

# OPERATOR

November 2013 Edition



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Victorian Operator of the Year, Stephen O'Keeffe from Goulburn Valley Water. Read about him on page 8.

Former President Len Morris and Russell Mack with the 40 year anniversary cake.



John Day, our newest IDIOTS member. More on page 5.

Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

## PRESIDENTS PRATTLE

Hi Folks, welcome to the November edition of "Operator". I have been back in the President's seat for only 6 months but there has been plenty going on!

Since April, three very successful conferences have been held in Canberra, the Gold Coast and Bendigo. We used the Bendigo conference to help celebrate the 40th Anniversary of WIOA's formation with a special dinner to which all the past Presidents, Secretaries and Life Members were invited. There was a "this is your life" style run through history, ably narrated by Stephen Wilson, where we recognised the achievements of the organisation and the people involved. We even had a birthday cake with Len Morris (Pres 1985) and myself given the privilege of blowing out the candles.

On the same night, we recognised one WIOA member who has served the association with distinction over a number of years and who has demonstrated commitment to the vision and philosophies of the association. Former President John Day joined 26 others who have gone before him when he was Inducted as a Delegate of the Inextricably Obstructed Tap Society, a group that is affectionately known as IDIOTS. There is more on John later in this edition.

We also held a Special General Meeting at the Victorian conference in Bendigo to make some changes to the WIOA constitution made necessary by amendments to the Associations Incorporation Act. Thank you to our Committee and Members for your contribution to making this happen.

WIOA's membership now exceeds 2000 and it is growing each year. Having more people joining and involved makes the association stronger and more relevant for all of our members. WIOA endeavours to provide valuable business, educational, networking and learning experiences, along with the opportunity for individuals and companies to get involved. One of the major benefits of joining an industry association like WIOA is the sense of belonging and the joy of making new friends.

We have recently established two new WIOA Advisory Committees in New South Wales and Victoria respectively. They join the groups in Queensland and Tasmania that have been operating for a few years, and all are very active. These Committees are a vital component of our future structure and have an important role to play in providing feedback to the WIOA Committee and Board on initiatives, ideas, or issues

from the member perspective. They are also helping to coordinate networking and knowledge sharing opportunities by identifying specific training needs and the staging of seminars, plant tours, and even charity functions. We are always looking for assistance, so if you have a passion for what we are doing or some specialist knowledge to share and would like to get involved, contact our office and we will point you in the right direction.

Arrangements are going ahead full steam for the 2014 conferences. Next year's events will be at Orange NSW, in the Brisbane area for Queensland (venue to be confirmed shortly) and at Bendigo in Victoria. To make these events successful requires input from you - our members. Like anything in life, you only get out of it what you put in. We are always looking for technical papers, poster papers and articles for our publications. Even though you may not think so, we are all doing work that is of interest to others in the industry, so sharpen your pencil and share your experiences.

For the southern states we are heading into the warmer weather and with that comes the risk of fires and droughts. For the people up North, the wet season approaches with its own challenges of severe storms, possibly cyclones and resultant floods. For all the rest of you, I assume you live in Nirvana where every day is "living the dream!". But seriously, there will be challenges out there for our members and their organisations and as a whole, the water Industry has a wealth of knowledge to be able to deal with these scenarios. If you find yourself needing advice or assistance, please don't be afraid to put your hand up because somewhere in the country someone has more than likely been through a similar experience before. WIOA can assist in putting people together or publishing requests for information.

The 2014 WIOA AGM and Weekend Seminar will be held at the Airport Motel & Convention Centre, Attwood (Victoria), near the Tullamarine airport on 1 & 2 March 2014. We look forward to a strong turnout and we suggest you lock the dates in your diary now.

The Christmas/Holiday period is fast approaching, so to all our readers please have a safe and enjoyable time and I look forward to meeting as many of you as I can in 2014.

Cheers,

**Russell Mack** – WIOA President



*Some of the past Presidents, Secretaries and Board Members*

## PROFILE OF A MEMBER



**Name:**  
Heidi Josipovic

**Position:** Operations  
Systems Project Officer

**Employer & Location:**  
North East Water  
(Wodonga)

**How long have you worked in the water industry and what attracted you to it?**  
My interest in the water industry began in 2007 when I received the Environmental Group

Prize for Wastewater Management provided by EGL and WIOA whilst at University. This prize included full registration to the WIOA Bendigo Conference, and I have worked in the water industry ever since. I started as a Waste Water Treatment Plant Operator with EGL then Gold Coast Water for 3 years before moving into Environmental Compliance and Process Engineering for a further 2 years. I then moved back to Victoria to start my current position with North East Water.

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

The people I work with!!! And the diversity of my position, in the field and in the office.

**What are the major challenges in your current role?**

Having 21 Water Treatment Plants and 19 Waste Water Treatment plants that all require the same attention (And the three days after WIOA Bendigo Conference)

**How long have you been a WIOA member?**

I joined in 2007 for a year and then re-joined when I started with North East Water and have put my hand up as a member of the Victorian Advisory Committee.

**How do you relax?**

Walking my little Stan (dog), and after work drinks on a Friday.

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

Wodonga – The best thing about it is my job, it's close to my family, the people here are easy going, and it is surrounded by a beautiful country side.

### QUICK QUESTIONS

**Age:** 26

**Nickname:** Heidz

**Pets:** Stan and Tanus dogs and Pastello horse

**Favourite food:** Biscuits and dip only when served with Wine and Beer

**Least favourite food:** Celery (honestly who eats celery because it tastes good?)

**Favourite TV show:** Game of Thrones and Sons of Anarchy

**Worst TV show:** Neighbours

**Favourite Movie:** Shawshank Redemption and Austin Powers

**Favourite Musical artist/s:** Pink

**Favourite book:** Anything that eventually comes out in a movie.

**Favourite team:** Essendon

**Ambition in life:** Live a long and happy life

**Hobbies:** Horse riding, netball, and soon hockey

**Best Trait:** Positive outlook on life... and not to forget Karaoke singing

**Worst Trait:** Driving a manual car

**Four people to invite to dinner:** Pink, Nicholas Cage, Matt Damon and Josh Hartnett

## THE LOST BADGE

WIOA has only awarded 5 Life Memberships in its 40 year history. You could imagine our surprise when we found a WIOA Life Membership badge lying on the floor at the Bendigo conference centre.

Given that there were only three Life Members at the Victorian conference, we quickly worked out it didn't belong to George or Ron Bergmeier, leaving only Barry Waddell as the culprit.

Obviously, once he realised his predicament, Barry did everything in his power to find the lost article without raising the suspicions of anyone that may know the significance of his error. By the end of the day, and after asking lots of cryptic questions to the wrong people, Barry had a fair idea the badge had been located.

You can imagine Barry's surprise though when our entertainer, none other than someone that looked a fair bit like Kevin Rudd, arrived with the missing badge securely fastened to his lapel. This fact was not missed by Barry and his usual red face went more like a purple colour. The wayward badge was duly re-presented to its rightful owner up on the stage much to Barry's embarrassment.



*Barry being re-presented the Life Member badge by "Kevin Rudd"*

## WIOA BUILDING NETWORKS

As WIOA expands our reach, influence and membership numbers, it is important that we continue to build strong, collaborative relationships with other organisations with similar goals and ideals to us.

In 2007 and then 2010, we signed off a Memorandum of Understanding (MoU) with the Water Industry Operations Group NZ - our Kiwi "operations" cousins. A three year review period was deliberately set to ensure that both organisations would continue to work on and develop our relationship, based on a partnership arrangement, and ensure we achieved results on either side of the Tasman. After some discussions at the 2013 Bendigo conference about how the relationship was going, we updated the contents of the MoU and we are pleased to report that it has been signed off for another three year period.



