

OPERATOR

February 2014 Edition



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Broc Mulcair (L) and Luke McComick at the Veolia membrane workshop. More on page 4

Merimbula News Story.
Find out more about who
and why on page 10

Merimbula NEWS

Woman airlifted from base of Merimbula cliff



Attendees at the Queensland interest day at Oxley Creek STP. Details on page 6

Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

FROM THE EO'S DESK

After a very relaxing but hot (at least in Northern Victoria) Christmas break, it's back to business as usual for everyone in the WIOA office.

The 2013 WIOA Annual Review was mailed out to all members recently. It showcases quite well the growth of the organisation and all the activities that WIOA and our members are involved with. It also gives us the opportunity to celebrate the achievements of a number of our members. Apart from informing members, this document is also a very important promotional tool. We hope it will help attract potential members to join once they understand the level of industry commitment and involvement we have. If you would like more copies to distribute, please contact the office.

Also enclosed with the Annual Review was a "Floc Size Chart" which was produced as a collaborative effort between WIOA and Thermo Fisher Scientific as a positive way to invest some under-utilised Kwtaye funds. We understand that not every member will be regularly doing jar tests and may not have a use for the chart. If that is you, instead of just tossing it out, why not give it to someone in a role that you know will use it, giving them a spare.

Planning for the 2014 conferences is proceeding full steam ahead. We are really excited that Orica Australia and Odour Control Systems (Australia) have joined existing companies Acromet, Automation Group, Peerless Industrial Systems and Xylem as Prime conference sponsors in 2014. We greatly appreciate the involvement of these companies and all our other event and award sponsors and encourage our members to support them whenever possible.

The technical program for the NSW conference in Orange in April is full of interesting presentations from experienced operations staff and there is a wide range of Councils represented in the program. Delegate and visitor registrations are being accepted with registration forms available from the website.

We have confirmed that the "In-Sports" complex in Logan will be the venue for the 2014 Queensland conference. We have received great support from Logan City Council as well as a number of the South East Qld water businesses. The Call for Papers closes at the end of February and we are still chasing papers from operators and regional water businesses. Please contact the office if you have any ideas for a presentation.

WIOA's certification scheme is gaining traction in Victoria with 18 operators now meeting all the requirements to be certified and another 31 applications currently being processed. WIOA is excited to be working with the Queensland Water Directorate on a Pilot Project to allow a number of operators in Qld to be certified against the requirements of the National Certification Framework 2012 – Operators within Drinking Water Treatment Systems. WIOA is also working with a number of NSW Councils to assist them prepare for the potential implementation of Certification nationally. The certification pages on the WIOA website have been overhauled recently and now provide information on both the Victorian and National schemes.

In late 2013, WIOA was invited by Standards Australia to participate in their newly created Australian technical committee – "WS-039 Sludge recovery, recycling, treatment and disposal". WIOA nominated current Director Peter Tolsher from North East Water in Victoria to represent us and his nomination has been accepted. More information on the Committee and some work that Peter has been doing in this area appear later in this newsletter. As a truly national organisation with a broad member and skills base, it is appropriate for us to contribute to as many of these committees as possible. The number of invitations we are receiving indicates the rest of the industry is now recognising our capabilities and values our input.

Finally, those members yet to pay their 2014 fees would have received a reminder in the mail recently. Anyone not paid by the end of February will be removed from the database so make sure you pay promptly. Keep in mind that all financial Individual members will go into the bonus draw to win a \$1,000 travel voucher, generously donated by Royce Water Technology. The draw will be made at the NSW conference in Orange.

Until next time.

George Wall – WIOA Executive Officer

NSW OPERATOR OF THE YEAR

Nominations for the 2014 NSW Operator of the Year sponsored by the Water Directorate, close on 28th February 2014 with the winner announced at the WIOA NSW conference in Orange.

If you know someone within the NSW water industry that fits the bill download a form from the Water Directorate website and nominate them today.

Nomination forms can be downloaded from the WIOA website www.wioa.org.au or from the NSW Water Directorate.

www.waterdirectorate.asn.au/downloads/Nomination_Form.pdf



THE LIGHTER SIDE

PLUMBER OF THE YEAR?



PROFILE OF A COMMITTEE MEMBER



Name: Ryan McGowan

Position: Manager - Information Systems

Employer & Location: Goulburn Valley Water, Shepparton, Vic

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

15 years – at first my attraction was that it was a job and I needed one! However, after starting in the industry I have come to value working in a place that makes a significant

difference in people's lives (even though I think many people may take water and sewerage services for granted).

What do you enjoy most about your job?

The people I work with and the ability to apply technology based solutions that enhance business operations and efficiency.

What are the major challenges in your current role?

IT is a never ending landscape of change – systems are out of date soon after you've put them in, or sometimes even before you have finished installing! In addition to that there is the ever increasing need to do more with less.

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

I presented a paper at the 2008 Victorian Conference in Bendigo. I was impressed by the energy and passion that WIOA has for the industry and its members. I became a member a little later on, and volunteered at the 2010 Victorian Conference and joined the committee in 2011.

