette boys  
– the North East  
team doing their  
best to put Tolsh  
off.*



## QUEENSLAND WATER IS AUSTRALIA'S BEST

Launceston's Brisbane Street Mall provided the perfect backdrop for the IXOM Best Tasting Tap Water Grand Final held during National Water Week on 18 October. TasWater's Barrington Water Treatment Plant, the reigning national champions from last year, hosted the tasting event. The winners of each of the 5 State based Taste Test competitions provided a sample of their water for judging.

Many of the State winners also sent across a staff member to help out on the day. They joined WIOA, IXOM and TasWater staff to help encourage members of the public to taste the samples and cast their vote.



*The State reps all dressed up in their jumpers.*

From toddlers to tourists, students to seniors, members of the public were asked to try each blind sample of water from the separate schemes and note the different tastes present in the tap water. Coffee beans were provided to 'cleanse the palette' for the true water connoisseurs, to make sure the tastes did not all blend together.



*The setup in the Brisbane Street Mall.*

The tasters then cast their votes for the sample labelled only with numbers, and received a drink bottle for their efforts. TasWater provided water bottle filling stations supplying quality Launceston water for the re-useable bottles.



*The public tasting the samples and casting their vote.*



*The public tasting the samples and casting their vote.*

In all, more than 150 members of the public voted and Toowoomba Regional Council's Mt Kynoch WTP in Queensland took out the top drop this year.



*Winners are Grinners – Bill Holdsworth from IXOM, David Frizzell from Toowoomba with WIOA's Craig Mathisen.*

WIOA's Craig Mathisen championed the event, giving interviews with local media outlets to promote the exciting day. Journalists from the local television news, radio stations and local papers were all present to witness the announcement which received good coverage across the country.



*David Frizzell interviewed by the media.*

Congratulations to Toowoomba who will go on to represent Australia at the Berkeley Springs International Water Tasting Competition to be held in West Virginia, USA in February 2018.

**Contributed by Eleanor Talbot, TasWater**



## NAMOI OPERATIONS INTEREST DAY

It was a warm and windy spring day for the WIOA NSW Namoi Operations Interest Day held at Quirindi's Racecourse on 26th October. There was a healthy attendance of Operators from surrounding shires with some travelling from as far away as Armidale and Bingara. The morning started with some mingling over a coffee with approximately 30 operators picking each other's brains.



*All the attendees listening intently.*

We were greeted by Liverpool Plains Shire Council's Acting Works Director, Russell Lloyd, and then dived straight into the first presentation on LPSC's Regional Water Supply Scheme's planning. Rod Batterham described the amount of effort taken to get the Scheme to where it is today.

Next presentation was from George Wall (WIOA) who was able to provide us an update on where Certification of Operators is up to in NSW and what Certification is designed to achieve.

After a brief break and more insightful mingling, Luke Whitten (LPSC) presented on a trial of Sludge Reduction via Bio-remediation for Werris Creek WWTP's Sludge Lagoons. He discussed the results so far and where to in the future.

Adrian Cameron (Tamworth RC) provoked excellent discussion from the floor with a presentation on the replacement of filtration Media at the Calala WTP. He provided a step by step outline on the issues that arose and how they were solved on the run.



*Adrian Cameron presenting.*

Andrew Campbell from Xylem presented the considerations for choosing the right pump for different applications with an in-depth explanation of pump curves.

Xylem also sponsored lunch which was greatly appreciated.

After lunch Rodney Batterham (Liverpool Plains SC) provided details of Quipolly Dam's recent upgrade, which was followed up with a site tour to end the day.



*The upgraded Quipolly Dam.*

We look forward to next year's event to continue the information sharing in our region.

**Contributed by Garth Parker, Liverpool Plains SC**

## WATER QUALITY AWARENESS & DISTRIBUTION SYSTEM MANAGEMENT SEMINAR

Port Macquarie Hastings Council recently hosted two of the WIOA one day Water Quality Awareness & Distribution System Management Seminars at the Wauchope Water Treatment Plant.

The seminars were held on 22nd & 23rd August with a total of 80 water industry employees from Port Macquarie Hastings, Kempsey, Walcha and Mid Coast Councils attending.