George Wall, Russell Mack, Mike Monghan (WIOG Chair) & John Clemens (WIOG EO)

In 2010, we also developed and signed off a MoU with the Queensland Water Directorate (**qldwater**). This MoU has also been recently reviewed and updated.

The relationship between the two organisations has been building strongly with a number of initiatives implemented in the last few years. In particular, the awarding of the Queensland Young Operator of the Year and the Queensland Operator of the Year (Civil Works) has been a great reward for some very worthy operators and a positive outcome of the relationship. Like WIOA, **qldwater** has a strong focus on operator development and training initiatives and they have assisted WIOA to deliver training seminars in a number of Queensland locations. There are also some technical plant reviews and mentoring of operators on plant operations under way in some of the more remote areas of western Queensland as well.

We look forward to continuing to work proactively with all our existing industry partner organisations and no doubt, we'll be adding to the list in the future.



George Wall and Dave Cameron from **qldwater**

## WHEN THE NUMBERS DON'T ADD UP

At Gippsland Water's Sale WTP we have planted a number of native trees along the adjacent waterway "Flooding Creek". I was doing an inspection of the trees and noticed that we had had an animal in this protected area and it had left a trail of destruction and faeces in their wake. On closer inspection I could see a dead animal on the other side of the creek which looked like a Friesian cow. That will teach it I thought. Trying to do the right thing, I proceeded to contact four different authorities, Gippsland water, the Local council, the catchment Management Authority and the EPA to determine who was responsible to remove this animal from next to the waterway? Note this creek is not used for water supply to town!

Before officially reporting the incident I thought I would have a closer look at what I had reported as a cow to see if I could find any identifying ear tags or markings. I ventured down to the creek I was about 5 meters from the carcass but it was looking a bit strange so I found a way across the creek and had a closer look only to discover that my cow had feathers and was actually a Pelican!! "They are a bloody big bird". So with my tail between my legs and a crimson face I had to notify every one of my mistake. So in the future I won't make the mistake of adding one and one together and coming up with a cow!

**Contributed by**  
WIOA President  
Russell Mack



## NEWEST IDIOTS MEMBER

At the Bendigo conference, John Day was Inducted as a Delegate of the Inextricably Obstructed Tap Society and became the 27th WIOA Member to join the IDIOTS fold. In presenting the award, Peter Tolsher did a spiel on John and outlined his service to WIOA over the years.

John joined WIOA in April 1998 – so he has been a member for over 15 years.

His first formal involvement with WIOA was also in 1998 when he delivered a paper at the Victorian conference held in Shepparton. His paper on “controlling odour from an industrial treatment plant” was very well received and he was awarded 2nd place in the Actizyme Award. Most people would have been excited with a second place, but it seemed to make JD even more determined to win the award outright, particularly when Russell Mack came first that year.

He backed up again in 2003 doing another paper at the Victorian conference, coincidentally held in Shepparton again. The paper - this time on “detecting odour potential at an industrial treatment plant”, had little opposition and it won both the Hepburn Prize for best paper overall and the Actizyme Award for the best operator paper. For those who can remember this far back, John's acceptance speech was pretty special with a staged phone call and heaps of tears in the middle of it.

Not long after this, he moved to the Northern Territory and then later to Alice Springs. He kept his commitment to WIOA going by signing up a heap of Power & Water guys as members. He also arranged to get George, then Cynthia, up to the Territory to speak about WIOA at the annual Power & Water operations staff gatherings.

In 2006, he came back to the Victorian conference with a couple of his NT colleagues in tow. Entries in the Operator poster section were a bit low so John agreed to help us out and put one in. True to form, he picked up the Water Industry Training Centre prize for the Best Operator Poster.

In May 2006, John accepted a position on the WIOA Committee to fill a casual vacancy and he has been on the Committee ever since. He was Vice President in 2009 & 2010 and then President in 2011 & 2012, handing over the reigns to Russell at the AGM in March this year.

He moved back to Victoria in 2007 as a District Manager with Goulburn Valley Water before moving to North East Water in 2011 as Executive Manager – Operations. In both these roles he has continued to spread the message about the benefits of being involved with WIOA. He has also encouraged his own staff to become WIOA members, has pushed them to put in papers or posters and to get involved at WIOA seminars.

John has never been a shrinking violet – he is always “out there” with his opinions, so we’ll never

die wondering what he thinks. Occasionally he gets a bit boisterous but we know he always has the best interests of the Association and our members at heart.

Like all IDIOTS before him, John was set a challenge to demonstrate his suitability for receiving the award. John is a keen swimmer and regularly participates in the Lorne pier to pub swim. Interestingly, former Victorian Premier (and apparently one of JD's best mates), Ted Bailleau is also a regular at the pier to pub swim. After visiting the 2006 conference as Opposition leader, in John's words – “Big Ted is a shoe-in to open the conference once he becomes Premier”. Unfortunately, we're still waiting!



John Day and Ted Bailleau at the 2006 Bendigo conference

Amid lots of “goat noises”, some other IDIOTS assisted with a range of props designed to help the initiation process. John was blindfolded as he was being kitted up in his budge smugglers, goggles, floaties and flippers.



John in all the attire

Once suitably attired, his task was to swim to the other side of the room and rescue his good mate Big Ted who was apparently drowning.

John undertook the challenge with a heap of flair and enthusiasm and is a very worthy recipient of the award. Congratulations!



Big Ted rescued

# VICTORIAN CONFERENCE WRAP UP

On the 4 & 5 September 2013 over 1,350 people attended the 76th Annual WIOA conference in Bendigo. The conference included keynote presentations by Mr Marcus Crudden from the Essential Services Commission who provided the opening address and Dr Karl Braganza from the Bureau of Meteorology who enthralled delegates with his keynote presentation on climate monitoring and some of the less understood data that he was able to provide.



Karl Braganza delivering the Keynote Address

Just over thirty platform and poster presentations were delivered over the two days by engineers, operators and staff from supplier companies. The papers were very well received and were extremely relevant as they provided some great insight into options to manage a variety of operational issues.

Some 145 companies filled the 183 display sites and exhibited the latest in equipment, services and process technologies available to the water industry.

The conference was hosted by Goulburn Valley Water and Goulburn-Murray Water with major sponsorship provided by the Automation Group, Acromet Australia, Peerless Epigen and Xylem.

The event concluded with the official awards ceremony, which Stephen O'Keeffe from Goulburn Valley Water won the major award, the 2013 Wal Whiteside - Victorian Operator of the Year and East Gippsland Water won the award for the Best Tasting Water in Victoria.

## AWARD WINNERS

### Victorian Operator of the Year

Stephen O'Keeffe - Goulburn Valley Water

### Victorian Young Operator of the Year

Aaron Mitchell – East Gippsland Water

### Ecolab Prize for Best Paper by an Operator

1st Jarrah Feather - East Gippsland Water

2nd Peter Murphy - Yarra Valley Water

3rd Daniel Haworth - Tenix

### HEPBURN Prize for Best Paper Overall – sponsored by Iwaki Pumps Australia

Catherine Huf - Wannon Water

### Water Industry Training Centre Prize for Best Poster

1st Ben Marsden - Wannon Water

2nd Rylee Duffus - Gippsland Water

3rd Adam Bauerle - Goulburn Valley Water

Host corporations, Goulburn Valley Water and Goulburn-Murray Water both chose Water Aid to be the recipient of the WIOA charity donation and \$3500 was presented to this worthy cause.