How do you relax?

I have a young family, a full time job and study part time – I do not understand what relaxing is. But I do enjoy watching sport, TV shows or movies and reading.

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

Shepparton – easy to get around and the weather is great.

QUICK QUESTIONS

Age: 39

Nickname: Ryno

Family Status: Married with two children

Pets: 3 fish (not sure that counts)

Favourite food: Chips

Least favourite food: Tripe

Favourite TV show: NCIS

Worst TV show: Too many to list

Favourite Movie: Shawshank Redemption

Favourite Musical artist/s: Don't really have a favourite artist but anything with a heavily distorted guitar is good

Favourite book: Anything by Clive Cussler or Tom Clancy

Favourite team: Hawthorn (and Seahawks in the NFL)

Ambition in life: To make a difference and to leave things in a better state than when I found them

Hobbies: Running (when not injured), reading and sleeping...

Best Trait: Persistent

Worst Trait: Persistent

Four people to invite to dinner: Lyndal (wife), Ben (Son), Kate (Daughter) ... and me!

WIOA ON STANDARDS AUSTRALIA COMMITTEE



Following a formal invitation to participate, WIOA board member Peter (Tolsh) Tolsher has been accepted as WIOA's representative on the new Standards Australia technical Committee - WS-039 Sludge recovery, recycling, treatment and disposal.

The prime function of this Committee is to identify the range of Australian interests in ISO developed standards; formulate the Australian position; articulate that position in the appropriate forums; and determine if, to what extent future international standards should be applied in the Australian context.

Standardisation in the field of methods for characterising, categorising, preparing, treating, recycling and managing sludge and products from urban wastewater collection systems, night soil, storm water handling, water supply treatment plants for urban and similar waters.

The standards will include all sludge that may have similar environmental and/or health impacts. Standardisation methods for characterising: sampling method, physical, chemical and microbiological parameters analysis, preparation of sludge, physical behaviour of sludge, all required for the characterisation of sludge with a view to facilitate decisions on the choice of the treatment procedures and of the use and disposal of sludge.

The project excludes hazardous sludge from industry and dredged sludge already covered by the standards for soil quality.

WIOA thanks Tolsh and his employer North East Water for participating in this project. Peter may be seeking input or information from WIOA members from time to time, so please provide any assistance you can.

MICROFILTRATION WORKSHOP

In late 2013 Kathy Northcott from Veolia Water approached WIOA to see if the Victorian Advisory Committee would be interested in running a special interest day on membrane maintenance and performance optimisation. Such an offer was too good to pass up so the date was set for November 27th at the Castlemaine WTP. The day was limited to 12 delegates and these positions didn't take too long to fill.

- After inductions and a coffee, the day got under way with a presentation by Kathy covering:
- Managing feedwater quality
- Membrane performance monitoring & optimisation
- Membrane maintenance
- Membrane optimisation case studies.

Interaction during the presentation was encouraged and any questions were ably answered by Kathy and the Veolia Plant Operators. It was a fantastic presentation and before we all realised it was time for lunch. This networking gave everyone the opportunity to compare their own plants and catch up on what was happening in other parts of the state.

After lunch we were split into groups of three for the plant tour. This gave the Operators plenty of time to answer questions and explain the intricate workings of each area. At the end of the tour the groups were brought back together in the main treatment room to observe Luke McCormick, Broc Mulcair and Michael Wright carry out sonic testing, removal, leak testing & pinning of a membrane core.

The Castlemaine WTP is testament to the hard work put in by all of the Operators. Everything is neat & tidy and well maintained and it's the type of plant that I think everyone would like to be working in.

The day finished mid-afternoon and I am sure everyone left with an idea or two that they could use in their own plant.

Kathy told me that the concept of a practical membrane workshop "for industry, by industry" was thought up by Konrad Mueller (Plant Supervisor) and Colin Ellett (Projects Supervisor) and that her role was to turn the vision into reality. The team were privileged to give something back to the WIOA community by demonstrating commitment to quality and performance in operations.

Thanks to Kathy, Konrad, Colin, Luke, Broc & Michael for running the day and sharing your vast knowledge of the plant, your camaraderie was commented on by quite a few delegates on the day.

Contributed by Anthony Evans from Wannon Water

Workshop #2 Tuesday 4th March 2014

WIOA and Veolia have arranged a second workshop at the Castlemaine WTP on Tuesday 4th March.

PARTICIPANT FEEDBACK

A fantastic day, the plant condition is a credit to the dedicated operational staff!

Russell Mack - Gippsland Water

Different to the UF I look after but overall very interesting presentation and day. Best kept plant I have ever seen.

Leese Rundell, Wannon Water



All the Workshop participants



Glenn Taggart & Steve Letcher, CHW, Sandy McGregor GWW & Luke McCormick Veolia discussing GAC filter media

LUMLEY HILL STP – QUEENSLAND



Seqwater is well known for supplying drinking water to almost three million people across South East Queensland, but along with providing a range of other services operates several sewage treatment facilities and effluent re-use schemes across its region, mainly catering for recreational sites.

