

OPERATOR

August 2015 Edition



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Double celebration for
Grahame Dunstan from
Cairns Regional Council.
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The first operator certified
under the National Framework,
Peter Kirchman from the Wugal
Wugal Aboriginal Shire Council.
More on page 7.

Newest IDIOTS member
John Granzien. Find out
more on page 8.



Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

FROM THE EO'S DESK

The road from the WIOA office to the Melbourne airport and back copped a hiding in the three months since our last edition of Operator. Trips to New Zealand for the annual Operators tour, Ozwater in Adelaide, Interest Days in Ballarat and Campbell Town (Tasmania) our Queensland conference in Toowoomba along with a bunch of distribution seminars in the Sunshine State, and the inaugural South Australian Taste Test day have kept us really busy.

A key highlight to report is that we have certified the first six operators in Australia under the National Operator Certification Framework at a presentation ceremony held at the WIOA Queensland conference. There is a report and some photos later in this edition but I would like to say a special thanks to Dave Cameron from **qldwater** and Toni Styles from the Queensland Department of Energy and Water Supply (DEWS) for their support in making the presentation possible. Our heartfelt congratulations are also extended to the certified operators themselves for all their hard work, their employers, and all the others involved in the Queensland Pilot of the Certification scheme. We look forward to many more operators being certified in the future.

The Operators tour to New Zealand in May was awesome yet again and the dozen attendees had a most memorable time. As it was the first time the tour has travelled around the top part of the South Island, we were able to visit a whole bunch of plants and meet operators that have not been involved before. The hospitality and friendliness of everyone along the way, as well as some of the more novel activities, will no doubt keep coming up in discussions for some time to come. A write up on the tour by Peter Umland and photos are included in this newsletter. As usual, a bunch of Kiwi operators are coming over to attend the WIOA Victorian conference in September. We have arranged a reciprocal tour to the west of Victoria and our thanks are extended to a number of water businesses and members who will be hosting the Kiwis at their plants in September.

Our Queensland conference in June was a great success with near record attendance. Once again, thanks to the Toowoomba Regional Council and their staff for being such great hosts and for all the help they provided. The support from the members of the Queensland Advisory Committee was also outstanding, with a large workforce at the event sharing the workload around. At the President's Dinner, we took the opportunity to reward another long term supporter and helper in John Granzen from Seqwater. John became the latest inductee into the IDIOTS fold and some notes on his exceptional efforts are on Page 8. A full report on the conference and all the award winners also appears later in this edition.

In conjunction with **qldwater**, WIOA's Technical Advisor, Peter Mosse has been very busy in far north and central Queensland recently delivering specialist training on filters and coag/flocc, as well as follow up mentoring for a number of operators who did courses last year. Comments from participants at each of these courses have been contributed and highlight how valuable this training is for their skill development. We have also delivered Distribution Seminars in Ingham, Yeppoon, Brisbane, Logan and Gold Coast recently which have been well attended and enthusiastically received.

As we move into the second half of the year, the Advisory Committees in all States are becoming very active again, with a range of Interest Days and other events planned. Engagement, ownership and contributions by members in all States is a vitally important part of our future plans. We hope that members will support the efforts of the Advisory Committees, attend the events and participate in all the other opportunities on offer to network and share knowledge.

The very first event under the WIOA banner in South Australia was staged at the TAFE SA Tonsely campus in late July. The Interest Day and SA Taste Test was attended by just over 30 participants and was an excellent first up event. A meeting will be held in October to formalise the South Australian Advisory Committee and to do some planning for future events. If any South Australian members are interested in helping out on this Committee, please let us know. Due to space restrictions, the SA Taste Test report has been held over to the November edition of Operator.

WIOA was pleased to be part of the organising committee for the inaugural Biggest Ever (Laurie Gleeson) Dinner which was held in Melbourne in late June. The event was extremely well supported by the Victorian water industry with more than \$70,000 raised and contributed to the Australian Prostate Cancer Foundation. Thanks to all the WIOA members who attended and supported such a worthwhile cause and we look forward to the 2016 event.

Finally, our attention has now moved over to finalising the arrangements for the Victorian conference in early September. The exhibition is a sell out yet again and the conference is a "must not miss" event for Victorian based operational people. Registration forms or visitor passes are available from the WIOA website. We look forward to a strong turn out.

Until next time, **George Wall**, WIOA Executive Officer

NEW QLD CHAIR

After doing a sterling job as Chairman of the WIOA Queensland Advisory Committee for the last two years, Marcus Boyd from Toowoomba Regional Council decided it was time to step down and let someone else have a go.

WIOA is pleased to report that Colin Haynes from Unity Water was elected the new Chairman at the Advisory Committee Meeting held at the Queensland Conference in Toowoomba.



Colin Haynes (L) being congratulated by WIOA President, Ryan McGowan.

PROFILE OF A MEMBER



Name: Peter Kirchmann

Position: Water and waste supervisor

Employer & Location: Wujal Wujal Aboriginal Shire Council

How long have you worked in the water industry and what attracted you to it? 25 years - I was working

for Hooker chemicals and they needed a discharge treatment person to fill in as the operator was on leave so I got a crash course on treatment of chemical waste. We had full laboratory and chemist facilities so lots of support for dumb questions!

What do you enjoy most about your job? As we do both water and sewer, every day has new challenges.

What are the major challenges in your current role? Trying to keep costs down and replacement of aging infrastructure.

How long have you been a WIOA member? 5 years, I try to attend conferences I find them very useful (and a laugh!)

How do you relax? Reading (mostly water journals!)

Where do you live and what's the best thing about it? While I work in Wujal I have a home in Cow Bay. Cow Bay is where the rainforest meets the reef, there's fishing, swimming and a great pub! People come from all over the world to look at the area. Best thing is I go home to it every weekend.

QUICK QUESTIONS

Age: 53

Nickname: PK

Family Status: DINK

Pets: 1 dog

Favourite food: Sea food

Least favourite food: Blood pudding

Favourite TV show: Becker

Worst TV show: All of the reality shows

Favourite Movie: Water world!

Favourite Musical artist/s: Frank Sinatra

Favourite book: WIOA Operator! (NAH! I DON'T HAVE ONE)

Favourite team: Collingwood

Ambition in life: Live long and prosper!

Hobbies: Home renovation

Best Trait: Willing to listen and open to new ideas

Worst Trait: Not knowing how to give up!

Four people to invite to dinner: Albert Einstein, Michelangelo, Archimedes and Nikola Tesla

LOOK- ALIKES!

At the IWA Inaugural Biggest Ever (Laurie Gleeson) Dinner we found another one courtesy of MC Craig Willis.



Gary Murdoch-Brown
from EcoCatalyst



Joe Hockey Australian Treasurer
and Member for North Sydney

WATER OF ORIGIN TASTE TEST 2015 - QLD SCORES OVER NSW!

For the third consecutive year, the IXOM Water of Origin Taste Test was conducted at the WIOA Queensland Conference. The best tasting water from Queensland was pitted against the best tasting water from NSW with conference attendees doing a blind tasting of both samples and voting for their preferred drop. The winner this year was the Queensland sample, supplied from Richmond Shire Council which came up trumps over NSW represented by the Orange City Council. The win put the Queenslanders in the lead 2 to 1 over NSW.

The Richmond Shire Council sample came from their brand new water treatment plant that was commissioned in December 2014. Council secured funding of \$3.6 million from the State Government to assist in development and installation of a first class water treatment plant and engaged Aeramix to design and implement the plant.

Richmond Shire Council CEO, Peter Bennett, said the plant formed part of a major overhaul of its water supplies with another \$1 million spent to upgrade the water mains. "These two projects have provided the residents of Richmond with the best water in Queensland – and NSW – and showcase the hard work the Richmond Shire Council has gone through to get the best result possible."

On behalf of Orange City Council, Icely Road Water Treatment Plant manager Jon Francis said winning the NSW competition was due to his dedicated team's hard work. While the plant has high-tech systems including ozone treatment and biologically-activated carbon (BAC) filters not often seen in regional plants, the defining factor behind Orange's water quality was the plant's four workers. We've done a lot of work on the filters recently. The guys are constantly tinkering with things to optimise the plant. There is always something to improve.



Geoff Warren from Orange City Council NSW faces off with Geoffrey Johnson (R) from Richmond Shire Council QLD.



Gerhard Floridia (C) from Ixom with Geoffrey Johnson (R) and John Wharton AM, Mayor of Richmond Shire Council.