### Ron Bergmeier Award for Best Exhibition Display – sponsored by WME

EcoCatalysts

### Orica Victorian Water Taste Test

East Gippsland Water

### Orica Victorian Water Taste Test Finalists

Lower Murray Water

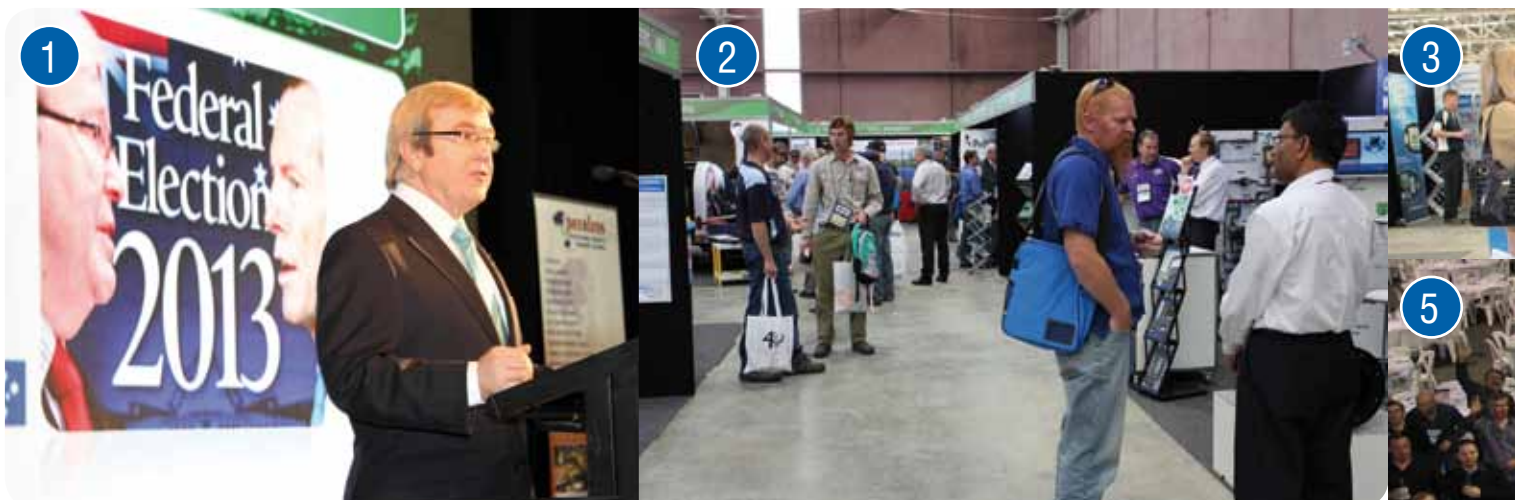
South Gippsland Water

East Gippsland Water

Mt Hotham Resort

### Kwatye Prize – sponsored by Thermo Fisher Scientific

Mick Clewes from North East Water, Victoria





Alex Maderasi (R) congratulates Jarrah Feather from East Gippsland Water, winner of the Best Paper by an Operator.

**ECOLAB®**



Catherine Huf (L), winner of the Hepburn Prize for Best Paper Overall, being congratulated by Sulio from Iwaki Pumps.

**IWAKI**



Ben Marsden (L) from Wannon Water, winner of the Best Operator Poster Paper being congratulated by John Harris.



The EcoCatalysts team won the Ron Bergmeier Award for best exhibition site, represented by David Rae (Center)

**WME**  
Environment Business Magazine



- 1 Our special guest, someone that looked a lot like KR entertains the crowd Thursday night
- 2 Delegates inspecting the exhibition
- 3 The Fluidquip light sabres being put to use by the North East Water girls
- 4 The Kiwi tourists
- 5 Attendees at the Dinner

## STEPHEN O'KEEFFE WINS VICTORIAN TOP AWARD

Goulburn Valley Water (GVW) Water Treatment Plant Operator, Stephen O'Keeffe, has been awarded the Wal Whiteside Victorian Water Operator of the Year at the Victorian conference in Bendigo.

Stephen was awarded the prestigious water industry award in recognition of 24 years of service in the industry and for his involvement in GVW projects including the Kilmore Water Treatment Plant fire recovery effort and his project management of the Shepparton Water Treatment Plant DAFF modification works.

GVW Manager Operations, Steve Nash, also attended the awards dinner in Bendigo.

"The Wal Whiteside Award is a highly regarded award sponsored by the Victorian Branch of the Australian Water Association and presented at the WIOA Awards dinner. The award reflects the significant contribution that Stephen has made over many years to the water industry. He's a valuable employee with so much industry knowledge, it really is no surprise to us that he was successful," said Mr Nash. "Stephen is deserving of the recognition and it's great to see people associated with Goulburn Valley Water receiving accolades in the water industry."

Stephen said he was not expecting the award and was humbled by his win.

"I was really honoured to come away with the award, it was not expected at all and a really proud moment in my career. Thanks to GVW, in particular my manager Mark Putman and to the team at the Shepparton Water Treatment Plant."



Stephen O'Keeffe (L) from Goulburn Valley Water with Bruce Hammond (representing AWA)



Stephen at work



Stephen watching over GVW MD Peter Quinn in the workshop



## AARON AWARDED YOUNG OPERATOR OF THE YEAR

Aaron Mitchell from East Gippsland Water was announced as the 2013 IWA Young Operator of the Year at the Bendigo conference.

Aaron is 29 years old and has been employed by East Gippsland Water since March 2011.

Aaron was thrown in the deep end somewhat when he was appointed Team Leader Alps and High Country. He has had to develop and utilise many new skills in a very short period. Apart from picking up everything from the operational, treatment and practical side, he has had to quickly learn and implement the managerial aspects of the Team Leader role as well.

He has been extremely proactive in managing OHS issues, being responsible for his own team as well as many contractors. He has developed a number of Safe Work methods along with induction tools for new staff and contractors. Aaron is a very proactive and passionate member of East Gippsland Waters' Regional Safety Committee

Aaron has excelled with his training and has successfully completed both his Certificate II & III in Water Industry Operations in a very short period of time. Prior to joining East Gippsland Water, he completed a Diploma in Conservation and Land Management followed by a Degree in Environmental Science. He is now assisting and passing on much of what he has learnt to other members of his team.

Working in the High Country often in isolated areas, requires very strong commitment to team work. Aaron and his team have managed to meet their KPI's and record a 100% compliance standard with all their regulatory reporting requirements. This is an excellent outcome given that some of the facilities were not necessarily designed to meet all of today's standards.

The challenging nature of the role in the High Country requires constant use of initiative. A "can do" attitude is vital as sometimes help may be days away and the risk of both fire and flood are significant issues to be dealt with constantly. In Aaron's relatively short time as Team Leader his initiative has been pivotal in improving working conditions, safety, minimising risk and achieving efficiency gains for East Gippsland Water.

Aaron can look forward to a long and fruitful career in the water industry if he continues to work at his current high standard.

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



Young Victorian Operator of the Year Aaron Mitchell (L) with Peter Quinn from IWA

# LOVE YOUR MEMBRANES AND THEY WILL LOVE YOU BACK!

Through the relationship between the Qld Dept of Local Govt and Community Recovery & Resilience (DLGCRR), local councils and WIOA, they came together to present a seminar on "Operation of Membrane Water Treatment Plants" on the 24th October, 2013 in Cairns. It was attended by a mix of people in the water & wastewater industry from treatment operators to general managers, from all corners of Far North Queensland (the greatest place in the world!!).

WIOA brought technical experts in Kathy Northcott (Veolia Water) and Brionne Gay (Water Equipment Plus) to present the seminar. The information started with the basics, so even if you haven't seen a membrane plant you were soon caught up on terms like TMP's, Resistance, Flux, and bio fouling. I don't personally work with membranes every day, however I have been lucky enough to spend time at our Mossman UF water treatment plant, so this refresher was definitely useful.

We learned about real membrane plants and common problems using the presenters own experiences in treatment plants, (they weren't afraid to say that they have had their fair share of issues). One of the common problems the group could relate to was the importance of feedwater quality and how that can potentially cause damage to the membranes. One of the standout points made by Kathy was, "feed water quality has a major impact on membrane integrity".