The Lumley Hill STP (LH STP) and effluent irrigation station may be small, but it still needs operating. The LH STP is an Enviroflow package sewage treatment plant providing a three-stage treatment process with a peak design capacity to treat sewage from 21 to 100 EP. The facility receives the outflow from the recreation amenities building at Lumley Hill and the pumped effluent from the Logan Inlet and Captain Logan Camp recreational areas. The LH STP is designed to treat the sewage to a standard allowing the effluent to be used for irrigation without impacting the natural environment or polluting surface waters, in particular Lake Wivenhoe. Effluent from the Enviroflow unit is pumped to the first storage/maturation lagoon for natural treatment (UV from sunlight) and settling. There are three rubber lined effluent storage/ maturation lagoons (combined capacity of 1.715 ML), with 2 of these used for emergency storage.

A chlorination/pH correction facility, including two 10KL chlorine contact tanks, allows treated effluent to be chlorinated and stored for irrigation use. Upgrades mean the process now has the ability to recirculate effluent through the tanks until it is within the specifications required for irrigation; all governed via SCADA set-points. Turbidity, free chlorine residual and pH are monitored by analysers as the effluent leaves the tanks.

When all monitoring data is within limits, effluent is pumped through a 130 micron filter which has an automatic backwash system to the tree irrigation area where it is again filtered through a 200 micron filter and then irrigated via a dripper system to approx 5,000 trees in a 3.3ha plantation. Sometimes there are high seasonal fluctuations in the number of visitors to the Logan Complex recreational areas, causing wastewater volumes above the original design intent. A recent increase in visitor numbers to these popular recreational areas, particularly during peak holiday periods (Easter, Christmas, and School Holidays), has placed additional pressure on the sewage system and has led to an increase in hydraulic load. But with the correct operation, the site can be managed using the 3 storage lagoons and remote monitoring.

The flexibility built into the scheme means that it continually complies with the licence requirements for the site.

Contributed by John Granzien (Seqwater)



Lumley Hill



Lumley Hill Tree Plantation and visitors

QUEENSLAND CHARITY BOWLS DAY

The Queensland Advisory Committee is conducting a Charity Bowls Day on Friday 14th March 2014.

The day runs from 10am to 3pm at the Yandina Bowls Club. Book your RDO and mark the date in your diary now. We'd love to see as many WIOA members and friends as possible come along in support of this Charity event.

We are seeking corporate support for the bowls day through teams sponsorship. If you would like your company represented at this event and have the chance to win the "Queensland Tradies Cup" please contact Craig at the WIOA office.



QUEENSLAND WATER INTEREST DAY – OXLEY CREEK STP

On 20 November 2013, 30 members assembled at Queensland Urban Utilities' (QUU) Oxley Creek STP control room for the WIOA interest day. While the plant looked like most plants the main topic for the day stood out in all its glory with stainless steel tanks and pipelines that comprised of the CAMBI (Thermal Hydrolysis) plant.

With all attendees seated and formalities complete, Bill Collie took the stage and informed the group about the QUU Biosolids strategy. Dewatered WAS produced from the plant is mixed with sludges from other QUU plants, as well as greases and waste from food manufacturing plants. The waste is viewed as an energy source and is fed into the CAMBI process.

Dr Tim Kempton addressed the group with some interesting facts and figures about the plant. The CAMBI plant at Oxley Creek is the first Thermal Hydrolysis plant to be installed in Australia. The process comprises of a complex system of pulpers, steam heating recycled from the process, high pressure reactors and flash tanks, heat exchangers and a digester. Gas produced from the plant is used to fuel power generation. The sludge is pressed and used as a soil conditioner on cropping land in the Darling Downs. A positive energy balance is possible of approximately 25% of energy produced to power the system while 75% of energy produced is used to generate green electricity and process stream.

During Dr Kempton's presentation he noted one point I found interesting, sludge is generally considered as a waste product from a STP. We rarely consider the energy held in the sludge nor do we try to extract the energy for reuse.

Following the presentations we toured the plant. Bill led the group and explained the current and future plant upgrades.

Wilco Australia was kind enough to provide lunch for all attendees. After lunch the Queensland Advisory committee held a meeting to discuss the events planned for the 2014 calendar year. I had the pleasure to be re-elected as the Queensland Advisory Committee Chairperson.

After the interest day at Oxley Creek, I cannot help but wonder if a CAMBI process could soon be the next bolt-on extra fitted to most plants around Australia in an effort to minimise waste and reduce electricity costs.

Contributed by Marcus Boyd from Toowoomba Regional Council



Bill Collie discussing the features of the CAMBI process



Bill making his point



Checking out the inlet works

NORTH EAST WATER'S NEW RHQ

North East Water is settling in to its new Regional Headquarters in Wodonga after moving to the \$10.5 million building last October.

The building is located on Thomas Mitchell Drive and allows the Corporation to serve its customers from one location by consolidating two former offices in central Wodonga.