George Wall (WIOA) and Murray Thompson (MTWS) were the presenters of the various sessions over the 2 days. The main focus of the seminar was to reinforce the risk that pathogens in our water supply present to the public health of our communities.



*George Wall presenting in Wauchope.*

The material presented made us think about how easily pathogens can be introduced into the distribution network, especially during routine operational tasks (e.g. main repairs, reservoir works). Seeing the Walkerton video helped highlight what we shouldn't be doing, but also how the community may view the water operations staff when there is a water quality incident.

Attendees worked in small groups to share experiences, identify risks and discuss practical measures that could easily be implemented in daily tasks to prevent pathogenic contaminants from entering the distribution system.



*One of the work groups at Wauchope.*

As with all WIOA events, this was a great opportunity for all involved to learn from each other and network.

We would like to thank the organisations that allowed staff the time to attend, George and Murray for sharing their knowledge and all the attendees for participating.

Also thanks to the NSW advisory committee for instigating the event.

**Contributed by Danny Roberts, PMHC**



Following on from the success of the water main tapping competition at our Queensland conference in June, the inaugural Victorian event was staged at the Bendigo conference. The competition was proudly sponsored by Reece Civil and Coliban Water. A big thank you is extended to both these organisations for supplying all the equipment for the competition.

The Committee and participants of the Network Operator Development Program were given the task of looking after and running the event and they did a fantastic job.

A rather large crowd assembled to see what all the fuss was about and they weren't disappointed. A total of eight teams participated over 4 heats and they were all in the running to win the magnificent trophy put together by Sam Scuito from Goulburn Valley Water.



*Part of the large crowd watching proceedings.*

After months of competitive trash talk between Wannon Water and Goulburn Valley Water (GVW) after the competition was announced, their teams were on first in head to head battle. With Neville Whittaker from GVW on the microphone as event MC, he let everyone know that there was no question that the "GV Super Heroes" would trounce the "Wannon Water Rats".



*The Wannon Water Rats (L) and the GVW Super Heroes with MC Nev Whittaker in the centre.*

It seemed that the capes got in the way of the super heroes a bit too much, and the Wannon team ran out very comfortable victors. No doubt Nev was a bit shaken by the end result and we're not sure if either of the GVW guys are still employed.



*The GVW Super Heroes under way.*

Nevertheless, with Wannon holding the best time, Nev's attention and encouragement turned to all the other teams – surely one of them would knock off the Wannon Water Rats. He didn't care who, "just one of you make sure you beat them!". One by one they came and went leaving Wannon in the lead. In their brave bid for victory and ultimate glory, some cut their hands on the tools and others got totally soaked on a rather cool 10 degree day outside.



*Jarryd from Westernport Water getting a good soaking.*

Neville's desperation was becoming more and more evident and with only one heat to go, it looked like Nev's worst fears were going to be realised with a Wannon Water win. It all came down to the very last heat and he pinned all his desperate hopes onto the experienced team of Heath Matheson and Denny Anderson from Central Highlands Water, a couple of the NODP participants.

Much to Nev's delight and Wannon's dismay, Heath and Denny not only won their heat, they recorded the best time out of all the teams.



*Denny (L) and Heath straight after being announced as winners.*

For winning the competition, Denny and Heath received the Perpetual trophy and the opportunity to donate \$1,000 supplied by sponsor Reece Civil to their chosen charity. They chose WaterAid as the recipient.

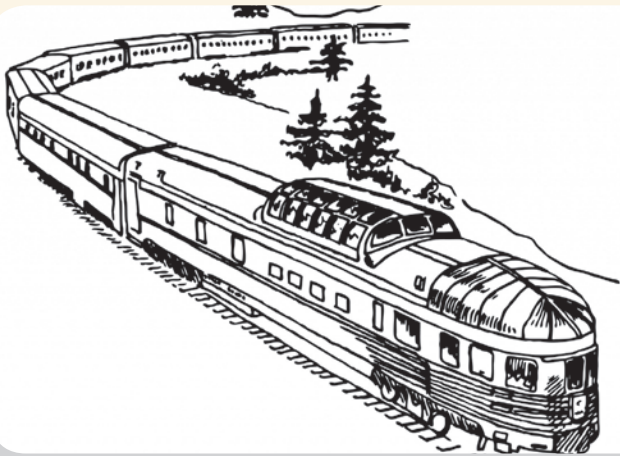


*The winners, Heath Matheson (L) and Denny Anderson proudly displaying the very impressive trophy.*

We look forward to even more teams entering next year, and we hear that some are already out practicing.