This lead us to Brionne's segment on membrane cleaning, probably the single most important process to prolong the life and efficiency of membranes. She explained backwashing, CEB's, CIP's the different processes and uses. She went on to explain how to monitor membrane performance, with the use of online equipment (turbidity, particle counters), reading trends of flux rate/resistance/LRV/backwash profile and the trusted pressure decay test.

Kathy then touched on membrane monitoring, and maintenance, management and optimisation. Stressing the points of; correct maintenance, feedwater quality (FFI) and recording maintenance information!, and that each plant is a constantly changing system and should be treated as such, "there is no silver bullet" I remember her saying.

We then proceeded to have an open forum on what we took out of the day. Some of the specific thoughts from the attendees included:

- A better understanding of the membrane process.
- Understanding the importance of feedwater quality that can potentially cause damage to the membranes.
- Learning about the real membrane plant problems and solutions.
- The seminar demonstrated a need for correct maintenance which can lead to cost savings.
- A critical need for SCADA to accurately operate the membrane system and record data.

In conclusion, the seminar provided practical solutions for operators and ground level water industry staff, by people with great real life experiences and expertise; they were approachable throughout the day.



Group shot of all the seminar attendees

The seminar itself was a reinforcement of skills sets that needs to be nurtured, however, just as valuable was the networking that was promoted by the event. The participants from the Cape especially, stressed the need for support. This highlights how important these events are, the pooling of knowledge.

Alex Ung (Cairns Regional Council), Anil Gupta (Qld Gov.) and George Wall (WIOA) all stressed the importance of the continuation of these meetings. We need to keep the momentum going created by these events, and not go back to routine of our jobs, and lose communication with other people in our industry and our region.

**Contributed by** Joe Robinson, Cairns Regional Council

## CAIRNS STP TOUR

As part of the lead in to the Membranes seminar in Cairns organised by DLGCRR and staged by WIOA, a number of operators were provided the opportunity to look over the Cairns STP right next door to the airport.

Many thanks to the team at Cairns Water and in particular Simon Page for doing such a great job in running us through the plant and explaining the processes. It was any eye opener to see the degree of treatment used and how the team managed the process, flows, air and pHs. It was also interesting and very relevant to the training course the next day to see the cleaning and maintenance being undertaken to the banks of membranes on site.

As Simon pointed out corrosion was a big issue (pHs as low as 3!!) which they are addressing by use of appropriate stainless steel replacements and galvanic isolation. Also something operators and engineers mostly miss in design was the issue of harmonics which has been addressed by attenuation (no longer reserved for noisy gen sets and blowers!) Cairns water really use the PASS system well!

Some discussion points made on the run included high quality water reuse and the prohibitive costs slowing down uptake of this valuable and available resource. Other points noted included the relationship between power consumption and plant DO, the resilience of membranes used in STP treatment and the big banger emergency power generator located on site. Some other discussions were missed due to the noise of the planes taking off right next door. Must remember the ear muffs next time!

Overall it was a very interesting and informative afternoon and I'm sure all the attendees took something home (learned I mean!) that they can use at their own plants.

Again many thanks to Anil, Simon Page and all the Cairns RC team for organising the tour.

PS - While George was eying off the boat in the belt press shed, I would have liked to take home an air diffuser or 2 for our plant, but I think in both instances Simon would have noticed!!!

**Contributed by** Peter Kirchmann, Wujal Wujal SC



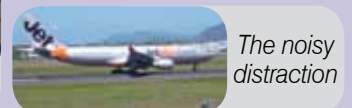
The Cairns STP



The emergency generator



Simon describing the maintenance to the membranes



The noisy distraction

## FACILITIES MEMBERS OPERATE - DARWIN RIVER DAM

Potable water for Greater Darwin is primarily provided from the Darwin River Dam. This is a 205 square kilometre large area, low depth dam that experiences significant evaporation. Water is drawn down through the year, with the majority of use in the Dry Season (May to October) and recharged during the Wet Season (November to April). The dam wall was increased in height by 1.3 m in 2010 increasing its capacity by 20% (i.e. 9,000 ML/year). The dam is in a closed catchments, meaning the only water treatment needed is disinfection.

The other source of Darwin's water is the McMinns/Howard East borefield which provides up to 10% of Darwin's supply. The availability of groundwater increases supply diversity for Darwin.

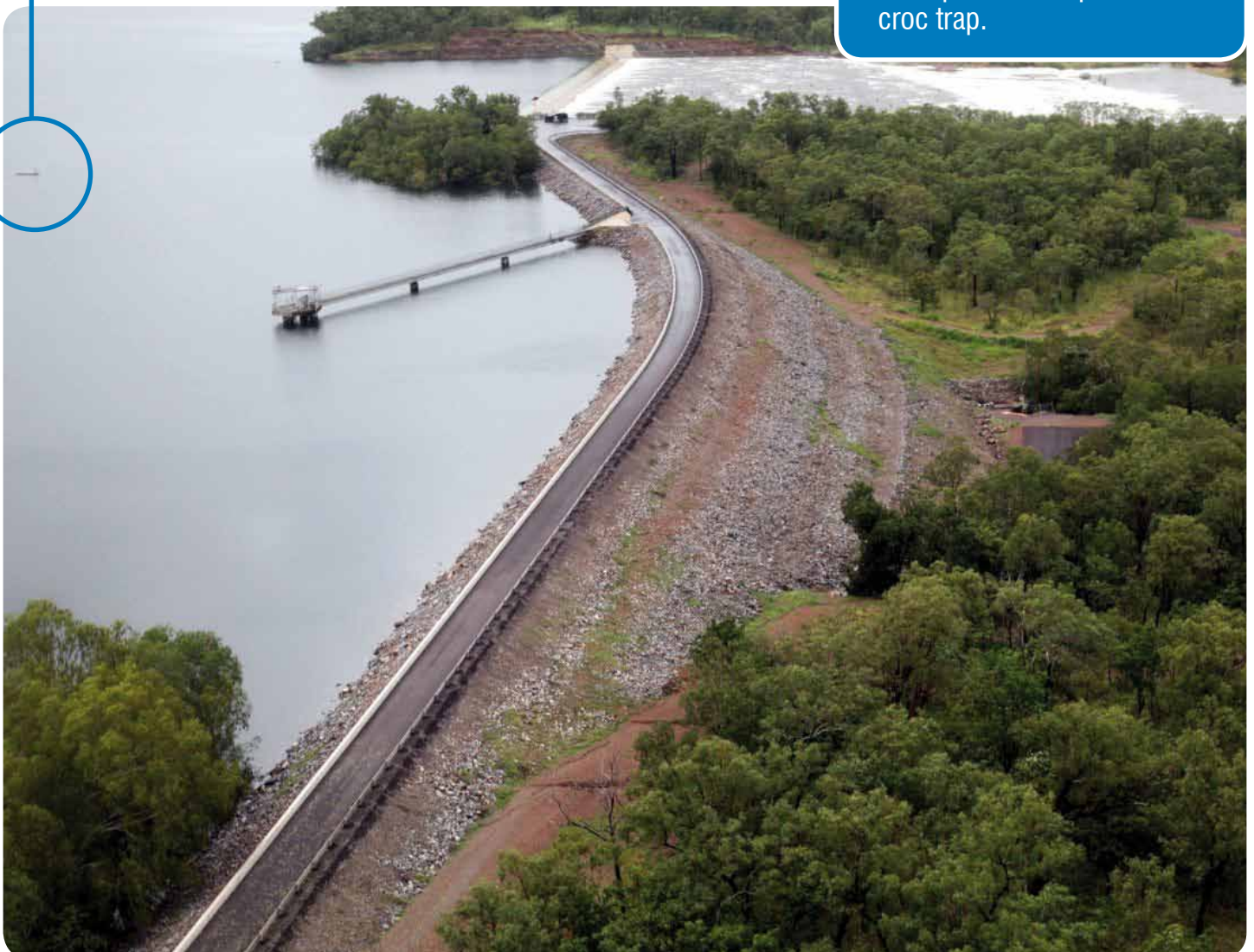
Other water infrastructure in Greater Darwin region includes:

- 18 water storage tanks holding 200 ML
- 1,200 km of water pipelines holding 17 ML
- 10 water pumping stations

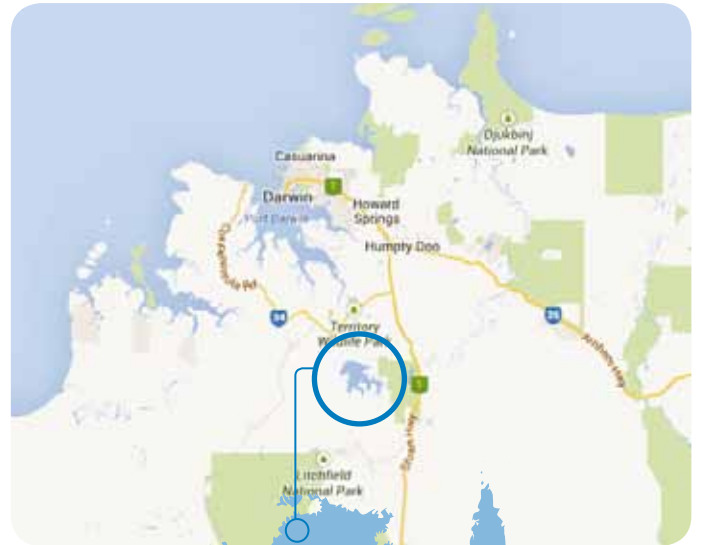
### Dam Facts:

- Provides approximately 90 per cent of Darwin's total supply
- Constructed in 1972
- Minimal water treatment (chlorination)
- Zoned earth-fill embankment
- Yield 40,000 ML/annum

Darwin River Dam photo shows the embankment wall, intake tower, spillway and in the top left of the photo is a croc trap.



- Maximum embankment height ..... 30.5 m
- Crest length ..... 518 m
- Spillway crest length ..... 260 m
- Spillway design capacity ..... 2080 m<sup>3</sup>/s
- Catchment area ..... 205 km<sup>2</sup>
- Reservoir area ..... 40 km<sup>2</sup>
- Full supply volume ..... 315,000 ML
- Max Water depth ..... 8 m



The photo shows the Dam in flood during the 2011 wet season. Approximately half a metre of water is spilling over the wall. The spillway was raised by 1.3 m in 2010 to increase the dam capacity and was expected to take 3 or 4 wet seasons to reach full capacity.



## YOUTH & ARTISTS IN CONFERENCING



The Youth & Artists in Conferencing project was a part of the celebrations of the Centenary of Canberra this year. It saw gifted young artist Sui Jackson attend the WIOA conference in Canberra in April, where he mingled with delegates and exhibitors to gain an understanding of the water industry. After the

Canberra event, he returned to his studio to create a piece of work which was then put on public display at the WIOA Victorian conference in Bendigo.

WIOA's conference artist Sui is an emerging artist specialising in hot glass. His artwork is driven by his desire to express individuality in a mass-produced environment, often using industrial processes to create pieces in glass, cast metal and ceramic. The project hoped that the participation of a young artist in a conference may add value to the conference itself, producing unexpected contributions or artistic outcomes.

### Description by the Artist

After attending the WIOA conference in Canberra in April, my sculpture is a reflection of the way I saw water being handled and used. It comes from local sources, is contained and cleaned. It is distributed via a vast reticulation system, then the waste and used water removed, collected and purified (again), and returned to the local source, cleaner than when it was collected.

I reflected that this is similar to the way our bodies work, with blood being pumped around and filtered, and also similar to the way our digestive system works - food intake, digestive system, waste - and it is this system that I have based the sculpture on.

I collected some of the 'sludge' that is removed from Canberra's drinking water from the Mount Stromlo Treatment Plant, and mixed it with ball clay to make a stable clay body. This I then extruded into a pipe form.

The pipe is a pretty obvious way that humans have handled water for thousands of years and the way I have done it is not any different than the way the Romans produced pipe, thousands of years ago. This extruded pipe has then been coiled into a soft sensuous mound that reflects the reticulation system, or our human bowels. I allowed it to sag and deform whilst shaping it, to give it a more organic nature, like a pile of excrement that is our waste. However the pipe is continuous and at the bottom loops up and over hopefully making a viewer think about a faucet or tap. If water were to flow from here it would then fall into the open awaiting pipe below, to spiral around the bowel system again, looping, useful and continuous.

This sculpture has some glaze to make certain elements more familiar, and hopefully the viewer will notice the different types of clays used.

About 60% of this sculpture is from Mount Stromlo Water Treatment Plant.

**Contributed by** Sui Jackson



*"Delegates admiring the artwork in Bendigo"*

## WHAT'S IN A NUMBER – "MEET 007"

The WIOA Operator Certification Scheme was officially launched in December 2012 when the first four operators were awarded their certified status.

As with all such schemes, each certified operator is given a unique number. Given that he was the first person to officially meet all the certification requirements, Broc Mulcair from Veolia Water in Bendigo became number 0001.

As luck would have it, there has been a number of applications submitted since December 2012 but for a variety of reasons, many of these are still in the "pending" folder awaiting more information from the employers.

This worked out very fortuitously for Veolia Water as Kelvin Growcott's application for certification was processed in August 2013 and by happy coincidence, Kel was awarded certification number 007. It was actually 0007, but what's an extra zero between friends? This earned him a new and deserving nickname of "James Bond".



*Kel Growcott – aka "James Bond"*

## VICTORIA'S BEST TASTING WATER

East Gippsland Water is celebrating being announced the winner of the Orica Victorian Water Taste Test for 2013 at the WIOA Victorian Conference. This gives them bragging rights as "having the best tasting tap water in Victoria" for the next 12 months.

Entries were received from 10 water businesses and they were randomly allocated to heats held at the conference welcome reception on the Tuesday evening. Four finalists were chosen by delegates using a "Masterchef" style blind tasting.



*Taste Test heats on Tuesday evening*



*Casting a vote in the Taste Test heats*

The four finalists; East Gippsland Water, Lower Murray Water, Mount Hotham Resort and South Gippsland Water were then pitted against each other in the Grand Final held at lunch time on Thursday. The samples were judged by a panel of technical water experts and industry connoisseurs.

The judges votes were locked away until the Thursday evening Awards Dinner where East Gippsland Water was announced as the winner of the 2013 Orica Victorian Water Taste Test.

East Gippsland Water entered the competition with a tap water sample taken directly from the Bairnsdale water treatment plant.

In accepting the award, East Gippsland Water's MD, Mr Bruce Hammond said "Bairnsdale's tap water originates from the Mitchell River and is treated at our Woodglen Water Treatment Plant. This plant came into operation three years ago to ensure consistent supplies of high quality water for thousands of customers between Lindenow in the west and Nowa Nowa in the east, including the major communities of Bairnsdale, Paynesville and Lakes Entrance. Winning the water test represents a great endorsement of our investment in the plant. It is also particularly satisfying as it builds on us finishing runner-up last year with water from Dinner Plain."

He was also glowing in his praise for the commitment and professionalism of East Gippsland Water staff, and the pride they take in their work and providing a high quality service to their customers. "This award is a tremendous achievement and we are really proud of everyone in our team".