The Queenslanders celebrating the win in the Water of Origin Taste Test.

2015 QUEENSLAND CONFERENCE REPORT

A total of 768 people attended the **40th Queensland Water Industry Operations Conference and Exhibition** held at the Clive Berghofer Recreation Centre in Toowoomba on 17 & 18 June 2015.

Delegates were officially welcomed by the Mayor of Toowoomba, Councillor Paul Antonio. A special presentation ceremony followed where the first operators in Australia were presented their certified operator credentials under the National Operator Certification Framework. These included two staff from Wujal Wujal Aboriginal Shire Council and four staff from Toowoomba Regional Council.

The conference keynote address was delivered by Mr Stewart Kreltszheim from the Country Fire Authority in Victoria who shared some of his experiences and issues in leadership from Kokoda to Kilmore. Having previously presented at our NSW and Victorian conferences, his powerful message was really well received by those in attendance.

The event concluded with the official Awards Dinner and presentations, which saw Grahame Dunstan from Cairns Regional Council win the prestigious Leon Henry Memorial 2015 Queensland Operator of the Year as well as the Queensland Operator of the Year (Civil/All Rounder). Geoffrey Johnson from Richmond Shire Council won the 2015 Young Operator of the Year Award.

A number of other water operational employees were recognised at this event including Sally-Ann Storey from the Toowoomba Regional Council who won the Best Paper by an Operator as well as the Best Paper overall.

Once again the event included a comprehensive exhibition with over 100 display sites where companies showcased the latest in equipment, services and process technologies available to the water, wastewater and liquid conveyancing industries. Control Components was awarded the Ron Bergmeier Award for the Best Exhibition Site at this year's event.

The conference hosted the Ixom Water of Origin Taste Test that saw the Queensland entry from the Richmond Shire Council defeat the sample from the Orange City Council, NSW. Queensland now holds a 2 to 1 winning record over NSW who will no doubt be back to take them on in 2016.

WIOA presented a cheque to charity on behalf of members who helped raise funds through a Charity Bowls Day conducted earlier in the year and a raffle at the conference. The **Give Me Five for Kids Appeal for the Toowoomba Hospital** received \$1,500 to assist with the good work it provides for children and families in the Toowoomba community.



AUSTRALIAN
WATER
ASSOCIATION

Qld Operator of the Year, Grahame Dunstan (L) with Matt Dawson from AWA Qld.



Qld Young Operator of the Year, Geoffrey Johnson (C) with John Betts and Dave Cameron from **qldwater**.



Qld Civil/Allrounder Operator of the Year, Grahame Dunstan (C) with John Betts and Dave Cameron from **qldwater**.



Winner Best Paper Overall, Sally-Ann Storey (L) with Shane Wholsen from Iwaki Pumps.



Winner Best Operator Paper, Sally-Ann Storey (C) with Alex Maderasi, John Paulger and Ryan McGowan.



The team from Control Components congratulated by WIOA Chairman Jim Martin (R) for winning the Ron Bergmeier Award for Best Exhibition Site.

2015 QUEENSLAND CONFERENCE REPORT

QUEENSLAND CONFERENCE 2015 WINNERS

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

Queensland Operator of the Year

Grahame Dunstan from Cairns Regional Council

Queensland Young Operator of the Year

Geoffrey Johnson from Richmond Shire Council

Queensland Operator of the Year (Civil/All Rounder)

Grahame Dunstan from Cairns Regional Council

Brian Davis Award for Best Paper Overall – sponsored by Iwaki Pumps

Sally-Ann Storey from Toowoomba Regional Council

Nalco Prize for Best Paper by an Operator

1st **Sally-Ann Storey** from Toowoomba Regional Council

2nd **Glenn Carrol and Matthew Ball** from Unity Water

3rd **Geoffrey Johnson** from Richmond Shire Council

IXOM Water of Origin Taste Test

**Queensland (Richmond Shire Council) v NSW
(Orange City Council)**

Won by **Queensland**, represented by Richmond Shire Council

Ron Bergmeier Award - Best Exhibition Site

Control Components

WHAT SOME OF THE PARTICIPANTS THOUGHT?

The WIOA conference provides a fantastic opportunity for operational professionals to explore the latest technologies and share their experiences with other organisations in the water industry.

Mark Gwynne from Cairns Regional Council

The conference provides a very good platform for both equipment manufacturers and the end user to interact. Feedback is extremely important to ensure our business is up to date with market expectations.

Les Luke from KSB Australia

It is the best means of keeping up to date with new technologies and provides operators with a reward for their dedication to their profession.

Shaun Johnston from Gympie Regional Council

Once again the WIOA staff and volunteers conducted a very successful Queensland Water Industry Operations Conference and Exhibition. The 40th conference held in Toowoomba was well supported by both industry representatives and operators and a broad range of technical papers presented to the conference delegates.

Ian Cuthbertson from Seqwater

This is our first year exhibiting at the WIOA shows and we have been really pleased with how well they are organised and attended. For a small company such as Control Components that is relatively new to the market, it is a great experience.

Ben Metman from Control Components

The WIOA conference in Toowoomba was a great experience, you come away from the conference with enthusiasm (and some tools) to go back and tackle some of the issues at home.

Joe Robinson from Cairns Regional Council

I found this conference to be extremely relevant to my daily activities and gave me a new perspective on the associated wastewater industry. It was great cross education for those of us who tend to only be involved with one side of the industry.

Andrew Steen from Seqwater



- 1 Paul Martell working the crowd on Thursday evening.
- 2 Delegates at the papers session.
- 3 Glenn Carroll and Matthew Ball from Unitywater present at the Queensland conference

QUEENSLAND OPERATOR OF THE YEAR

Double Celebration for Grahame

Grahame Dunstan, Wastewater Services Coordinator from Cairns Regional Council scooped the prize pool at the recent WIOA Queensland Conference winning both the AWA sponsored Leon Henry Memorial, Operator of the Year and the **qldwater** sponsored Civil/All Rounder Operator of the Year awards for 2015.

Grahame has a lifetime of professional experience in all aspects of the Water Industry, having devoted over 45 years to community involvement in the operations, maintenance and optimisation of water and wastewater infrastructure.

Grahame has been in a water services coordinator role with Cairns Regional Council since 1996. He was initially responsible for the coordination of water and wastewater services and treatment in Cairns and as the city has grown and demands increased, this role has been split. From 2001-2009 Grahame was the Wastewater Coordinator responsible for wastewater reticulation and treatment and once again this role was split due to the increased demands of the role. His early involvement in the industry commenced via a certified trade background and he has since developed skills ranging from operational management, strategic planning and implementation, contract negotiations and management, and regulatory governance.

From 2009 to current Grahame has been the Wastewater Services Coordinator, responsible for the reticulation of wastewater.



Grahame Dunstan hard at it in the office.



Grahame Dunstan doing some operational planning.

He has recently been appointed as Operations Manager of the Cairns Regional Council Sewerage Pump Station Relationship Contract, a significant project to upgrade key pump stations.

In his current role, Grahame is charged with managing the everyday demands of a major regional city's expanding wastewater system and implementing processes to provide customer service satisfaction while developing risk management systems to protect the natural environment associated with a world heritage locality. Grahame is responsible for 34 staff and an operational budget of approximately \$19M per annum.

Grahame is an experienced and innovative water industry operator, well respected by his peers. Grahame strives for perfection in all operational aspects. His objectives and actions throughout his long involvement in the industry have been focused on the efficient operation of a municipal water and wastewater system thereby maintaining and preserving community health, and the protection of environmental values. He is focused on continual improvement and optimisation of accepted best practice principles.

For winning the Leon Henry Memorial Operator of the Year Award, he receives an all expenses paid spot on the WIOA Operators tour to New Zealand in 2016. Additionally, for winning the Civil/All Rounder award, Grahame receives up to \$1500 towards professional development opportunities such as attendance at other WIOA conferences, **qldwater** training or for funding expenses for exchange opportunities at neighbouring councils.

QUEENSLAND YOUNG OPERATOR OF THE YEAR AWARD

Congratulations to Geoffrey Johnson from Richmond Shire Council who was announced the winner of the **qldwater** sponsored Young Operator of the Year award at the WIOA Queensland Conference Awards ceremony.