## FATBERGS – THE LURKING MENACE!

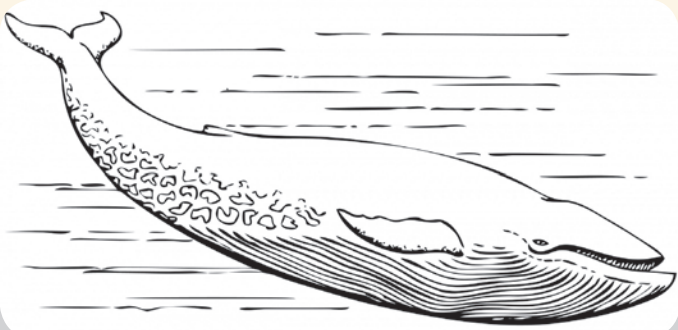
In September 2017 Thames Water reported the discovery of a 250 metre long Fatberg clogging up a sewer in Whitechapel, London. The Whitechapel Fatberg is one of the largest ever found, weighing-in at an impressive 130 tonnes!!



*The Whitechapel Fatberg measured over **250m long!** That's equivalent to 20 train carriages!*

Fatbergs are a major problem for Thames Water, who service around 15 million customers, and spend around AUD\$1.7 million a month clearing blockages from its sewers in London and the Thames Valley.

When it comes to Fatbergs of this magnitude it becomes a major effort in manpower and equipment. Thames Water staff describe it as trying to break up concrete, as they use jet powered hoses to break up the mass before sucking the lumps out with tanker trucks for disposal. Progress is slow and difficult, with around 20-30 tonnes per shift being removed by teams of operators kitted out in full coveralls and breathing apparatus (Thames Water news release, 12th September 2017)



*At **130 tonnes**, the Whitechapel Fatberg weighed in around the same as a blue whale!*

### Are Fatbergs a problem in Australia?

The short answer is, Yes!

Sydney Water has reported one million kilograms of material, generally presenting as these congealed masses of fats, oils and wet wipes, having been removed from their sewer system in a two year period.

In Melbourne, Yarra Valley Water have estimated they remove over 100,000 kg of similar materials from their sewers every year.

Icon Water, in the ACT, have previously reported that they experience around 1 sewer pump blockage every three days as a result of these materials in their sewer system. (Adapted from Utility Magazine, 27th July 2015).

### What is the industry doing to prevent Fatbergs?

The key is education and changing customer behaviour. Many water utilities around the world have active education campaigns to inform customers of the issues and risks of pouring oils and greases down drains and flushing non-degrade-able materials.

In the wake of the Whitechapel Fatberg, Thames Water launched a Youtube video campaign giving customers useful "Fatberg Fighting Advice".

Since 2015, Sydney Water have had a fantastic education campaign "Keep Wipes out of the Pipes", with some great graphic illustrations of the magnitude of the sewer blockage problems under Sydney, associated with flushing these materials.

The Water Services Association of Australia (WSAA), along with like-minded industry associations and a number of water utilities, are campaigning to have industry standards for flush-ability of products entering the sewer system. Called the "International Water Services Flushability Group", they have developed a draft flushability standard, which is available for public comment.

As both water industry employees and water utility customers, we can all do our bit, by educating our friends, family and neighbours on the risks and hazards of flushing the wrong things down the sewer. Together, we can work together to stop the lurking menace of the Fatberg!

For More Information:

Thames Water: <https://www.thameswater.co.uk/>

Sydney Water: <https://www.sydneywatertalk.com.au>

International Water Services Flushability Group: <http://iwsfg.org/iwsfg-flushability-guidelines/>

## WIOA LOOK-ALIKES



**Colin Nash**  
Filtec



**Bill Collie**  
QUU

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



## SCREENING & GRIT REMOVAL IN SANDY AREAS

CST Wastewater Solutions has introduced high performance inlet screening and grit removal technology ideally suited to wastewater treatment plants (WWTPs) operating in sandy environments.