It is a Five Green Star facility that showcases energy efficiency, water conservation, water sensitive landscaping and the re-use of timber from an old warehouse that used to be on-site.

The energy efficient design encourages natural airflow, and along with double glazing, is expected to reduce energy consumption by 62 per cent compared to the old office in central Wodonga.

An array of solar panels on the roof generates up to 10 kilowatts per day and provides the average daily energy required to supply the interior lighting.

Rain water captured from the site is being re-used for non-potable indoor use such as toilet flushing and all outdoor garden irrigation.

Landscaping around the building showcases the use of bio-retention basins and grassed drains to reduce the quantity of storm water runoff from the site as well as improving its quality.

The next stage of the building will see the redevelopment of two large sheds at the rear of the site which will accommodate the Wodonga works depot.

The Regional Headquarters also incorporates a large auditorium that other water corporations are able to utilise for holding workshops or seminars related to the industry.

More information is available from North East Water on 1300 361 633.



New RHQ Reception



New RHQ Auditorium



New RHQ Building

BIRDS EYE VIEW - FACILITIES MEMBERS OPERATE

Wannon Water - Portland Water Reclamation Plant

Domestic sewerage average dry
weather flow - 3.2ML/d

Domestic sewerage peak wet
weather flow - 10.4ML/d





- 1 Inlet works - design flow rate of 250L/s, consisting of two primary inlet channels with step screens removing and washing solid material. Vortex grit chamber and grit classifier removing smaller particles. All solids appropriately washed ready for landfill application.
- 2 IDEA tank anoxic zone - three separate chambers in each IDEA tank with flow connecting weirs. Micro-organisms naturally removing nitrogen and releasing it to the atmosphere as gas.
- 3 IDEA tank aeration zone - two separate IDEA tanks with a capacity of 2ML each. Fine bubble diffused aeration system. Micro-organisms naturally removing carbon and ammonia.
- 4 Blower building - 4 no. 37kW turbo blowers. 3 duty with 1 standby, supplying the diffused aeration system within the IDEA tanks.
- 5 Effluent balancing storage - 1.5ML capacity
- 6 UV system - disinfection prior to discharge to ocean outfall and re-use at site for process water.
- 7 Process water pump station - filtration and booster pump system for reticulated process water throughout the plant site.
- 8 Waste activated sludge & return activated sludge pump station - return of mixed liquor to the head of the IDEA process and wasting of liquor to the sludge lagoon.
- 9 Return pump station - return of supernatant from the sludge lagoon and sludge drying pans. Return of excess effluent to the inlet works from process locations within the plant site.
- 10 Site office - plant control system, meeting room and laboratory.
- 11 Emergency storage / wet weather lagoon - 14ML capacity. Accepting excess flow from the inlet works during high flow periods. Available redundancy storage if required to take whole plant offline.
- 12 Sludge lagoon - 14ML capacity. Receives waste activated sludge from IDEA system.
- 13 Sludge drying pans - 7 no. sludge drying pans. Drying beds for decanted sludge from the sludge lagoon as required.
- 14 Ocean outfall - existing ocean outfall. Receiving all treated effluent from the water reclamation plant.

CHRISTMAS ON THE ROCKS

It all started with a family holiday to Australia's East Coast (Merimbula). The first two days it rained, then finally the third day, which also happened to be Christmas eve, the sun was shining. So my father and I went out on the rocks spear fishing around lunch time. Several fish and abalones later we decided to head back. It's a good 30 minute walk/rock climb for a healthy person to get back to civilisation. Around 5 minutes in, I climbed up a rock cliff I have climbed many times but this time one of the rocks I grabbed broke off (I know what you're thinking, but remember this was before Christmas lunch).

I fell a bit over two metres and landed on my feet on all the oyster and barnacle covered rocks below 'like a cat' but perhaps not so nimble. From the sound I knew I had broken something. Dad rushed back to get help while I made myself comfortable on sharp unforgiving rocks, but the pain from my legs outweighed the discomfort from the rocks. About 40 minutes later he came back with helpers including 2 fire trucks, 2 ambulance vans and 4 police cars. Due to the terrain, only half the officers made it to where I fell. Now the question remained how are they going to get me out? Rough ocean one side and rock cliffs on every other side. The options put forward were ladders, a boat, a surf board, all which were too dangerous, leading to the only viable option - to be harnessed and air lifted into a helicopter.

After a go at one of the 'Green Whistle' things the ambulance officers gave me, the pain was gone and I felt like I could just fly out (I need to get myself some of those). Just on 5 hours later, I made it to the Merimbula airport where I met the ambulance crew again and was taken to Bega hospital. After several x-rays it was apparent I hadn't broken any bones but wrecked all the ligaments in my left ankle and had plenty of cuts and bruises from my not so soft landing. To top off this Christmas, I had surgery on Christmas day with 2 screws put in my ankle and I now have to navigate through the summer on crutches.

On a positive note, my work team at North East Water have been very accommodating carrying all my bags for me, and they have nearly perfected my coffee. I hope you all had happy and safer Christmas and am looking forward to catching up throughout 2014.