*The East Gippsland Water team at the Bendigo conference*



*Bruce Hammond, MD of East Gippsland Water (L) being congratulated by Steve Rasdell from Orica*

The Orica Victorian Taste Test Award is all about raising awareness of the quality of the state's drinking water. The award recognises the efforts of local water service providers, but more importantly the role WIOA members play in delivering valuable water services to their communities.

## FLOC SIZE CHART

WIOA, in conjunction with Thermo Fisher Scientific have developed a clear view "floc size chart" for use when doing jar tests. Standard jar test charts have been available for decades but flicking backwards and forwards to a chart on the wall or in a book, and then back to the jar being assessed, is tricky.

Wayne Shaw from Gippsland Water came up with idea of copying the standard floc sizes onto a clear plastic sheet so that it could be held up against the jar allowing easy determination of the floc size. WIOA was so convinced of how good an idea this is, we approached Thermo Fisher with a proposal to use some unspent Kwatyte funds to make up the charts in bulk.

Thermo Fisher agreed and we made up enough to place one in the delegate satchels at the Vic, NSW & Qld conferences and we will also send one to every WIOA member in the New Year when we send out our Annual Report.

If you don't have a use for the chart, make sure you give to someone in water treatment, as I'm sure they'll appreciate some spares.



*Wayne Shaw using the floc size chart*

## WATER RESOURCES ASSESSMENT 2012

The Bureau of Meteorology's Australian Water Resources Assessment 2012 is now available.

The 2012 Assessment delivers high quality, nationally consistent water information and reports on the extent and magnitude of Australia's water resources in 2011–12 in the context of the long-term record.



*Australian  
Water  
Resources  
Assessment  
- covers*

It highlights patterns and trends in water availability, condition, and use at local to national scales and includes extensive information on the nation's surface water resources and more limited information on its groundwater resources. It provides details on urban and rural water use and the water volumes of major surface water storages and aquifers.

The 2012 Assessment aims to assist all Australians, but particularly policy-makers and planners, to understand the current state of the nation's water resources. It marks the second Australian Water Resources Assessment published by the Bureau under the Water Act 2007.

The report consists of a national overview and 13 regional chapters. Key findings are presented in a summary report.



*Australian Water Resources Assessment regional chapters*

The regional chapters consider trends in water availability and use. Topics include impacts of climatic conditions on water resources during 2011–12 and over the recent seasons, years and decades. The hydrological state of rivers, storages, wetlands and aquifers and hydrometric statistics for key sites are presented. Water availability for, and use by, selected major cities and irrigation areas is included.

Information is presented in the form of maps, graphs and tables with an accompanying narrative. The water data and model outputs used are also available.

A Technical supplement provides detail on the data selection, analysis and water balance modelling techniques used and the level of peer review and acceptance received.

In producing Australian Water Resources Assessment 2012, the Bureau engaged with key stakeholders in the scientific community and with other potential users to seek feedback. Technical expertise with regard to modelling of national landscape water flows was provided through the Water Information Research and Development Alliance (WIRADA) between the Bureau and CSIRO.

For more information and to view the 2012 Assessment please visit: [www.bom.gov.au/awra/2012](http://www.bom.gov.au/awra/2012)

# Get away with WIOA in 2014

another bright idea from  
Royce Water Technologies  
[roycewater.com.au](http://roycewater.com.au)

**All paid up, individual WIOA members are  
automatically entered into the draw.**

*(Conditions Apply)*

## VICTORIAN CHARITY GOLF DAY

Some 33 keen golf enthusiasts made their way to the WIOA Endress + Hauser Victorian Charity Golf Day on Sunday, 20th October at the picturesque Euroa Golf Club to demonstrate their skills, and do some networking and socialising.

We were all spoilt by perfect weather conditions keeping Marilyn busy running the PAAS drink cart (great job, thank you – even if George did run dry towards the end).

Teams were mixed & matched to play the Ambrose format. As a local, Neil (Cactus) Healey provided his valued advice and insight into how best to play the course. This caused him to be hassled by the Club Captain yelling out from a distance that “he wouldn’t have a clue”.

It was nice to see a ladies team giving the gents a run for their money – good on ya girls!

After registering, we enjoyed some hydration and snags from the barbie to pump up the energy levels. Our big thank you goes out to all sponsors and in particular Endress & Hauser who picked up the WIOA golf day naming rights. Without the financial assistance and contribution of goodies for the raffle and winners, the event would not be possible and the charity contribution would be much smaller.

The groups headed off down No. 1 and 10 fairways with a few good hits observed but also a number of trees getting a workout. The fairways were excellent to play from, the greens were challenging and after some gardening and zig zaging, everyone got back to the club house in good spirits to hand in their scores.

The numbers were a bit down on previous years and we appeal to everyone that can hold a club to give it a go next time. It’s all fun and the worst shot will still produce a good laugh!

Before the winners were announced we all feasted on fresh salads, kebabs and hamburgers prepared by the Euroa Club duty team – thanks guys.

### And the winners were:

- 1st** Graham Harvey, Craig Scott & Paul Wholan
- 2nd** David Aitken, Craig Freeman, Roy Corteses (Water Infrastructure Group)
- 3rd** Dave Rae, Adrian Rijnbeek & Rob Woodhouse

As the leading score from the teams representing the sponsors, the Tradies cup was won again by the Water Infrastructure Group team – congrats from all.

The raffle featured some excellent prizes and Xmas arrived early for some. The WIOA Golf Day was able to raise over \$2500 which will be donated to worthy charities as selected by our conference hosts in 2014.

A big thank you to Craig for perfect organisation and well done to his wife Trish for coming along on her birthday – hope you enjoyed the cake. Special mention also to my team, Jim and Steve for a very entertaining round of golf and I hope to see you all back next year.

**Contributed by** Bernd Vetter  
from Siemens Water Technologies

# Endress + Hauser



People for Process Automation



*All the golf day participants*



*The PAAS sponsored drinks cart got a good workout*



*The winners overall Graham, Craig & Paul*



*Winners of the Tradies Cup, Roy, David & Craig for team WIG*

# TASMANIAN WATER INTEREST DAY

## HUON WATER TREATMENT PLANT

On Wednesday 9th October we had an early morning road trip heading down South, to have a discussion session at the Ranelagh depot followed by a tour through the Huon Water Treatment Plant.

A good roll up of TasWater employees and corporate members arrived timely on site, with Craig Mathisen from WIOA managing to arrive at both sites without getting lost.

A brief meet and greet before we got started was good being able to meet other operators and see how things are going in their areas. When the day got underway, we had an introduction from Tas Advisory chairman Darren Lord followed by Craig introducing the guest speakers and the plan for the day.

Our first topic was Disinfection system controls and early warning by Tony Hourigan which was very interesting and outlined the different options for dosing and metering. The group had a good understanding of the topic and could relate the different measures to their plants. Some liked some of the other options discussed, wishing they had them installed at their plants.

Cameron Dalgliesh from Tas Health then discussed water quality issues in Tasmania. He gave the group a good understanding of past history and the steps and procedures Tas Health follow after reports on water quality are suspect, and also the working relationship with TasWater. It was a very interesting presentation and gave operators a understanding of the role of Tas Health in water quality in Tasmania.

After a lunch break, we drove a short distance and had a look at the Huon WTP. With the plant situated right next to a cemetery back off the road, I wouldn't like to get a call out in the middle of a stormy night to that plant. The DAF plant was very neat and with a few operators operating similar plants, a lot of questions on how they managed different aspects of the plant was interesting. There were lots of comments on how little things needed to be changed and the different operators shared the tips on changes they had made to their systems to make them better or more user friendly.

A big thank you to Rodney and Geoff who gave the group a guided tour around their plant and answering some questions thrown their way.

Thank you to the Southern region and to the WIOA Tas Advisory committee for organising and putting on an interesting and informative day.