The latest Smith and Loveless PISTA® 360™ technology – which removes 95% of grit as small as 105 microns. PISTA® 360™ technology eliminates the build-up of grit in downstream aeration basins and sludge digesters of wastewater treatment plants.

The technology is particularly relevant to councils and utilities serving the more than 80% of Australia's population living within 50 km of the coast and more than 72% of New Zealanders living within 10km of the coast, often in sandy areas.

It reduces damage to downstream equipment from abrasion, enhances WWTP reliability, reduces OH&S hazards involved in unclogging systems and helps to prevent environmental spills from blocked and flooded systems.

"PISTA® technology has set the global benchmark for grit removal for many years. It far exceeds the established standard for grit removal, which has been 95 per cent removal at 250 microns. We are now achieving the same removal efficiency at 105 microns (140 mesh), this latest technology sets an entirely new benchmark," said Michael Bambridge, Managing Director of CST Wastewater Solutions.

The V-Force Baffle™ allows for a full 360 degrees rotation through the inlet and outlet, providing maximum travel of the wastewater for the most effective grit removal before proceeding to downstream treatment processes. The baffle acts as a "slice weir" to control the water level in the main chamber and in the inlet channel. A 10:1 turn down in performance is achievable with this the system.

"By increasing chamber velocity during low flow periods, the baffle extends the grit extraction path within the vortex grit chamber. This is the key, because a longer path increases the amount of grit being captured on the chamber's flat floor."

Benefits of the V-Force Baffle™ include:

- 95% grit removal efficiency down to 140 mesh particle size.
- Construction cost savings due to decreased overall grit system footprint.
- Increased grit chamber velocity during low-flow periods.
- Elimination of the need for downstream level control devices.
- An ability to handle a wide range of flows.

For further information contact Mr Michael Bambridge, on 02 9417 3611 or by email: [info@cstwastewater.com](mailto:info@cstwastewater.com)



Michael Bambridge (R) and Joe Gill pose with a scale model of the latest Smith and Loveless PISTA® 360™ technology.

## LOW PRESSURE UV SYSTEMS DELIVERING SUSTAINABLE RESULTS IN PUBLIC POOLS

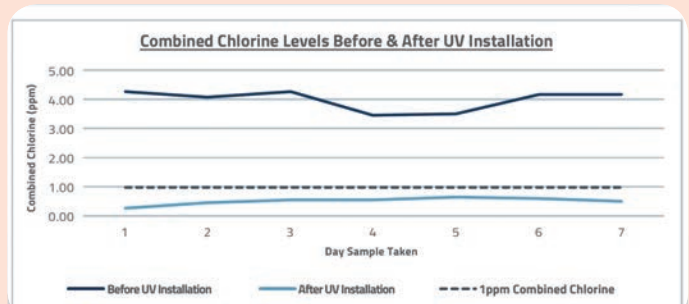
Public swimming pool operators are increasingly required to consider swimmer health and comfort by minimising combined chlorine levels.

Combined chlorines (or chloramines) are responsible for sore eyes, skin irritations and asthma attacks. It's the combined chlorines that give swimming pools the nasty "chlorine" smell. They are also responsible for the rapid corrosion of swimming pool equipment.

Conventional theory recommends medium pressure UV disinfection systems for use in public swimming pools. However, pool operators looking for energy savings are increasingly turning to low pressure UV systems.

Studies in Australia and overseas have all recorded combined chlorine levels below 1ppm using low pressure UV systems.

Earlier this year, a public swimming pool located in Melbourne, Australia installed one of UV-Guard's low pressure UV systems. Over a 7 day period, on-site water quality testing recorded average combined chlorine concentrations of less than 0.5ppm. That's a combined chlorine reduction of approx. 90% since installing the low pressure UV system.



7 day time shot showing Combined chlorine levels before and after installation of a UV water system at a public swimming pool in Melbourne.

Environmentally conscious pool operators are choosing low pressure over medium pressure UV systems because of their sustainability attributes. They include:

- 3 times more efficiency - less power is required to achieve an equal UV dose
- 2 times the lamp life - fewer replacement lamps and lower maintenance costs
- Lower risk of overheating during intermittent flow

Low pressure UV disinfection systems are proving to be a viable and cost effective solution to maintaining water quality in public pools. UV-Guard is leading the way by providing well designed water treatment systems for a wide range of aquatic applications including spas, aquatic play pads and wading pools.