Geoffrey's achievements are many and include redesigning his council's workplace health and safety systems including risk assessments and development of safe operating procedures, mapping programs and on-ground reticulation works and coordinating contractors in the upgrade of water mains around town. He completed all this while overseeing the construction and implementation of a new water treatment plant.

Geoffrey was also actively involved in the WIOA Queensland Conference presenting a platform paper on the upgrade of the water treatment plant as well as representing Qld as the winner of the best tasting water in the Water of Origin Taste Test competition.

Geoffrey receives an all-expenses paid trip to join the WIOA delegation on a tour of water and wastewater facilities in New Zealand as well as attending the Water Industry Operations Group New Zealand conference in May 2016.



Geoffrey Johnson - Young Operator of the Year.

NATIONAL CERTIFICATION FOR OPERATORS

Two operators from Wujal Wujal Aboriginal Shire Council and four from Toowoomba Regional Council have become the first “Certified Water Treatment Operators” in Queensland at a presentation held at the WIOA Queensland Conference in Toowoomba on 17 June. While Operator Certification has been in place for some time in Victoria, this presentation is an Australian first, as the staff are recognised against the National Certification Framework for Operators Within Drinking Water Treatment Systems.

At the award Ceremony, Toni Stiles, Director of Water Supply Regulation for the Qld Department of Energy and Water Supply (DEWS) noted that Water Treatment Operators have one of the most important jobs of anyone in Australia – ensuring the supply of safe drinking water to our communities. There are very few people that can say they hold the health and safety of their communities in their hands.

The importance of ensuring operators are appropriately qualified cannot be underestimated and the employment of certified operators is seen as best practice by the Department. Suitably qualified, experienced and competent operators are the best line of defence for any provider of water services. These operators are able to make the best use of their Drinking Water Quality Management Plan and ensure it is able to be operationalised.

They are able to apply their skills and expertise, particularly in emergency situations and devise and implement sometimes innovative solutions effectively and efficiently, while giving confidence to the Department that health of the public will be protected.

Speaking on behalf of **qldwater**, CEO David Cameron confirmed that significant effort had been put into developing and implementing the National Certification Framework. Supporting initiatives like this that improve the industry, has been a no brainer.

From **qldwater's** perspective, David noted that “Drinking water treatment personnel in Queensland are typically trained to a high standard but this Certification program takes a few extra steps to ensure that the training they receive directly matches their on-the-job requirements and they get ongoing access to professional development.

It's specifically about recognition of the significant skills of these people, building career paths and reinforcing the crucial role they play in delivering safe drinking water to Queensland communities”.

qldwater continues to push for opportunities to see it mandated with the new government. From the Pilot trial, our business case identified that only an additional couple of million dollars is required to make this happen state-wide. Given total spending on water, this small investment is nothing by comparison. Certification can be “the single most cost-effective investment in our industry to support strong public health outcomes”

Dave acknowledged Peter Kirchmann from Wujal Wujal who organised his own staff off his own bat with the support of bosses like Jaime Gueddes and his council. I can only hope it's infectious and we see many more taking the option up.

On behalf of WIOA, EO George Wall noted this was a very historic event for the Queensland and Australian water industry. WIOA was instrumental in establishing an operator certification scheme in Victoria in conjunction with the Victorian Department of Health and VicWater. The first operators were presented their credentials in December 2012 and there are now 36 who have completed all the requirements to be certified under this scheme and another 29 with applications in the system.

The water treatment operator is the final, and most important cog in the supply of safe drinking water to our communities. We should see ourselves as protectors of public health and we should always act accordingly.

The awarding of Certification under the National Framework came about following an extensive Pilot project in Queensland through a partnership between **qldwater**, WIOA and DEWS. Its main aim was to test the implementation of the certification scheme with a view to its broader adoption. The Pilot involved the input of 5 service providers including Toowoomba Regional Council, Wujal Wujal Aboriginal Council, Seqwater, Bundaberg Regional Council, and Longreach Regional Council. Training data was collected for 130 individuals employed by these organisations, around 25% of all water treatment operators in Queensland.

For just over 40 years now, WIOA has had an advocacy role for our members and the broader water industry. We have been doing everything we can to improve the training and recognition of operators and we have also been promoting the opportunities for operators to develop themselves, their skills and in many cases to take up leadership roles in the industry. We want to help build an environment where operators can make a career in our industry, instead of it just being a place to work.

While drinking water regulation in Australia remains the responsibility of individual states and territories, it is hoped that these steps towards an integrated national program will drive improved standards in training and portability of skills.

As he was first to complete all the requirements to be certified, the honour of being the first operator certified against the National Framework went to Peter Kirchmann from Wujal Wujal Aboriginal Council. The other five certified operators include Ray Sycamore also from Wujal Wujal, along with Terry Heness, Ricky Mason, Scott Nichols and Craig Smith, all from Toowoomba.

These six operators have made their own little piece of history and are being rewarded for the fantastic job they do. WIOA is proud to have our first nationally certified operators and we hope they are the first of many certified water operators in Australia and in the long run, the certification process will be a great driver in the continual protection of public health for our communities.



From left, George Wall, Dave Cameron and Toni Stiles with all the certified operators.

JOHN GRANZIEN JOINS THE IDIOTS

John Granzien from Seqwater in Queensland was Inducted as a Delegate of the Inextricably Obstructed Tap Society, or what is commonly known by the acronym, IDIOTS. He joins 28 other individuals who have been recognised by WIOA in recognition of their service to the Association

John joined WIOA in July 2004 and has been a member for just on 11 years. He rocked up to the 2007 conference representing the Shire of Esk and we can recall a photo of him and his mate grinning after winning some prizes from the operator competition. He has hardly missed attending a conference ever since.

His first formal involvement came in 2009 when he presented a paper at the Caloundra conference titled "Transition****Inheritance*****Scope". He won the Actizyme Prize for the Best Operator Paper. His paper talked about the changes following the amalgamations of water providers in the South East Queensland area. It highlighted some of the improvements made to plants which had been neglected somewhat by their former council owners.

John's paper was converted into a feature article in the December 2009 edition of WaterWorks along with a suite of "before and after" photos highlighting the range of improvements made. This article and the photos were used quite a lot in the following years by WIOA to highlight where the industry needed to get to.

For winning the Actizyme Prize, John got to trek down to Bendigo to do his paper all over again and meet a whole bunch of new operators. True to form, he didn't just stand around doing nothing – we reckon he single handedly set up the whole meals area and then looked for more jobs.

He delivered another paper in Toowoomba in 2011 and placed 3rd in the Actizyme prize.

In August 2011, when WIOA created the Queensland Advisory Committee, John was one of the inaugural Members in attendance at the meeting and put his hand up to help out.

He has been a regular at the conference, either coming as a Seqwater delegate or in the years when it wasn't his turn, he just took holidays anyway and showed up to help out.

John has been a regular at the Charity Bowls Day and has also participated in a number of the Queensland interest days. He has written numerous articles for Operator and participated in Movember in 2014, which gave us another photo to laugh at (what a terrible Mo).

John epitomises what a good member is, and what they can do for the organisation. We know he is continually encouraging his fellow workmates to get in and have a go and there are a number of members who have been signed up as a direct result of this John's encouragement and promotion of what WIOA is all about.

When inducted into the society all IDIOTS are required to undertake a task of some description. Given John's love of rugby league and the Penrith Panthers, a rugby style passing task was set. His task was to pass the rugby balls into the various boxes which all included a special item for him to wear or use – a volunteer hat, apron and tongues due to his community minded spirit; a fishing lure; the bunny ears that he has grown accustomed to wearing by coming last at the bowls day; and something for John to enjoy, a bottle of port. A very deserving inductee indeed.



John undertaking his challenge.



Our newest IDIOTS member, John Granzien.

FORGETFUL TRAVELLER

You'd think someone who has amassed over a million frequent flyer points would know not to show up at the airport for a trip to NZ without his passport. This is what EO George did before the recent NZ Operators tour. After some frantic phone calls, Marilyn and Sherryn located the errant document, jumped in the car and raced from Shepparton to Tullamarine. Lucky for George, the outbound flight had been delayed a bit and they got there just in the nick of time for him to join the tour.

Early onset Alzheimer's or stupidity, take your pick!



TECHNICAL TIP – CLEANING WATER STORAGEES

Following a Distribution Seminar run by WIOA recently, we were asked to provide some technical tips relating to cleaning reservoirs and storages. After following this issue up with some knowledgeable industry people we have put a few tips together.