**Contributed by** Stuart Campbell (Northwest Region)



*Tassie attendees at the  
Ranelagh depot*



*mmmm wonder how  
they got up there*



*Huon WTP tour led by  
Rod and Geoff*

# BLUE GUMS FOR BEACONSFIELD

TasWater (formerly Ben Lomond Water) owns and operates a full sewage reuse scheme in Beaconsfield in Northern Tasmania. It is a 49 hectare site planted with more than 32,000 Tasmanian Blue Gums drip fed via a 105 ML dam and 75 kilometres of dripper hose irrigation.

The plant was officially opened in December 2012.

In 2009, TasWater took over the running of West Tamar Council's Beaconsfield sewage treatment plant on Bowens Jetty Road.

As part of its regional upgrade program, TasWater examined options to upgrade the plant to improve the quality of effluent being discharged to Brandy Creek and then to the Tamar. Following a full economic assessment it was determined that the most cost effective and environmentally acceptable option was to explore opportunities for full effluent reuse.

Effluent reuse has been used elsewhere in the West Tamar Council area and there are four schemes, two based on farms and two on golf courses. These schemes provide only partial reuse and a significant amount of water is still being discharged to creeks and to the Tamar. This remains a problem and does not provide the environmental outcomes now expected by the community.

Recognising this, TasWater determined that treated effluent must either meet present and future environmental requirements or must be delivered to a reuse scheme that provides for 100% usage of water in all but the wettest years. This either meant a full plant upgrade or investment in a reuse scheme that could be relied upon to utilise all the water provided.

TasWater's business case confirmed that a fully owned and operated reuse scheme was the best economic, social and environmental solution. To this end TasWater purchased land at Beaconsfield on which it established a forestry based reuse scheme. It is an approach which differs from all other schemes in Tasmania in that the scheme is fully owned and operated by the Corporation.

Tasmanian Blue Gums have been planted and these will be harvested from coppice approximately every 12 years. Coppice harvesting preserves the roots, stems and soil and provides long term sustainability. This is a significantly different approach from the clear fell and re-establishment practices traditionally seen in plantations. It ensures a long life for the scheme and the associated infrastructure. Coppicing also allows repeated harvests to be taken from the same stems over a period of some 50-70 years.

To soften the impact of the plantation and to provide habitat diversity, TasWater planted a buffer of local tree and shrub species along the boundaries of the plantation and around the dam. These trees will grow to maturity and form a pleasing visual buffer between the plantation and public areas.

**Contributed by** Matthew Layton and Chris Hall



*Beaconsfield  
Trees*

# VICTORIAN INTEREST DAY

## MELTON RECYCLED WATER TREATMENT PLANT

The first water interest day organised by the WIOA Victorian Advisory Committee was a resounding success. The day was conducted at the Melton Recycled Water Plant and was attended by a group of thirty five operators and professionals from across the water industry, all keen to hear the presentations and have a look over the plant.

After arriving at the plant and having a coffee and registration it was great to see Western Water MD, Mr Neil Brennan on hand to welcome everyone to the plant then show his support of the association and employees Rod Curtis and Andy Bridson by attending their presentations.

The first presentation by Rod Curtis provided an overview of his trip to Germany & England to study sludge conditioning for energy production & cell lysis for COD reduction utilising ultrasonic technology. Rod was the winner of the Kwatye Prize sponsored by Thermo Fisher and encouraged anyone with an idea to apply for the award as it was a fantastic initiative and something he may not have been able to do himself. He also thanked Western Water for encouraging his participation.

Rod was followed by fellow employee Andy Bridson with his presentation on the membrane plant, the teething problems that had occurred, how the operators initiated a cleaning program and the checks & balances that are used to ensure it is performing at an optimum level. Both Rod & Andy answered questions from the floor and it was evident that they have put a lot of time in to getting to know the plant. Well done to both.

The Operator Forums conducted previously have been a success and this event was no exception. Solids management was the topic and there are a variety of different methods that are currently in use across Victoria and other states in Australia.

At the completion of the forum it was off to tour the plant. Starting in the control room and looking out over the plant it was easy to see the different treatment processes that are utilised. After a run through the control system and the plant design it was off to see it all first hand. The wastewater treatment facility in the City of Melton is the first in Australia to install a micro turbine with a combined heat and power (CHP) system that helps transform sewage water into recycled water, electricity, and heat. Once again Rod & Andy were able to share their knowledge of the plant and show first-hand the improvements and changes that have gone on since the plant was commissioned. I know a few left the tour with some changes and ideas that will be implemented in their own plants.



*Rod Curtis  
presenting  
on his  
Kwatye  
project*

At the conclusion of the tour everyone was treated to a BBQ lunch provided by the Western Water Team in their outdoor lunch room. The boys did a great job and I am sure no one left the plant hungry.

The WIOA VAC would like to thank Western Water for allowing us to conduct the day at the Melton Plant, the use of the marquee and the sound & vision setup by Matt & Nicole, and the Team for providing the BBQ. Thanks to Rod & Andy for helping out with everything as well as their presentations on the day.

Finally thanks to everyone who attended for showing your interest in our newly formed Advisory Committee. After the tour and lunch, the Committee held a meeting and as a result, we anticipate having some more interesting days coming up in the not too distant future.

**Contributed by** Anthony Evans, Wannon Water



*Inspecting membranes at the recycled water plant*



*Enjoying the BBQ lunch*

### MAD MAG MAGMETER

Non-invasive measurement technology often dubbed “Clamp-on” flow meters sometimes evoke a mixed reaction. Ultrasonic flow meters now compare favourably with Magnetic flow meters and are being specified in many applications as a cost effective and reliable alternative. Clamp-on ultrasonic technology is utilised in many applications where “Mags go Mad”. This “bolt on” technology provides measurement of most liquids (including non-conductive) and gases where Mag meters cannot provide flow measurement. Turn down ratio exceed most Mag meters.

Flowservices has provided many replacements where Mag flow meters did not meet the flow criteria or where conditions were not suited. “We listen to flow”.

Water Treatment, Wastewater (Sewage) Treatment plants have identified non-invasive clamp on flow meters as an alternative measurement device to measure flow accurately.



*K sensor fixed  
on a 960mm  
CLS next to an  
old mag meter*

#### CHALLENGE

What if the flowmeter could be installed in a fraction of the time whilst leaving the existing or redundant flowmeter in place? Accuracy, reliability and repeatability are maintained.

Mag flowmeters and many other insertion measurement meters are tried and trusted. These meters all require shutting down the flow, cutting the pipe and installing flanges using specialised techniques.

Our customers have identified the number one reason for selecting non invasive clamp on meters is the ease of installation. Production continues without compromising plant safety with lower overall cost of ownership.

#### SOLUTION

Non Intrusive Gas/ Liquid Flow Meters can be installed on virtually any pipe material Steel, Stainless Steel, Ductile Iron, Rubber, Concrete CLS, DICL, Fibreglass, GRP, PVC, HDPE and many others. The meters are not restricted to diameter, lining or wall thickness and operate on pipe diameters ranging from 6mm to 6000mm.

Site pre-testing with a portable ultrasonic meter can be done within minutes. The pre-test guarantees that the permanent meter to be installed is suitable. The final installation and commissioning process is thereby simplified.

**Contributed by** Alan Neethling from DCM / Flowservices.



*Mag flowmeter installed*

### INTERNAL ‘INSITU’ WATER MAIN PHOTOGRAPHY

Have you ever wondered what the inside walls of the mains pipe serving your area looks like? Well now you can find out. C-Tech Services have developed a means of doing just that. An Endoscopic Camera that passes into the water main via C-Tech’s exclusive @MONIpLUG located on any ball and seat type Fire Plug where mains pressure is less than 7 Bar. (Higher pressure available soon)

By applying this method, there is no changes necessary to existing assets while detailed photographed images are taken.