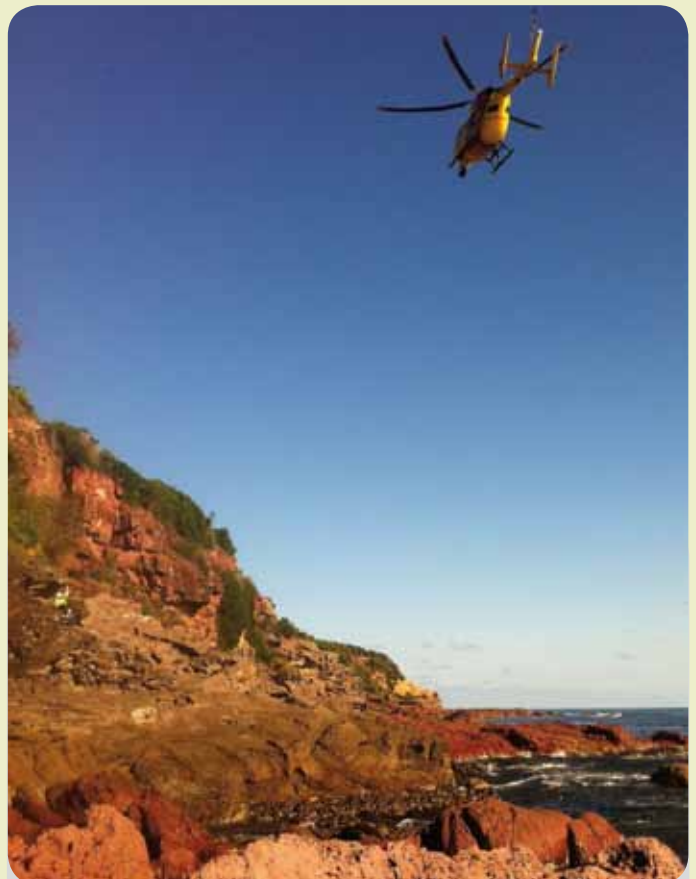
Contributed by Heidi Josipovic, North East Water



Heidi with her magic green whistle



Flare for Helicopter



Airlifted to hospital, one way of getting a ride in a helicopter



Ambos that rescued Heidi from the rocks

CELEBRATING THE TOILET

Some people imagine the toilet to be the dirtiest place in their home (it's not, see below). The toilet is a tolerated necessity, but not worthy of our admiration. Yet the facts are clear: toilets save lives. The result of not having a toilet or safe sanitation - the reality for 2.5 billion people in the world – is devastating.

Every 20 seconds around the world a child dies from diarrheal diseases related to poor sanitation. Diarrhoea is the leading cause of illness and death in the world, and 88 percent of diarrheal deaths are due to a lack of access to sanitation facilities, inadequate water for hygiene and unsafe drinking water.

World Toilet Day is a UN recognized event, observed annually on 19 November. This international day of action aims to break the taboo around toilets and draw attention to the global sanitation challenge.

Can you imagine not having a toilet? Can you imagine not having privacy when you need to relieve yourself? Although unthinkable for those living in wealthy parts of the world, this is a harsh reality for many – in fact, one in three people on this globe does not have access to a toilet! Have you ever thought about the true meaning of dignity?

The United Nations Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque, has warned that the sanitation target set by the UN Millennium Development Goals is today the most off-track of all, leaving around one billion people still practicing open defecation on a daily basis, and one-third of the world's population "without access to improved sanitation."

World Toilet Day is not just about toilet humor, or an attempt to make toilets sexy. World Toilet Day has a serious purpose: it aims to stimulate dialogue about sanitation and break the

taboo that still surrounds this issue. In addition, it supports advocacy that highlights the profound impact of the sanitation crisis in a rigorous manner, and seeks to bring to the forefront the health and emotional consequences, as well as the economic impact of inadequate sanitation.

Where is the dirtiest place in your home?

A recent UK study by UNICEF and Domestos has revealed that it is not the toilet. Video game controllers carried nearly five times more bacteria than a toilet seat, and fridge handles were four times as dirty. The real winner in filth, though, was the arms of couches, coming in at 12 times dirtier than toilet seats. Regular hand washing, the report concluded, is the best way to stop the spread of germs around the house.

More information:

<http://worldtoiletday.org>

Source:

[Xylem Impeller Magazine](#)



WIOA AGM

2014 WEEKEND SEMINAR & AGM

The 2014 Weekend Seminar & WIOA AGM will be held at the Airport Motel & Convention Centre in Attwood, Victoria.

For new WIOA members this is your opportunity to meet other members and learn about the latest technologies in a relaxed and friendly atmosphere. The cost for the weekend is absolutely zero, as long as you can get yourself there and home again. From lunch Saturday to lunch Sunday the weekend is on WIOA – just another benefit of being a WIOA member.

Confirmed Corporate Member presentations will be conducted by Khrono Australia and Cyndan Chemicals.

The topic for the open discussion forum this year is professional development and education and training innovations in the workplace. The forum will follow a presentation from Veolia Water sharing some of the innovative training that their operations employees are undertaking.