For more information, contact one of UV-Guard's specialist engineers on 02 9631 4900 or visit [www.uvguard.com](http://www.uvguard.com)

### TECH TIP - DECODING THE DIFFERENCES IN FILTER NOZZLES

'You get what you pay for', the old adage goes. When it comes to investment in filter nozzles, saving money with a cheap product now could well cost a fortune later.

The differences between cheaply made, poorly designed products may not initially be obvious, but they will be down the track. The financial ramifications of buying inefficient filter nozzles or using an unreliable supplier can cost much more than any potential saving.

A few crucial things to consider when investing in filter nozzles:

1. Are the slot sizes consistent?
2. Is it strong and robust enough to withstand the forces imposed on it?
3. Do you need your filter nozzles to perform at their peak for many years?
4. Is your supplier focused purely on sales or can they also offer advice?
5. Is the raw material used high quality – especially for drinking water applications?

#### Slot size consistency

Consistency and accuracy of slot size is an important indicator of a quality filter nozzle. The slots serve 4 main purposes:

1. Preventing fine filter media from passing through the nozzle and entering the plenum floor
2. Enabling the filtered water to easily pass through the nozzle
3. Providing a uniform distribution of backwash water and air
4. Providing consistent calculated back pressure across the filter for backwashing.

Inconsistent slot sizes are the result of imprecise manufacturing processes, often a feature of cheap imports. Manufacturing a high-quality nozzle requires cutting edge technology, extensive testing and a commitment to continuous improvement.

#### Quality and durability

Construction or refurbishment of facilities such as commercial pools or water treatment plants are major and costly undertakings. Replacing filter nozzles within the first few years, or even months, can be a costly and avoidable exercise.

Quality sand filter nozzles last decades because they are made of high quality, durable raw materials, backed by material certification, along with many years of experience and engineering design.

Manufacturing cheap nozzles comes at the expense of dimensional accuracy and consistency, and the quality of the material they are made from. In some cases, cheap products have failed within months of installation, requiring removal of all of the filter media and replacement of the nozzles, causing major disruption.

Suppliers should stand by their manufacturing quality by offering material certificates for their products – especially for drinking water applications, and after sales support.

#### Consulting and advice

Do you have a sand filter nozzle requirement that can't be met by any product on the market? A good supplier isn't just focused on sales, they can offer specialist design advice. They can also potentially save you money by devising alternative solutions you may not have considered.

In some cases, you may have filter nozzles that require replacing but are no longer available to purchase. A good supplier can arrange to have your filter nozzles replicated. In addition, they will also be able to flow test your existing nozzles to see if they offer exactly what you need, and see if they can be improved on to create a solution that saves you money and provides a more efficient system.

While filter nozzles may only be a small part of a major refurbishment budget, investing in something of low quality can see a major cost in remedial or replacement works later. By researching your products and receiving good advice, your small investment may even buy you more than you paid for.

For more information contact Tecpro Australia today on (02) 9634 3370 or by email at [sales@tecpro.com.au](mailto:sales@tecpro.com.au)

### FIBRE OPTIC LEAK DETECTION SYSTEM

Undetected Pipeline Leakage is one of the most environmentally and financially damaging risks to any oil, gas or water pipeline operator. Undetected leaks often result in a loss of product, environmental damage, fines, and infrastructure damage, not to mention the potential safety risk uncontrolled leakages pose.

Hawk has developed a state-of-the-art pipeline leak detection system utilising an infield fibre optic cable, which not only informs you about the occurrence of a leak, but gives an accurate location of any potential leakage allowing for extremely rapid infield assessment and repair. Part of HAWK's solution involves the combination of multiple measured variables within one cable such as sound, temperature and vibration, allowing the system to automatically cross reference and remove false signals.

Through the use of multi variable sensing, a single Fibre Optic System (FOS) is capable of detecting:

- Changes in temperature, caused by liquid or gas movement in pipe leaks
- Detection of sound and vibration from pipe leaks
- Change in stress / strain experienced due to pipe bending or loss of support

The FOS solution is a next generation monitoring system that provides predictive analysis capabilities to allow better informed decisions to optimise the service life of pipeline assets.