The process is quick, simple, inexpensive and can answer many suspicions about pipe conditions such as:

- the extent of restrictions due to ‘tuberculosis’ in older cast iron pipes
- sediment build up
- lining failure
- valve obstructions.

Each entry can examine to approximately 7 meters from the fireplug in each direction, (greater lengths can be arranged). Photos shown here were taken using a ‘snap shot’ approach, however, C-Tech Services are currently seeking the assistance of a Water Authority to help trial a ‘video’ version and provide more active information. If you can assist, please contact C-Tech Services on (03) 5940 3355



## SLUDGE PUMPING MADE EASY

Pumping sludge is a difficult duty for a pump, and can be very frustrating for operators at sewage treatment plants. Pumps can choke, run dry, fail regularly, and can be a nightmare to maintain. Most pumps will prove difficult to remove chokes from and many will require the sludge to be diluted to enable easier transfer.

Here's where the Ramparts super heavy duty single diaphragm pump can provide the solution, according to Australian distributors, Hydro Innovations. Ramparts diaphragm pumps are used where other styles of pump are proving too expensive to maintain. Where pump service lives are short, Ramparts pumps will last. Where other pumps prove difficult to maintain, Ramparts pumps deliver reliability. Where other pumps are expensive to repair, Ramparts repair parts cost as little as 15% of the purchase price of the pump for a complete overhaul, and that overhaul will take operators less than 2 hours to complete.

Sludge does not have to be diluted when Ramparts pumps are used. Primary sludge consistencies can increase by as much as 60% according to the manufacturer. This could eliminate the need for separate thickening operations and reduce the sludge volume that needs to be handled.

Rags can often cause big issues for sludge pumps. Some pumps need to be off-line for a considerable amount of time to remove blockages and un-wrap rags from rotors. Not so with the Ramparts diaphragm pumps, where quick opening yoke style ball check valves, allows access to the "offending" rags within seconds. Unlike other pumps, Ramparts pumps can also run dry indefinitely and can "deadhead" without damage.

Unlike most diaphragm pumps, the Ramparts pumps use a unique controller that enables operators to fine-tune the pump to any applications. Stroke rates can be adjusted to precisely tune the flow rate. The discharge stroke time can be adjusted to minimise pulsing, and pressures for the suction and discharge strokes can be independently adjusted to minimise air consumption and maximise diaphragm life. Pumps can be remotely started and stopped, and can be fitted with moisture detectors to enable quick detection if a diaphragm has worn.

Ramparts pumps are available in 5 sizes - 1½", 2", 3", 4" and 6", enabling flow rates from 10 litres per minute up to 1200 litres per minute. Pressures can reach 7 Bar, and spherical solids of up to 63mm can be handled (by the largest pump). Pumps can be fitted with a variety of diaphragm materials, including Nordel, Hypalon, Nitrile, Neoprene, Viton, Santoprene or Hytrel enabling pumps to be set up to suit specific applications.

### Contributed by

Garry Grant, Hydro Innovations.



Ramparts  
sludge pump

## CLEWES WINS KWATYE PRIZE

WIOA's prestigious national Kwatye Prize, sponsored by Thermo Fisher Scientific was awarded to North East Water's Health and Safety Coordinator Mick Clewes, at the 76th Annual Victorian Water Industry Operators Association's (WIOA) conference in Bendigo.

Micks project will investigate the interactions that can occur with drinking water after it has passed the water treatment step. There are a range of activities which can occur and some of these may potentially be detrimental to the quality of the drinking water.

The objective of Micks project is to develop an information booklet pertaining to hazards and their impacts on drinking water quality, and provide best practice information for the elimination and control of those hazards. This booklet would be ideal to use as part of an organisation's induction process.



Kwatye Prize winner Mick Clewes (L) with Jarod Percy from Thermo Fisher Scientific

The 2013 Kwatye Prize was the ninth time the award has been presented through the generous support of Thermo Fisher Scientific and Mick's project will be presented at a joint WIOA and Thermo Fisher Scientific event in the future.

The Kwatye Prize (Kwatye meaning 'water' to the Arrente aboriginal people of the Northern Territory) is open to all WIOA members across Australia with entries closing in July annually.

## NEW MEMBERS

Welcome to the following people and companies who have recently joined our Association as Members.

New **Individual Members** include:

Michael Morris, Yigit Samur, Linc Symons, Chris Hetherington, Lana Priddle, Tim Baxter, Samuel Arulsuthan, Rick Hartland, Sri Prasanna, Rebecca Lock, Tracy Freeman, Brett Nicol, Shane Ryan, Jai Vadhyaphal, Tony Petruzzelli, Garry Paris, Peter Rayner, Louie Lim, John Whitewood, Bruce Anderson, Mick Clewes, Randell Carey, Geoffrey Matherson, Darren Moore, David Murphy, Brad Clingin, Ben Foster, Ben Marsden, Jerome Simpson, Manish Khadgi, Andrew Naughton, Kaitlin Mona, Graham Chapman, Geoffrey Smart, Scott Bradshaw, Lisa Sharman, Yalcin Gedik, Merece Muncaster, Deanne Gooch, Ken Strong, Karen Kerr, Jard Russell, Ben Freeman, Dan Dawes, Joel Barbara, Michael Stevenson, Andy Bridson, Dallas Baker, Chris Ford, Adam Holloway, Shaun Sullivan, John Presbury, Robert Mihalyka, Cameron Fancett, Brent Martin, Daniel Hobday, Chandra Jayalath, Dinuka Ginige, Raghu Dasam, Matthew Weeks, Aaron Spillman, Samuel Boal, Juanita Zischke, Emily Reid, Nicholas Zischke, Paul Burgess, Chris Howard, Jacob Bright, Deniss Basset, Aron Smith, Tyren Cavanagh, Joe Robinson, Peter Ure, Joe Osbourne, Brock Stone, Daniel Rolinson, Warren Gaylard, Kyle Hodgkisson, Mark Law, Rod O'Donnell, Noel Shields, Sam Scuito, Russell Sunderland, George Taylor, Peter Taylor, Nathan Bovalino, Neil Cooper, David Greenaway, Anthony Haywood, Steven Lee, Ricky Bertoli, Sam Robertson, Michael Verner, Dale Hogan, Thomas Lees, John Wallace, Matthew Cotter, Scott Martorella, James Walsh, James Callan, Doug Moorby, Chris Steffert, Mike Sahayam, Peter Murphy, Hannah Busch & Rhys Kirkland.

New **Corporate Members** include:

Hawk Measurement Systems, Spanset Australia, ifm Efector, Waterdos Instruments Australasia, Hunter Water Australia, BASF Australia, SAFEGroup, Calix Bushmans Group, Spill Station Australia, Innovyze, Norma Pacific & Pumpnseal Australia.

## THE LIGHTER SIDE - A CAVIAR MOMENT



## COMING EVENTS

### 2013

- 20 Nov Queensland Advisory Committee Interest Day and Tour, Rocklea, Queensland
- 27 Nov Membranes Operation Day, in collaboration with Veolia Water, Castlemaine, Victoria

### 2014

- 28 Feb PASS Award applications close
- 1 & 2 Mar WIOA Weekend Seminar & AGM, Airport Motel & Convention Centre, Attwood, Victoria
- 14 Mar Queensland Charity Bowls Day, Yandina Bowling Club, Queensland
- 20 Jul Kwatye Applications close

### 2014 Conference and Exhibition Schedule

- 2 & 3 Apr 8th WIOA NSW Water Industry Operations Conference & Exhibition, Orange
- 4 & 5 Jun 39th WIOA Queensland Water Industry Operations Conference & Exhibition, Logan
- 3 & 4 Sep 77th WIOA Victorian Water Industry Operations Conference & Exhibition, Bendigo

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## NEXT EDITION

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