A site tour on Sunday morning will also form part of this informative weekend.

Places are limited to the first 50 members who register. To secure your place register online at

<http://www.wioa.org.au/seminars/WeekendSeminar.htm>



Participants at the Weekend Seminar 2013

Adenosine Triphosphate (ATP)

ATP is a new tool and approach available for water treatment and distribution operators in the detection of microbiological loads. It is a real-time, accurate quantification of total bioburden allowing operators to identify and rectify problems in a matter of hours compared to days or weeks with traditional methods.

Water treatment operators typically use Heterotrophic Plate Counts (HPC) to estimate the total population of microorganisms in a water sample and to supplement regulated parameters such as Total Coliform and E.Coli tests. While it can be useful as a general indicator of water quality, the HPC process has many shortcomings. In general, since the main goal of an HPC test is to reveal changes in the overall water quality, the value would undoubtedly be much higher if the results were known at the time the sample was collected instead of several days afterward.

In terms of measuring total microorganisms, ATP monitoring provides more complete and therefore more accurate results when compared to HPC. ATP analyses allow an operator to assess microbial content of raw influent, disinfectant demand, and monitor the overall effectiveness of treatment. When the microbial content at any point in the process increases, it is either a sign that a change in the incoming microbial loading had increased or some aspect of disinfection has failed. Either way, it provides the operator with real-time knowledge of this change and allows them to investigate it more closely.

Beyond the treatment process, ATP monitoring also provides great value to monitor downstream points in the distribution system for biological activity such as re-growth, infiltration, nitrification and biofilm accumulation. ATP monitoring is especially effective to monitor biological activity in chloramine-treated systems because it can detect nitrifiers, unlike HPC tests. The hard work of operators and engineers in even the most efficient water treatment processes is essentially negated if downstream regrowth is not effectively monitored and controlled.

While the benefits of ATP monitoring are numerous, it is important to point out that ATP monitoring will not replace compliance tests required by most governments and regulatory bodies (i.e. E.Coli, Total Coliform, etc.). While ATP monitoring detects all species, it also will not differentiate between different species. Furthermore, since viruses do not contain significant quantities of ATP, they cannot be detected using ATP monitoring.

Get away with WIOA in 2014

\$1,000
Travel Voucher
to be won

Make sure you are in the draw by **paying your membership ASAP**. All paid up individual WIOA members are entered into the draw.

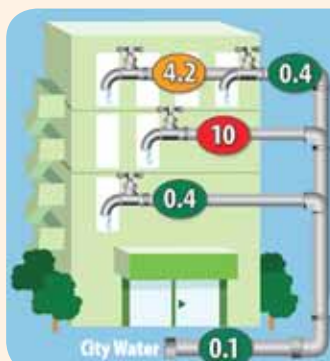


another bright idea from
Royce Water Technologies
roycewater.com.au



Despite the fact that ATP monitoring cannot replace required testing, it is a powerful tool to guide disinfection programs and water management programs to ensure that compliance targets are met. Since upstream changes in water quality can be immediately detected using a routine ATP monitoring program, it will give operators an early indication that increased disinfection may be required. In addition, when used in concert with currently employed TOC measurements, it can indicate if changes in influent water quality are biological in nature.

Contributed by Arthur Kokolekos from Royce Water Technologies



Once a problem is detected, you can get to work immediately and assess the effectiveness of your solution on the spot!

■ Preliminary Tests ■ Mitigation Activities ■ Confirmatory Tests



The NEW Dynafluid 2000 Steam & Water Mixing Valve

You could save up to 80% on your wash down and process water costs simply by installing the Dynafluid 2000, now available from Tecpro Australia.

Utilise your plant steam to provide instantaneous hot water with the Dynafluid 2000, the world's leading steam and water mixing valve. Backed by more than 40 years of specialist experience in hot water technology, Dynafluid's proven design is preferred the world over for its unrivalled safety, performance and versatility.

The Dynafluid 2000 combines steam with cold water to deliver a constant flow of hot water without the need to install expensive and complicated water heating and pumping systems. Simply select the temperature required and the Dynafluid 2000's state-of-the-art spring-controlled valves will ensure an even and consistent flow.

The unique design is the safest on the market and the key to Dynafluid's worldwide success. The steam inlet valve is controlled directly by the cold water pressure, opening only when water is flowing into the chamber. As soon as the cold water pressure in the chamber drops below 1 Bar the steam valve shuts off completely, ensuring that steam cannot escape through the outlet.

The versatile Dynafluid 2000 valve is available in four different sizes, from 15 mm to 40 mm, for flow rates up to 350 l/min and operating pressures from 0.5 to 6 Bar. The smaller two valve sizes are perfect for hose wash down stations, spray balls and jetting tank washers. The larger two valve sizes are ideal for tank filling and multipoint applications, where higher flow rates are required.