It is able to seamlessly integrate into an existing digital control system or supervisory control and data acquisition (SCADA) and alert operators through a variety of digital protocols or simply connect a screens, mouse and keyboard to operate and observe the unit directly through the a built-in human / machine Interface.

For more information, visit the website [www.hawk.com.au](http://www.hawk.com.au) or contact Mathew Cook email [mathew.cook@hawk.com.au](mailto:mathew.cook@hawk.com.au)



### INTERLOCKING PLATFORM LIFTING BAGS

Interlocking stackable Pronal heavy lift cushions are being introduced by Air Springs Supply for heavy horizontal raising and rescue tasks across major sectors, including automotive, construction, electrical, infrastructure, materials handling, resources, transport and government utilities.

The CPF 10 bar (145psi) Platform Lifting Bags – with individual starting thicknesses of just 25mm and individual lifting capacities up to 84.6 tons – can be stacked in threes for extremely stable lifts up to 510mm.

Their flat, interlocking tops and bottoms make them a most forgiving and effortless lifting solution in compromised and difficult stabilisation situations including in softer, irregular and remote areas, says James Maslin, National Sales and Marketing Manager for Air Springs Supply, which is national distributor for Pronal products. Areas in which the CPFs excel include:

- Lifting of pressure vessel, electrical machinery and fabricated steel components, including manufacturing, energy utility and infrastructure environments
- Emergency removal of heavy weights (slabs, beams) from trapped people and objects, including construction and resources developments
- Machine height adjustment in multiple industrial and materials handling environments
- Raising of vehicles and mobile machinery, including recovery operations in civil and industrial environments
- Maintenance services.

Available in individual lifting capacities of 31.4 to 84.6 tons, the five models of CPF bags weigh from just 11 to 26kg, adding to their safe ease of handling and positioning in awkward and emergency situations.

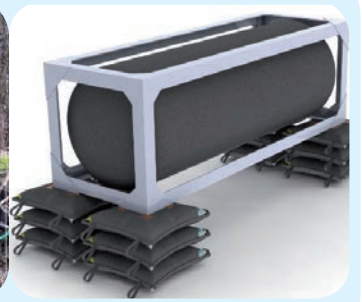
“These robust, smooth and powerful lifters are the ideal product to lift heavy horizontal objects effortlessly,” says Mr Maslin.

The cushions’ flat, interlocking tops and bottoms enable them to be safely and easily stacked in threes, offering a most forgiving and safe solution in stabilisation situations. A secure lifting column is created by the weight of the object being lifted and the surface of the lifting bag.

CPF lifting bags offer:

- Constant lifting power during the entire lift
- Safety factor of 3 (bursting pressure V working pressure)
- High burst pressure
- Operate in conjunction with conventional control systems
- Maximum stacking in threes
- Accessories including Deadman controllers, inflation hoses, adaptors, shut-off unit and pressure regulator

Information about Pronal products can be obtained through the Pronal website of Air Springs Supply Pty Ltd, [www.pronal.com.au](http://www.pronal.com.au). For more information about Air Springs Supply’s national distribution and technical support network, contact Air Springs Supply on (02) 8877 5500, or at [sales@airsprings.com.au](mailto:sales@airsprings.com.au)



### PRESERVING WATER INFRASTRUCTURE

Aeramix is working with Downer Utilities Australia to provide infrastructure preservation works at the Sunbury Recycled Water Plant as part of a significant upgrade to the facility. Downer Utilities are delivering the Design, Build, Operate and Maintenance of the upgrade for a period of 10 years on behalf of Western Water.

The plant is being upgraded to accommodate for high population growth expected in Sunbury and Diggers Rest in Victoria and will increase wastewater treatment from 5.9 million litres per day to 9.2.

An important element in sustaining this asset is the preservation of its concrete structures, both new and existing. Aeramix is supplying and installing protective coatings, waterproofing membranes, joints and carbon fibre to storage and transfer tanks at the facility as well as preparing all surfaces through high pressure water blasting and disinfecting.