All tanks within a single distribution system will have different cleaning cycles. The Clear Water tank at the WTP may need 6 monthly to 12 monthly cleaning if there is a lot of carry over floc present or if lime is being dosed in, in large amounts. If the Clear Water tank is kept clean, then the others further down the line will not be receiving the same amount of sediment loadings. Likewise, the last tank in the line may have minimal sediment, due to 'drop out' along the way.

On average, with good quality treated water and efficient filtering systems, tanks should be cleaned every 4 to 6 years. If sediment loadings are kept low (5 to 15mm) then disposal issues are minimised. The more sediment that is allowed to accumulate, then disinfection systems are working harder, cleaning is much slower and sediment disposal issues are compounded.

Some sites have cleaning frequencies of 10+ years, as there is nothing coming through into the tanks at all. Inspections are still done at 4 to 5 yearly intervals to keep an eye on structural, operational and water quality issues.

Unfiltered water and especially bore waters with iron and/or manganese loadings, should be cleaned between 2 and 4 years, but once again, after the first clean and based on the previous history. An accurate interval can soon be predicted to cover water quality and operational issues. A tank needs to be cleaned so that it can be inspected thoroughly and not JUST to remove the sediments – the few hours onsite each time are often the only human contact a tank receives throughout its operational life.

OH&S issues are preventing regular 'health checks' from occurring to tanks in many cases – local operators have been told NOT to climb up on the roof area, so much of the significant evidence, such as roof damage, open hatches, vermin entry and vandalism remain unreported.

Another consideration is the type of sediment and the condition of the tank at the time:

- Some sediments are what would be termed 'clean sediments' – iron, manganese combinations, chemical residuals and floc carry over.
- But tanks that have known contamination entry areas, such as failed centre gutters, unsealed entry hatches, platforms draining back in, coarse ventilation mesh, heavily corroded internal metal fixtures etc, often have 'dirty sediments', with organic, faecal and animal remnants mixed in. These ones should be cleaned on a more regular basis, regardless of sediment depth, until repairs to the tank integrity are performed.

It is actually harder for divers to clean a tank with minimal sediment loadings, as it is difficult to follow the 'cut line'...a bit like mowing the lawn too often – you get lost, and just move around thinking you are on the right track!

There's a number of articles published in our WaterWorks Journal with photos related to storages which can be downloaded from www.wioa.org.au/publications/waterworks.htm including:

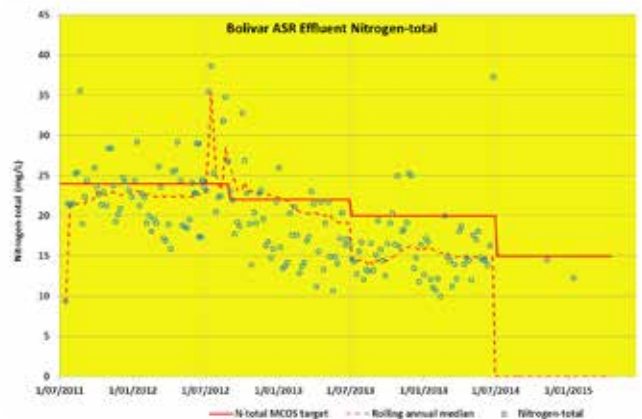
- December 2009 - Water Storage: Vermin Proofing Potable Water Storages - Jai Josey & Peter Duzevich
- June 2010 - Interview – David Barry, Aqualift
- May 2012 - 18 Years of cleaning water storages – David Barry
- There is also an article in the current edition (May 2015 which is not on-line just yet) looking at tank design.

LIFE IS NEVER DULL AT BOLIVAR

The Bolivar WWTP in SA that is featured on page 10-11, finds itself in the middle of a period of intense surgery at the moment in the form of multiple capital works upgrades. The operations team at Bolivar have done an amazing job thus far in accommodating these projects. They have taken segments of the plant offline when needed for the contractors to perform their work. This is often done at times of the year or times of the day when you normally would not, meaning operations are taking on more risk. It is our constant battle and challenge to ensure we have no contractors under safety risk. Bolivar often has 20-30 Permit to Work authorisations live at any one time, each with its own corresponding isolations and lock boxes. Amongst all this isolated Plant we ensure the Plant performs at its best and so avoid environmental and contractual risk.

Regular monitoring by the operations team of SCADA trends, process reports, and daily workarounds is the only reason Bolivar consistently meets specific performances indicators and even pushes its value add or 'stretch' targets during this intense capital works activity.

One such example is that Bolivar currently has half of its primary sedimentation offline, one of its four activated sludge reactors offline, and a quarter of its clarifiers offline. Even at this time of the year in early winter, we are still pushing the stretch target of Total Nitrogen yearly median less than 15.0mg/L to lagoons. Shown in the figure below, you can clearly see how year after year we are improving and meeting the increased performance expected of us.



The end is not yet in sight for the Bolivar Operations Team. The second half of the sedimentation tanks is soon to go offline, the ASR diffuser work will move onto the next reactor, and clarifier upgrades are commencing soon.

An operators dream is to have a Plant one day that has all equipment available to utilise, and no contractors onsite, meaning you have a full plant at your disposal to operate and optimise. Imagine how sweetly she would operate then! But alas that is only a dream. Until that day Bolivar Operations will continue to manage capital works interruptions, Plant breakdowns, and maintenance interruptions while getting the best out of its Plant.

Contributed by **Dan Ford** from Allwater

BIRDS EYE VIEW - Facilities Members Operate

Bolivar Wastewater Treatment Plant, Adelaide, South Australia

The Bolivar facility is undergoing multiple capital works upgrades

1 Bolivar High Salinity Plant

Rehabilitation of concrete, installation of liner, and penstock replacement

2 Hazardous Area

Remediation Stage 3; to ensure compliant electrical infrastructure within hazardous areas

3 Primary Gravity Thickeners

Hydraulic Ram Pump installation on Primary Gravity Thickeners

4 Primary Sedimentation Tanks

Rehabilitation and Grit Handling System Installation; 2 of the 4 sedimentation tanks are offline and nearing completion

5 Clarifiers

Upgrade about to commence by changing the design of the existing clarifiers in order to improve final effluent quality

6 Activated Sludge Plant

Replacement of the existing 'Aquablade' diffusers with disc diffusers

7 Plant SCADA

Full SCADA system replacement of the main plant is underway and expected to take 4-6 years

8 Digester No. 5

Asbestos Roof Insulation Removal, internal repair and roof re-insulation

9 Power Generation

Energy Co-generation Facility; a \$25.8 million upgrade to the energy generation plant is in its final commissioning and proving stage

10 Main Pump Station

Upgrade; the pump station which feeds the WWTP is nearing practical completion and handover



Bolivar WWTP is actually made up of 3 Plants

- The main plant is an Activated Sludge Reactor (ASR) plant that performs primary sedimentation, followed by the activated sludge process. Treated effluent from the main plant flows to the ocean outfall.
- A High Salinity Sequencing Batch Reactor (SBR) Plant that treats wastewater high in salinity content, which runs parallel to the main plant.
- At the end of the polishing lagoons is our '3rd Plant', the DAFF Tertiary Treatment Plant. The DAFF plant re-treats the effluent for re-use in local market gardens and residential third (p...

The Bolivar WWTP is the largest wastewater treatment plant in metropolitan Adelaide, and services approximately 68% of Adelaide's metropolitan customers and 86% of Adelaide's trade waste.



with traditional solids and grit
ed sludge reactors and secondary
to polishing lagoons before flowing to

t services selected coastal suburbs
el to the main plant.

Dissolved Air Flotation Filtration (DAFF)
uent that would otherwise head to sea,
(purple) pipe schemes.



OPERATORS TOUR OF NZ 2015

On the back of the success of the Australian Cricket team in the recent 2015 Cricket World Cup, the WIOA XI, plus our late joining 12th man, returned to tour the South Island of New Zealand in an attempt to retain the coveted bragging rights of water and wastewater operator supremacy. The Australian touring party was playing strongly until Day 3 when the New Zealand rugby league team defeated the Australian team in the ANZAC test. Lucky for us that two thirds of the Australian WIOA touring party was Victorian, so the ignorance card was played and then supported by 'Wasn't the cricket the WORLD CUP?'

Day 1 of the tour started with the convergence of operators at the South Island city of Christchurch. We bussed out to the nearby two-year-old Rolleston WRP where we met the two Stu's (we later found out that if you want to be a wastewater operator in NZ it helps if your name is Stu) along with WIOG members John and Muzza. The highlight of the WRP was the Thermo Systems solar drying, sludge management system. Apparently it's the first in the southern hemisphere.