The Dynafluid 2000 is also available in a variety of finishes, including stainless steel for hygienically controlled environments. The internal parts are constructed from robust, heat resistant thermoplastic polymers, giving the valves exceptional operating life in the harshest environments. Should maintenance ever be necessary, the valve is easy to service without removing any pipework and a full range of spares is available. An optional temperature gauge and a convenient hose rack are also available.

The preferred choice in a vast array of industries, the Dynafluid 2000 Steam & Water Mixing Valve is the safest, most reliable and most cost effective way to produce precisely heated water for any application. The Dynafluid 2000 is available from Tecpro Australia, the wash down system experts.

For more information about their complete product range, visit www.tecpro.com.au

Contributed by Graeme Cooper from Tecpro



Mixing the Alum sludge with road base



**THE LIGHTER SIDE
I DON'T
FEEL SO
STUPID NOW**



2013 CONFIRMED AS AUSTRALIA'S HOTTEST YEAR ON RECORD

The Bureau of Meteorology Annual Climate Statement for 2013 confirms Australia has recorded its hottest calendar year on record. Average temperatures were 1.2°C above the long-term average of 21.8°C, breaking the previous record set in 2005 by 0.17°C.

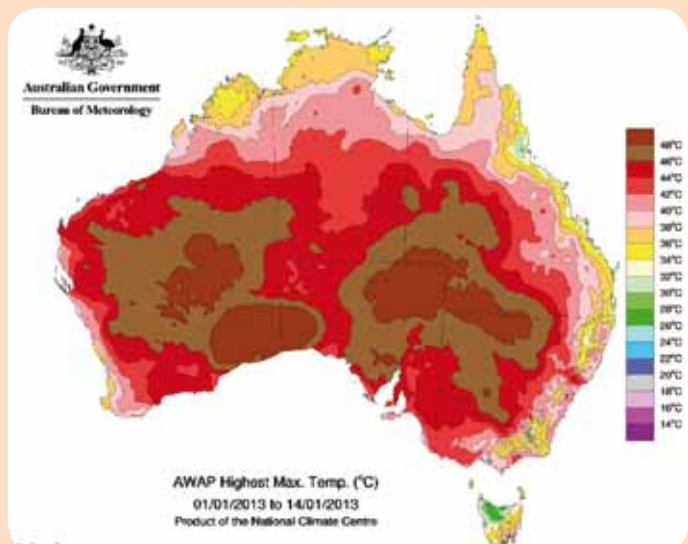
All states and territories recorded above average temperatures in 2013, with Western Australia, Northern Territory and South Australia breaking their previous annual average temperature records.

The year started with a persistent heatwave in January, with Australia recording its hottest day (7 January), hottest week, and hottest month on record. A new record was set for the number of consecutive days the national average temperature exceeded 39°C - seven days between 2 and 8 January 2013, almost doubling the previous record of four consecutive days in 1973.

Other significant climate events of 2013 include:

- Ex-tropical cyclone Oswald caused heavy rain and flooding along the east coast in late January, with many coastal areas from Sydney to Cape York receiving more than 200mm of rainfall in 24 hours, and Upper Springbrook in the Gold Coast hinterland receiving 1496mm in eight days.
- The highest temperature recorded during 2013 was 49.6°C at Moomba in South Australia (12 January), the highest temperature in Australia since 1998.
- The January heatwave saw a number of severe bushfires in south eastern Tasmania and in Victoria, where bushfires were particularly widespread.
- Tropical cyclone Rusty was the most intense tropical cyclone to make landfall in 2013, causing flooding in the Pilbara and Western Kimberley in late February.
- An early start to the fire season saw major bushfires in the Blue Mountains during October, the most destructive in the region since 1968.
- Tropical cyclone Alessia crossed the coast near Darwin in late November, the earliest tropical cyclone to make landfall in the Northern Territory in 40 years.

Nationally, Australian temperatures have warmed approximately 1°C since 1950, consistent with global climate trends. Globally, each of the past 13 years (2001 to 2013) have ranked among the 14th warmest on record.



PROBLEM ACCEPTED SOLUTION SUPPLIED PASS AWARD – WIN A TRIP TO NZ

The PASS (Problem Accepted Solution Supplied) Award provides an opportunity for operational staff to share their in the field innovations and fixes to problems so that others in the water industry can benefit. It is a fantastic opportunity for members of WIOA to receive recognition for their innovation and efforts and lets us share the good ideas and innovations with other Members.

Applications will be accepted until 1st March 2014 with the winner announced at the NSW Conference in Orange. The prize for the winner is an all-expenses paid trip to join the WIOA contingent on the tour of NZ and to attend the WIOG operations conference to be held at Wairakei, Taupo in May 2014.

All the entries, including the winner of the award, will be published in the PASS Award booklet that provides our members with useful tips on improving day to day work practices.



PIPE ROVER TO DRIVE EFFICIENCIES ACROSS WATER INDUSTRY

Pipe Rover technology that can find leaks and repair pipes, without the need to excavate or switch off customers' water, has the potential to transform how the water industry maintains its pipe networks.