“This is a recognition of Aeramix expertise and experience in protecting and maintaining vital water related assets and in line with our growing vision of ‘Enhancing Communities’. Our sincere thanks to Downer Utilities and we look forward to delivering quality results”, says Aeramix CEO, Cole Harvey

Aeramix is continuing to grow its experience and capability in structural protection offering a range of preservation, rehabilitation and structural protection solutions for concrete structures across a broad range of industry sectors including water, transport, mining and marine.

For further information or to understand how Aeramix can assist and enhance your project please contact: Jim Barraza – 0455 116 639 – [jimb@aeramix.com.au](mailto:jimb@aeramix.com.au).



Sealing inlet works.

## 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:

Emily Falvey, Russell Bates, Hilary Hall, Joshua Hoath, Simon Rooney, Rachael Brownstein, Simon Robertson, Paul McLeod, Hans Van der Sant, Jeff Van den Oever, Russell Healey, Anthony Esdaile, Kevin Lloyd, Dale Canning, Andrew Menzies, James Gavin, Tony Dwyer, Shanli Zhang, Carlotta Rodriguez, Kevin Pridmore, Terry Whittle, Jarred Simpkin, Nick Swan, Paresh Modi, Mark McNeil, Daniel Daye, Denny Anderson, Mark Botica, Adam Williams, Jessica Asbury, Brendan Meade, Tom Wells, Danny West, Teena Betteridge, Joshua Potter, Neville Wone, Gene Cole, Jodie Towning, Gary Butler, Keith Healey, Wayne Thomas, Phil Boshoff, Luke Ayres, Nick Ballard, Jason Ricks, Malcolm White & Michael Bashford.

New **Utility Corporate Members** include:

Nil

New **Corporate Members** include:

Redox, Hydro-dis, TracWater, Enviro One Services, Utilita Water Solutions & Alvi Technologies.

## 20 YEAR MEMBERS

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

This year there are another 14 Individual Members who have qualified for the 20 year recognition pin. The recipients of the pin in 2017 are: Andy Ban Ho, John Day, Don Edwards, Anthony Evans, Robert Grimmer, Tony Hourigan, Paul Keating, Brian McCarthy, Robert Mills, Pat Monaghan, Andrew Robbins, Peter Tolsher, Kay White and Wes Wittick.

Congratulations to you all.



## WORDS OF WISDOM

IF YOU THINK YOU CAN OR  
YOU THINK YOU CAN'T,  
YOU'RE RIGHT.

-HENRY FORD

## COMING EVENTS

### 2017

- 20 November **Victorian Network Operator Development Program**, applications close
- 23 November **South Australian Water Interest Day**, Happy Valley WTP, Adelaide
- 28 November **Victorian Operations Interest Day**, Desalination Plant, Wonthaggi
- 29 November **Queensland Water Interest Day**, Gladstone
- 6 December **Tasmanian Wastewater Interest Day**, Longford
- 12 December **Recertification Webinar**

### 2018

- 28 February **PASS Award applications close**
- 20 July **Kwatye Award applications close**

### 2018 Conference and Exhibition Schedule

- 11 & 12 April **12th WIOA NSW Water Industry Operations Conference & Exhibition**, Tamworth
- 6 & 7 June **43rd WIOA QLD Water Industry Operations Conference & Exhibition**, Logan
- 5 & 6 Sept **81st WIOA VIC Water Industry Operations Conference & Exhibition**, Bendigo

## 2017 Committee

### President

**Adrian Rijnbeek**  
Mob 0419 698 367

**Lindsay Walsh** Mob 0427 105 421  
Chairman NSW Advisory Committee

**Colin Haynes** Mob 0419 763 054  
Chairman Queensland Advisory Committee

### Vice President

**Heidi Josipovic**  
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**Robran Cock** Mob 0407 226 130  
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**Darren Lord** Mob 0417 506 480  
Chairman Tasmanian Advisory Committee

**Anthony Evans** Mob 0419 103 885  
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**Ryan McGowan** Mob 0440 055 508

**Simon Page** Mob 0447 058 377

**Mark Samblebe** Mob 0400 126 141

**Sally Taylor** Mob 0409 307 554

**Stephen Wilson** Ph (03) 5227 2301

## NEXT EDITION

**Article Contribution Deadline for the next edition is 12 January 2018**

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