Sludge drying at Rolleston.

After the tour, scones and cuppa, we headed off for the trip across the Southern Alps via Arthurs Pass. We went up, we went down, we went left, we went right, we went really slowly but one thing's for sure, we never went anywhere quickly. I was soon to discover that if you are travelling 50 to 100km in NZ, don't expect to get there for at least a couple of hours.



Heading to Arthur's Pass.

We made it to Arthurs Pass for lunch and I watched as some of my touring counterparts scoffed down a couple of tasty-looking homemade pies, only then to watch them have to scale halfway up the side of a mountain to access the Arthurs Pass water intake. I think a couple of operators may have been starting to enjoy their pie for a second time somewhere near the top. Operator Dan led us through a rock tunnel carved out in the 1920s to a beautiful waterfall and offtake pool with pristine water. Just a small filter and UV is all that is required.



The tunnel to Arthurs Pass Offtake.

Matt at the offtake pool.

Back into the bus and on to our night stopover at Greymouth with a tourist stop and group photo at the famous Arthur Pass viaduct. Tea on the first day saw us visit the historic Blackball Hilton pub where the New Zealand Labor Party was founded and formed. It just also happened to be May Day celebrations and we were treated to a debate between Blackball and its neighbouring town Runanga with the topic 'should NZ return to communism or stay with capitalism'. Not sure who actually won but I think it may have been the 1980s as I'm pretty sure that's where we time-warped to that night.

Day 2 was spent traveling from Greymouth to Westport with a short stop-off at Punakaiki to inspect the Pancake Rocks. The Westport highlight was a tour of the Holcim Cement works (thanks AJ and Pete) and then to the Holcim WTP (clarifier and filters) run and managed by the famous (or maybe infamous) Peeky. Peeky is a well-known celebrity in the NZ water industry and was on the original tour of Australia back in 1995. Apparently, he is threatening to come back this year so look out if they tour your region.



Holcim Cement Works.

We left Peeky and headed to Nelson where we had a relatively early night. Day 3 found us on a slight detour but our guide Graham insisted that he meant to go this way so he could show us the Nelson reservoir. We finally found the WTP thanks to helpful locals for a tour with Richard of the Nelson membrane WTP. After that we moved on to one of the two Nelson WRPs. We visited the tidal access-only WRP at Bells Island. Lindsay and Allan showed us around the Bells Island WRP, which consisted of clarifiers, aerated tanks, digesters and 50 hectares of lagoons before the final discharge to the ocean.

Nelson to Picton via the scenic Sounds drive saw more hills, more corners and definitely more braking, but still spectacular scenery. We just had to remind our bus driver to keep watch on the road. I think Anthony the co-pilot wore out a pair of shoes braking for every corner and decline with the driver.

We ventured to the Picton WTP and checked out the pressure filters and UV system (nice and easy but still with its challenges) and had a good chat and catch up with operator Paul.

Day 4 was a rest and recline day with a spot of fishing out in the Marlborough Sounds and with a ratio of 9:2 male to female, the boys were a shoe-in for fishing bragging rights. Three and a half hours later the girls had caught the two biggest fish and we were back on dry land. The boys quickly changed the subject and we moved on after lunch to Blenheim via the Cloudy Bay winery.



Sarah with the biggest fish.

The next two days were filled at the 2015 Embracing Change WIOG conference at Blenheim. We were openly welcomed by all and mingled with our NZ counterparts in between listening to operator's papers, exhibition site visits, competitions and lunch. I personally found all the papers very interesting and informative. They all seemed to be operator-based and even the industry papers weren't about sales but more about informing and helping operators. It also shows that no matter where you are in the world we all experience similar issues and challenges in our day-to-day work. As with the Australian tour, each night a dinner was held, with the first night being at Peter Jackson's (film director, King Kong, etc) aeroplane museum. The second night was a more traditional dinner with operator awards, best paper, etc. and then a bit of stage show, including New Zealand Elvis. Not to be outdone, Wannon Water and WIOA's very own Anthony 'Elvis' Evans ventured on stage to show the Australian version of Elvis. I think Anthony's version of Elvis was in his later years and not when he was at his prime. Let's just say that the rugby league ANZAC test wasn't the only thing New Zealand beat us at during our tour.

With the 2015 WIOG Embracing Change Conference over, we headed back to Picton and boarded the ferry to Wellington. A three-hour cruise through the Marlborough sounds and then across the Cook Strait took us past some great scenery (our youngest tour operator didn't quite appreciate it as much as the rest of us). With a couple of hours left of the day most of us ventured to the Te Papa museum with the highlight being the recently opened Gallipoli display.

Our last day saw us head to the Moa Point WRP for a tour with Stu (there is that name again), including the challenges of a main WRP in such a major city, treating the water, and managing odour control while next to the golf course, residents and Wellington's airport.



View from Moa Point Wellington WWTP.

The tour ended with the individuals catching their relevant flight and a couple of extra bags thanks to the duty free shop. Lastly, a big thanks and shout-out to all involved with the 2015 tour, including Graeme Thacker the bus driver, the WIOG committee, all the NZ operators that made themselves available, Peeky for a great feed, WIOA, George Wall and all the Australian members of the tour. Everyone made the tour an enjoyable, fun and informative experience. I made some great contacts and built relationships with like-minded people in both NZ and Australia who I know I can call up anytime for a chat or some help.

I also would like to personally thank Wannon Water for actively providing the opportunity for me to attend such a rewarding tour and conference. It's great to see an employer that is recognising and developing its employees by making these experiences accessible.

I recommend these tours to all operators and would urge people to start prepping their WIOA papers or talk to their managers to discuss what they can do to be a part of the next tour. It's definitely worth it.

Contributed by **Peter Uwland**, Wannon Water



The tour group with Kiwi hosts.

TASMANIAN WATER INTEREST DAY - CAMPBELL TOWN

On the 28th May 2015, numerous TasWater employees from all over the state converged on the Campbell Town water treatment plant for a Tasmanian Advisory Committee Water Interest Day focussing on activated carbon.

The day kicked off with a short spiel from TasWater's Stephen Westgate in relation to the taste and odour issues that have surrounded Hobart's water quality, and the use of activated carbon there.

Peta Thiel from Activated Carbon Technologies provided a detailed presentation in terms of what activated carbon is, what it is made up of, its purposes and how it can have an effect on the taste and smell of water.



Peta Thiel presenting.

We were then shown a brief presentation by Tim Keegal from Prominent who described some of the different types of delivery methods of carbon as well as attachments and specifications which make them more operator/plant friendly. Upon completion of the presentations we were treated to a BBQ lunch and a tour of the Water treatment plant.



Enjoying the BBQ lunch.

We were able to ask questions about activated carbon which was specific to this particular plant as well as any questions we had about the plant in general which used DAF processes (a plant us West Coasters are relatively unfamiliar with). All in all it was a very interesting experience where I'm sure many of us learnt a number of new things as well as solidifying some of our previous knowledge we weren't entirely sure about.



Assembled attendees.

Many thanks must go out to WIOA and Darren Lord for making this event happen as well as Peta and Tim for travelling over from the mainland. It made for an interesting day and it was great to chat to other operators from different regions and be able to bounce a few ideas off each other.

Contributed by **Eric Towns & Josh Brown**, Trainees, TasWater

VICTORIAN WATER INTEREST DAY - BALLARAT

Central Highlands Water (CHW) hosted the WIOA Victorian Water Interest Day on Maintaining Residual in your Network on Wednesday the 27th of May.

21 people attended the day from many water authorities and industry suppliers from around Victoria and New South Wales.

Gerrard Dooley started the day off with his opening address on how CHW are consistently improving the awareness of Water Quality within the business and how the organisation is committed to continuing its role as an Industry Leader in this area.

There were 5 presentations on the day which were all centred on how best to maintain chlorine residual throughout the water network. 3 were presented by CHW staff Jon Gooding, Brad Smith and David Reyne. Jenith Jesuthasan from Wannon Water provided insights on chlorine contact time v's residual, and the final presentation was delivered by Edward Zapanta from Metaval on the physics of mixing and the mixer installed at the Enfield facility.



Jon Gooding from CHW captures everyone's attention at the interest day in Ballarat.