The technology is being trialled by Western Water in partnership with Central Highlands Water as part of the Intelligent Water Networks Program. "This project has great potential to deliver efficiencies in the long term, from faster, simpler repairs to reduced water losses," Western Water's Managing Director, Neil Brennan, says.

The Intelligent Water Networks Program is a partnership between VicWater, 19 water corporations and the Department of Environment and Primary Industries, in consultation with the Office of Living Victoria. "The IWN program is part of a new era of innovation in the Victorian water industry," Mr Brennan says.

The IWN program has increased collaboration and information-sharing across the industry, which really boosts the potential for delivering efficiencies and limiting price increases for customers. Western Water spent two weeks with contractors trialling the Pipe Rover technology in water mains across their service region in 2013. Data from the trial is now being analysed.

The Pipe Rover is inserted into a water, sewer or recycled water main, where it gathers detailed information about the

condition of the pipe, including video footage. This allows determination of the scale of a leak or other problem, and the best means of repairing it. Water businesses can then prioritise maintenance and fix small problems before they become big ones. In some cases repairs can also be automated, potentially bringing significant cost savings.

"The Pipe Rover, and other new technologies now being trialled, have the potential to deliver big cuts in water losses, and associated costs, as well as avoiding supply disruptions" according to Mr Brennan. "The Pipe Rover project is one of several projects under way across the water industry as part of the IWN Program, designed to drive efficiency and system-wide cost reductions, with the aim of more affordable water bills".

The program is investigating new technologies and innovations to meet common challenges such as population growth, ageing infrastructure and climate variability.



Pipe Rover Technology

THE LIGHTER SIDE THINGS YOU CAN GET ON THE NET

Amazon.com is home to just about everything, from books, music and everyday household stuff to disturbing "when-would-I-ever-need-that" stuff. Here are 10 of the strangest things we came across that are all available now for the right price.

- Nicolas Cage Pillowcase
- Daddy Saddle
- Freud Action Figure
- Inflatable Toast
- Zombie Jerky
- 55 Gallons of Lube
- Dog Dinosaur Costume
- Canned Unicorn Meat

But the WIOA office favourites go to:

Underpants Dispenser A must have in your car or office for underpants on-the-go.



Weener Kleener Soap Don't waste your money on the generic version, pay a little extra and get the name brand Weener Kleener soap



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

Peter Harrison, Bryan Hutchison, Peter Fraser, Errol Taske, Tim Robinson, Grant Newman, Scott Sheppard, Tony Troughton, Ray O'Brien, Mark Thomas, Lee Marshall, Colin Hughes, A.S.M Mohiuddin, Philip McLean, Ben Foster, George Trehwhitt, Adam Goodyear, Allan Hruz, William Kelly, Grant Schulz, Michael Ashdown, Robert Wood, John Matheson, Brian Teasdale Larry O'Bree, James Sharp, Laurie Kempton, Graham Maloney, Matt Dixon, James Tasevski, Jake Weir, Jason Wade, James Parkinson, Arama Rapana, Todd Stacey, Shane Jerger, Mick Walsh, Ross Gibbs, Dean Long, Keith Oliver, Greg Waugh, Wayne Richardson, David Meyers, Rob Hood, Justin Chandler, Jason O'Brien, Ivan Ward, Bruce Sorensen, Rob Medland, Brad Shannon, Corin Yong, Johann Muller, James Paynter, James Doyle, Brent Cameron, Nic Amiguet, Allan Saunders, Joe Costanzo & Michael George.

Lower Murray Water, Mareeba Shire Council, Gympie Regional Council & Longreach Regional Council.

Georg Fischer Piping System, Lend Lease Services, Dial Before You Dig NSW/ACT, Sydney Water Monitoring Services, Spirac, Australian Water Quality Centre, Aquacorp, Phoenix Contact, MAK Industrial, IC Pipes, 37south, Ishigaki Oceania, Vansan Makina San ve Tic A.S, Trility, Cadia Group, SPX Flow Technology Australia, Meyjor Industries, Vega Australia, CSA Specialised Services, Schneider Electric, Inter-Water Events, Bell Environmental & Idexx Laboratories.

In November the WIOA committee were joined by Board members and staff to undertake a strategic planning process. When we put all of the planning documents together and looked at the frequency of words used this “wordle” evolved.

Obviously business and water were well represented, but interestingly most of the regular used terms are about people: relationships, committees, operators, members ...



Kwatye Prize (applications close 20 July 2014)

1 & 2 Mar	Weekend Seminar and WIOA AGM – Attwood
4 Mar	Veolia Membranes Workshop – Castlemaine, Vic
14 Mar	Queensland Networking & Social Bowls Afternoon, Yandina, Queensland
19 Mar	Tasmanian Interest Day - Waratah WTP
2 & 3 Apr	8th NSW Water Operations Conference & Exhibition – Orange, NSW
2-10 May	Operators Tour to New Zealand & WIOG Conference – Wairakei NZ,
4 & 5 Jun	39th Queensland Water Operations Conference & Exhibition - Logan, QLD,
3 & 4 Sept	77th Victorian Water Operations Conference & Exhibition – Bendigo, Vic

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