All presentations were of a high quality on this very important subject and it was interesting to note that many Australian Water Authorities experience similar issues. Events like the Victorian Water Interest Day create excellent opportunities to discuss these issues and create a networking base to continue discussion in this area.

A number of CHW's recent projects were also displayed. They included time lapse images of the new clarifier being built at Ballarat South WWTP, the Musical Gully Dam upgrades and fly over footage of Ballarat South WWTP and Clunes WWTP. This show created a lot of conversation around the projects undertaken in the past years and gave the participants an understanding on how CHW were managing and delivering projects.

All in all, the day was a great success with networking opportunities during a BBQ lunch. It was good to have such a nice day with all the participants enjoying the lunch in the Atrium although most of the Low Landers were complaining about the cold.



Edward Zapanta from Metaval catching up with Chris Spokes from Goulburn Valley Water over lunch.

Thanks to all the presenters and the Central Highlands Water team for their assistance in making the day a great success.

Contributed by **David Reyne** from Central Highlands Water

OPERATOR TRAINING IN FOCUS FOR WIDE BAY BURNETT ROC

Operators in QWRAP's Wide Bay Burnett ROC (WBBROC) region have fully endorsed the first water operator continuing professional development placement trial which coincided with a two-day coagulation, flocculation and jar testing training course presented by Peter Mosse in Gympie in May 2015.

Justin Vicary, the Water and Waste Water Operator at North Burnett Regional Council, says the training course with Peter Mosse was one of the best courses he had ever attended.

"The knowledge of Peter in the field is vast – the man knows his stuff – and the knowledge I took away will help me in my future career," Justin said.



Burnett training – Justin Vicary (L) with Ivan Ward.

As part of the pilot, Justin also had the opportunity to complete a two day placement with Gympie Regional Council to learn more about Gympie's treatment plants, processes and procedures, develop linkages and look for opportunities to apply the knowledge at his Council's plants.

The placement involved visits to three smaller Valley water treatment plants including site inductions, operational checks and tests, jar testing for dose rates and assisting the operator with daily duties and operations. The second day involved a visit to the Jones Hill Water Treatment Plant which provides the town water for Gympie.

According to Justin, the operator placement was a great learning tool and an opportunity to soak in some new skills from operators at both smaller and larger plants than their own.

"I had a very good two days with the boys in Gympie learning new stuff and establishing new contacts to use as a networking tool in problem solving that we may face in future, and vice versa for them."

Gympie WTP Operator Ivan Ward said it was interesting to hear what water quality problems they have at other plants around the region and the types of treatment technologies they use to get the job done.

"It opens your eyes to the different ways we can get things done," he added, which meant a lot from someone who has been at the plant for over 40 years!

For Gympie Regional Council Manager Treatment and Compliance, Shaun Johnston, there is no better conduit to grow capability than the exchange of ideas amongst peers, especially in such a technical field.

"I think that generally the work that operators do goes largely unseen and therefore under-appreciated. We should do all we can to recognise the value of what they do and that includes providing opportunities for their continued professional development."

Matthew Cook, Water and Wastewater Supervisor at North Burnett Regional Council, agrees that it is imperative for water and wastewater staff to regularly attend programs that support professional development and operator networking.

"The skills learnt through these courses are beneficial to not only the operator but also to their employer as the one goal for the staff and the organisation is to provide safe drinking water at all times. North Burnett Regional Council has found the training programs that have been organised through WIOA and **qldwater** very beneficial and look forward to participating in future events."

Contributed by **Dave Cameron** from **qldwater**

WTP TRAINING IN CAIRNS

A two day training course on the operation and optimisation of Media Filters, Flocculation, Coagulation and Jar Testing Course, organised through WIOA and **qldwater** and presented by Peter Mosse, was held at the Tunnel Hill Water Treatment Plant in Cairns in June 2015.

The training course was very informative and highlighted the importance of well maintained filter beds. We were given extensive information on signs to look for to check filters are being backwashed properly such as a nice and even air scour; the air scour starting quickly and evenly; and ensuring minimal sludge build up was left on the filter bed after a backwash.

We were also shown and participated in quite a few tests to see how well the filter beds were cleaned after a backwash. These tests included the expansion drop test; the media shake and settle test; the cut and slope visual tests; the backwash discharge test; and the media and sand depth test. All these are very important tests and inspections and are now being worked into daily, weekly and monthly operations to keep our filters well maintained. Their importance is highlighted by the fact that it is estimated that a filter rebuild could cost as much as \$80,000 to \$100,000.

The Flocculation, Coagulation and Jar testing side of the course was also very informative. As we already had the appropriate jar testing procedure in place at the WTP, the course actually showed how to get the correct dose rates using a 1 minute

coag drop test allowing us to start our jar test dosing in the right area. We were also shown a few mathematical equations and conversations such as mL-L and grams-mL so that you can calculate dosing amounts for jar testing, change your dose rates on SCADA and/or manually on pumps for plant. We also tried jar testing with different combinations of chemicals to see how they would help/not help the situation. It would have been nice to have more time to work on this side of things. Peter Mosse advised that operation and optimisation of media filters and the flocculation, coagulation and jar testing were actually two separate 2 day courses and we crammed it all into just two days.

All in all, the course was very informative and we all have come out of it with some new and important information that I don't believe anyone had before the course.

Contributed by **Damian McKenzie**, Cairns Regional Council



Course attendees.



Inspecting the filter media.

LESSONS IN LEADERSHIP

Over the last couple of years I have had the privilege of developing relationships within the water industry having presented at the 3 WIOA Conferences and to SEQ Water and Goulburn Valley Water.

It has become apparent that there are many similarities between our two industries – fire and water – and not only have I made some friends but I have also developed myself professionally.

Leadership is a subject that is widely studied and there have been many articles and presentations made on the topic. I am far from an expert and have learned much from falling flat on my face, but fortunately I have developed the resilience to get back up, many times with the help of others, dust myself off and have another crack.

My hand full of takeaways from the major fires (including Black Saturday) and Kokoda are fairly basic and I am very grateful for the opportunity to share them with you.

I will try to summarise them in a few short dot points:

- Take the time to reflect and consider what is really important to you.
- Understand that your most valuable critic looks at you in the mirror every morning and don't be misled by those who have never walked in your footsteps – especially the media.
- As a leader – understand what it is to be a good follower and that you are constantly being watched and mimicked.
- Be prepared to take risks – be an explorer and support explorers. If that's not your gig, be a pioneer or a settler but never get in the way of innovation. Understand that everyone can make a difference.
- Remember that you always have something left in the tank and be prepared to take help if it is offered.



Stewart Kreltszheim.



Stewart on the Kokoda Track.

To all of you who have listened to me over the years, you have become part of the story and each of you have individually or collectively supported the work I do in PNG and Australia to support those who are less fortunate than us.

Contributed by **Stewart “Sooty” Kreltszheim**

Here a just a few of Stewart’s favourite quotes on leadership

Nearly all men can stand adversity, but if you want to test a man’s character, give him power.

Abraham Lincoln

Management is doing things right; leadership is doing the right things.

Peter F. Drucker

We must become the change we want to see.

Mahatma Gandhi

You may have a fresh start any moment you choose, for this thing that we call ‘failure’ is not the falling down, but the staying down.

Mary Pickford

Leadership is the art of getting someone else to do something you want done because he wants to do it.

Dwight Eisenhower

I start with the premise that the function of leadership is to produce more leaders, not more followers

Ralph Nader

When what you are doing isn't working, you tend to do more of the same and with greater intensity.

Dr. Bill Maynard & Tom Champoux Heart, Soul and Spirit

Leadership has a harder job to do than just choose sides. It must bring sides together.

Jesse Jackson

A leader takes people where they want to go. A great leader takes people where they don't necessarily want to go but ought to be.

Rosalynn Smith Carter

The final test of a leader is that he leaves behind him in other men the conviction and will to carry on.

Walter J. Lippmann

The ultimate measure of a man is not where he stands in moments of comfort, but where he stands at times of challenge and controversy.

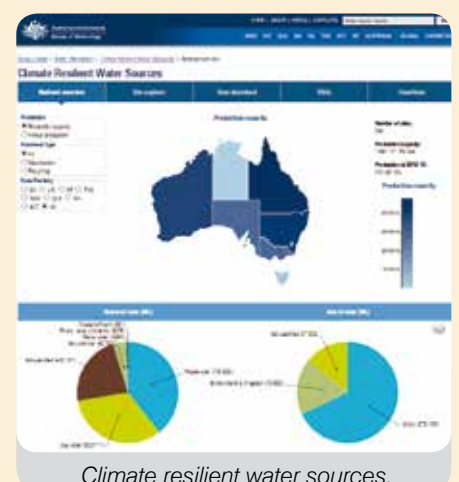
Martin Luther King, Jr.

NEW TOOL TO SUPPORT WATER SECURITY

The Bureau of Meteorology has launched a Climate Resilient Water Sources web portal, an interactive site providing comprehensive mapping and information of desalinated and recycled water sources for over 350 sites across Australia, both publically and privately owned and operated. It allows users to search information on capacity, production, location and use of these alternative water sources in their local area. Climate resilient water sources like recycled and desalinated water play an important role in increasing water security, by reducing the impacts of variation in rainfall and temperature, or long-term drought,

on water availability. Australia's climate is highly variable, and increasing population and economic development are also putting greater demands on our water supplies. The portal informs the Australian community, government and the water industry of the contribution that recycled and desalinated water make to securing water supplies for current and future needs.

Climate Resilient Water Sources has been jointly developed by the Bureau of Meteorology, the Australian Water Recycling Centre of Excellence, the National Centre for Excellence in Desalination, and CSIRO. www.bom.gov.au/water/crews/



Climate resilient water sources.

PROTECT YOUR MOST VALUABLE ASSET



Accidents happen and many Australians are not adequately insured for it. If you or your family had to do without your income, would you have enough insurance to cover it?

Generally, if you're a Vision Super member in a Super Saver plan, you get automatic Income Protection (IP), Death and Total Permanent Disablement (TPD) cover, so that means you and your immediate family are covered if an insurable event should happen on the job or outside of work.

Vision Super's insurance has been independently rated as one of the best in the market and at a time when competitors' insurance premiums have risen by as much as 150%, Vision Super has kept its prices low, with the second lowest fee increase in the industry.

It's important to note that when your financial obligations increase, the level of Income Protection cover you need often goes up too. To make sure your insurance is adequate for your current situation, take a look at our Super Saver insurance fact sheet at www.visionsuper.com.au/ssinsurance

You can also get an indication of your insurance needs using our online Income Protection calculator or Death and Disability calculator at www.visionsuper.com.au/calculators. For more information please call our Member Services team on 03 9911 3222 (or 1300 300 820 if you're calling from a regional area).

BETTER WATER, THE SMART WAY



Water. Some things don't belong in it. Like sludge, or blue-green algae.

This September and October, TAFE NSW Riverina Institute will be running workshops on Activated Sludge and Nutrient Removal and Blue Green Algae with Dr Ali Mitchell, Fresh Water Ecologist and biogeochemist.

Dr Mitchell comes to Riverina Institute from the Murray Darling Freshwater Research Centre, and has extensive knowledge in treating water efficiently and effectively.

Water operators are faced with a number of challenges to water quality and these challenges are increasing with changes to inputs and climate. Take blue green algae for instance. These microscopic bacteria can reproduce quickly, with some species producing toxic pollutants in water that may be destined for your plant.

Learn how to detect and control blue green algae before it has a chance to impact the quality of your drinking water.

How about the efficiency of your waste water operations? Would you like to know how to produce better water? Ensure you're up to date with the latest microorganism based wastewater systems. Find out how activated sludge and nutrient removal work, what goes on in an activated sludge plant and the key operating issues to be aware of.

Visit us at www.rit.tafensw.edu.au or call 1300 TAFE RI (1300 8233 74).

STAINLESS STEEL RETRACTABLE HOSE REELS

Tecpro Australia is proud to distribute the complete range of Ramex Stainless Steel Retractable Hose Reels in Australia and New Zealand.

Employing only the highest quality materials and components, Tecpro's range of retractable, spring and motor rewind hose reels ensure exceptional performance, durability and hygiene for any work site.

In addition to the standard AISI 304 stainless steel, the hose reels are also available in all AISI 316 stainless steel where higher standards of hygiene and chemical resistance are required.

For potentially explosive environments, ATEX compliant hose reels are available on request. Unlike some other hose reels on the market that use brass wetted components, Tecpro's range use AISI 303 swivel joints and hardened and ground AISI 416-420 shafts, making their reels extremely durable and resistant to chemicals that pass through them.

The retraction springs have an exceptionally long life as they are manufactured from special German spring steel. They also deliver a consistently smooth action, reducing operator strain and ensuring easy recoiling of the hose. Unlike other hose reels that may require specialist maintenance, the tension in the springs can be easily disabled, making it quick and safe to replace the springs on site if the need ever arises.

The hose reels suit a very wide range of hose diameters and lengths, and the open design simplifies washing of the hose and reel. This makes it easy to remove dirt to ensure a more hygienic workplace.

With decades of experience advising on and supplying high quality products, the team at Tecpro Australia can advise on the best choice of hose and reel to fit a specific need and budget.

For more information about Tecpro's complete range of hose reels and stainless steel products, as well as the company's full range of technical solutions please visit www.tecpro.com.au





REDUCING THE NEED FOR CCTV INSPECTION

The SewerBatt™ Operational Model using Red Amber Green (RAG) analysis is a simple and powerful way to understand how SewerBatt™ screening can be used to reduce the need for CCTV inspection of pipelines.

Primary Tool for Condition Assessment

The model shows that SewerBatt™ is the primary tool that should be used for condition assessment of all pipelines in the network. Those pipelines that are identified as “Green” are serviceable and no further work is required. Typically this can be 20 to 35% of pipes. This alone can be a large saving in many systems and completely avoids the practice of “cleaning clean pipes”.

For pipes that are identified as Amber (typically 25 to 40%) or Red (typically 20 to 35%) then jetting or other cleaning methods can be used to clean these pipes. Many pipelines can then be returned to serviceable condition by the jet-cleaning and no CCTV is required at this stage.

Second SewerBatt™ Scan

After the jet cleaning of pipelines a second SewerBatt™ scan can then be performed on the cleaned pipes. Some pipes will now be identified as “Green” (serviceable) and no further work is required on these pipes – they have been returned to a serviceable condition by jetting alone. For those identified as “Amber” or “Red” then CCTV inspection will now be required.

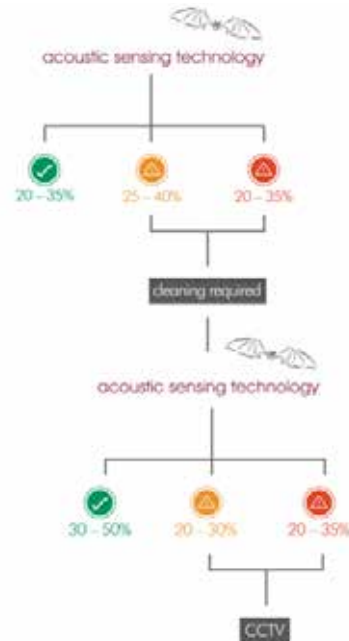
Reduced CCTV Inspection

The CCTV inspection is thus conducted on a reduced subset of the total pipeline network resulting in significant savings and best use of scarce CCTV resources. The highly capable CCTV trucks and operators can be deployed where they are best needed in the network to investigate and report on difficult problems.

SewerBatt™ scanning and RAG analysis reduces the probability of “cleaning clean pipes”, or worse, CCTV inspection of clean pipes.

Cost Savings

Using the SewerBatt Operational Model and the RAG analysis tool, the potential for significant cost-per-metre savings can be realised for pipeline condition assessment and inspection. Many operators have found reductions in inspection costs of up to 25%. More information from Darren Burrowes, Chief Technology Officer, UVS Trenchless by email darren.burrowes@atsa.com.au



*Sewerbatt
Operational
Model using
Red-Amber-Green
Analysis*

EDUR DAF PUMP

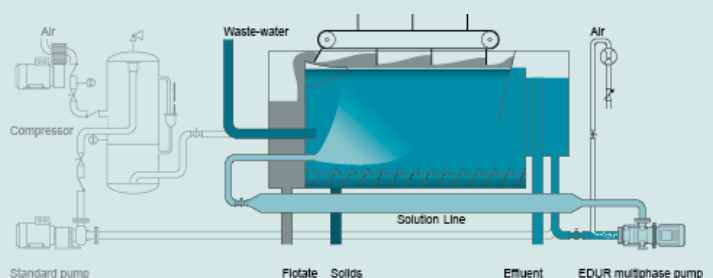
A single “DAF Pump” is said to be able to replace the entire air bubble system on DAF [Dissolved Air Floatation] plants, which can save capital cost, energy and maintenance costs according to pump supplier, Hydro Innovations. Their Edur® “Multiphase” pumps draw in air through a “snorkel” in the suction line, shear the air, then feed it into the DAF plant, producing a discharge stream into the tank that is saturated with 30 to 50 micron air bubbles.

Conventional DAF systems normally consist of a wastewater tank, compressor, air saturation vessel, and effluent pump. The effluent pump draws effluent from the tank and pumps it into the air separation vessel. A compressor pumps air into this same vessel. The air/water mixture is “saturated” under pressure, then released back into the wastewater tank at atmospheric pressure where tiny bubbles form and adhere to the suspended matter [fats, oils and other small wastewater particles]. The bubbles [with their attached suspended matter] float to the surface of the tank, where floatables can be skimmed off the surface.

By using Edur® Multiphase pumps, which can produce their own micro-bubbles, asset owners can do away with the compressor, the air saturation vessel and any control and/ or ancillary components for these items. The reduction of these system components and the simplification of the system design results in lower investment costs and higher operational reliability.

The Edur® Multiphase [DAF] pump is also an efficient alternative. Now, one pump can replace the conventional pump, air saturation tank, and the compressor. Energy costs [as well as maintenance costs] of running the compressor are eliminated.

Edur® multiphase pumps can deliver flows from 1 l/s [for smaller DAF plants] to 15 l/s [for larger DAF plants] and produce pressures to 12 Bar. A variety of materials and seal arrangements enable Edur pumps to operate in a very wide range of applications. Available materials include ductile iron, “gunmetal” bronze, stainless steel and super duplex. Mechanical seals available as balanced, double and tandem. More information on these pumps can be obtained from info@hydroinnovations.com.au or by phone on 02 9898 1800.



OFF-GRID WATER DISINFECTION NOW POSSIBLE

Off-grid and mobile water disinfection is now possible thanks to a unique product recently released by Australian water disinfection specialists, UV-Guard. A PLC operated controller with the ability to operate on 12V and 24V DC power supplies, now gives UV-Guard's off-grid and mobile customers the ability to disinfect water using UV treatment.

UV-Guard Principal Water Treatment Engineer, Luke Chamberlain, said "This option has been added after receiving a number of enquiries from operators of solar powered buildings and other customers who require UV disinfection but are off the grid. We have also heard from customers who require mobile UV disinfection for commercial and domestic applications,".

The 12V and 24V DC PLC controller can control UV-Guard's UV systems up to a power of 40W. This means that recommended UV dose rates can be provided at flows of up to 60lpm by using the SLF, SLT and S-Series of systems. It can also control the storage tank headspace disinfection systems, the T-series.

"We see this as the ideal disinfection solution for drinking water provision and commercial applications for our off the grid and mobile customers," Luke said.

The new range has the following optional features that make installation, operation, monitoring and servicing easy:

- Australian designed and made weatherproof IP65 rated box
- User friendly service menu and digital display
- Digital lamp hour run meter to indicate when the lamp has reached its operational life
- Integrated UV intensity monitoring to ensure correct UV intensity and sufficient disinfection is being achieved
- Building Management System (BMS) connection for remote monitoring
- Remote controllable

For more information please contact Luke Chamberlain at UV-Guard on 02 9631 4900 or email luke.chamberlain@uvguard.com.au. More information about UV-Guard's range of UV water treatment systems is available at www.uvguard.com.au



PUMP OPERATING EFFICIENCIES

The key operating requirement for any sewage handling pump is its ability to pass solids without clogging. Clogging consists of either a full or a partial clog of the impeller and or volute. A full clog exists when the pump has ceased to pump, this condition is easy to detect and highly undesirable. An immediate service call is needed to remove the pump and manually clean out the clog.

A partially clogged pump however, is harder to detect because the pump still delivers flow at a varying reduced rate. This can go unnoticed for long periods of time, resulting in a number of adverse operating conditions. These include increased energy usage, reduced Q/H performance, longer run times and vibration. If the pump is operated continuously, the pump efficiency will gradually decline to levels as low as half of the clean water efficiency or lower. This issue of the pump operating for extended periods of time at substantially reduced overall efficiencies results in much higher consumed power and running costs.

Impeller design is fundamental to how well sewage pumps can operate without clogging. Traditionally it was assumed impellers with large throughlets would eliminate clogging. Throughlet size is determined by the largest diameter of a hard, solid, spherical object that can pass through the pump. The concept is old, dating back to 1915, and was developed at a time when energy costs were not of significant importance.

Pump manufacturers and operators intuitively believed that pump clogging could be avoided simply by having an internal pump throughlet equal to or larger than what the toilet of the day could pass. The last few decades of research and development coupled with experience from hundreds of thousands of pump installations, have proven that this simplistic logic of throughlet size is incorrect and misleading. It has been found that the vast majority of full and partial pump clogging occurs from long fibrous material such as rags accumulating on the leading edge of the pumps impeller and or between the rotating and stationary wear rings. The practice of specifying a minimum throughlet size for wastewater pumps within requests for tender specifications is still prevalent today.

The Flygt N Pump utilises a completely different hydraulic design to that of traditional sewage handling pumps, such as the closed channel and vortex impeller designs. The Flygt N Pump has been designed with a semi-open impeller with back swept leading edges working together with a relief groove located in the lower section of the pump volute. This patented design allows the impeller and hydraulic areas to clear itself of any buildup of rag or fibrous materials. This self-cleaning function of the Flygt N Pump ensures the hydraulic profile of the impeller is maintained, resulting in the pump being able to operate with sustained high operating efficiencies.

Impeller material options include Hard Iron and Duplex Stainless Steel materials, providing increased service life when high corrosion and erosion conditions are present. In addition to material options the N Pump can also be equipped with new impeller designs to better handle sewage with abnormally high concentrations of rag and solid materials. Also available is the option of a chopper impeller to reduce clogging in heavily ragged sewage pumping stations. High efficiency IE3 drive motors are also available when required to minimise the drive motors consumed electrical power.

For more information please visit www.xylemwatersolutions.com/au or call 13 1914

NEW MEMBERS

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

New **Individual Members** include:

Rhonda Forrest, Glenn Cook, Shane Mills, Gavin Milton, Glenn Carroll, Matthew Ball, Leigh Crook, Damien Alexander, Bevan Anderson, Shane Baxter, Jan Bennett, Joshua Brown, Christine Cottee, Craig Fitzmaurice, Gerry Humphries, Aiden Jones, Troy Keating, Garry Morgan, Wade Oates, Craig Pullin, Nathan Purton, Donald Rolston, Vere Story, Phillip Towns, Robert Walton, Declan Cummins, Richard Nolan, Jarryd Minahan, Brae Torr, Brandon Tiziani, Shane Carville, John Boundy, Joshua Watson, Christopher Toby, Lloyd Jeston, Joshua Lamanna, Ian Slape, Corey Rogers, Mae Jobson, Roy Orr, James Redmond, Jude Fernando, Rick Wakefield, Adrian Cameron, Ricky Hannaford, Micheal Hearn, Ian Fraser, Justin Miller, Steve Sullivan, Jamie Hunt, Scott Cornthwaite, Bill Constable, Bruce Jeffrey, Nathan Archer, Jim Sawyer, Benjie Burge, Tony Wells, Don Thrift, Jon York, Johnny Freeman, Paul Craven, John Carr and Mark Weaver.

New **Utility Corporate Members** include:

Tamworth Regional Council.

New **Corporate Members** include:

Water Infrastructure Services, Hunter H2o, Ridgeback Service Bodies, Spray Nozzle Engineering, ANDZAC Group, Chankar Environmental, Cisco Industry Solutions Group and Ludowici Water

NSW PLANT LIVES UP TO NAME

The Orange Water Treatment Plant operators posed for this photo with the NSW Water Taste Test trophy they won at the conference in March. Whilst most of the country shivered during a cold snap in mid-July, the Icely Road WTP lived up to its name when it was covered in snow.



COMING EVENTS

2015

- 2 & 3 September** 78th WIOA Victorian Water Industry Operations Conference & Exhibition, Bendigo
- 14 October** Tasmania Wastewater Interest Day, Devonport
- 18 October** Victorian Charity Golf Day, Camperdown Golf Club



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NEXT EDITION

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