



OPERATOR



August 2009 Edition

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Newsletter of the WATER INDUSTRY OPERATORS ASSOCIATION OF AUSTRALIA

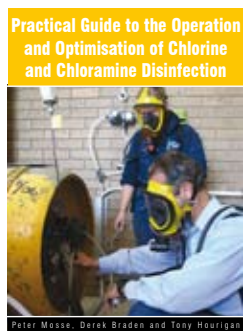
From the EO's Desk

Hello to all our Members and welcome to the third edition of Operator for 2009.

It is really exciting to look back over the past few months and see the amazing results coming through the efforts of the whole WIOA team – staff, Committee and volunteer helpers alike. There are detailed reports on the very successful Qld Workshop and Seminar and the trip to New Zealand later in this issue so I won't comment in detail here other than to say that the Kiwis looked after our people amazingly well, yet again. We look forward to welcoming another Kiwi contingent across the Tasman to the Victorian conference in September.

I know it was reported in the May edition of Operator, but we passed a major milestone in late March when Patrick Berry from Veolia Water in NSW became WIOA's 1000th member. We are now on the climb towards 2000 and it is pleasing to see the large number of new members signing on over the last few months. As we often say, it doesn't matter how many members we have if no-one contributes to the Association. Apart from spreading the word and helping to grow the Association further, we ask all Members to get along and support our events or contribute something to one of our publications.

The fifth book in our series of practical guides to water treatment, the "Practical Guide to the Operation and Optimisation of Chlorine and Chloramine Disinfection" has just been completed. An Order form/Tax Invoice for the Disinfection Guide and the previously released "Catchment Management", "Chemical Dosing", "Filters" and "Distribution" books, can be downloaded from the publications page of the WIOA website. Remember, each book is only \$30 + GST and they are a great resource to have in your treatment plant library.



As the first edition had completely sold out, we took the opportunity to update some of the content in the "Practical Guide to the Operation and Optimisation of Distribution Systems". The second edition has been completed recently and is now available. We have also just sold out of the Filters book and a second edition is currently being developed for that one as well.

The WIOA Committee recently approved a new project to produce a set of Practical Guide books covering wastewater issues. Work has now commenced on books on activated sludge/BNR; lagoons; biosolids management and odour control in sewer networks. We have also received a proposal to extend the water series with potential titles such as pH/alkalinity adjustment, iron/manganese oxidation, UV disinfection all now being considered.

As advised last year, WIOA has been working with the Victorian Department of Human Services and the Victorian water businesses to develop a Code of Practice for Water Treatment Operator Competency. One of the outcomes of this system is that for the first time in Australia, minimum standards of training, competency and defined levels of experience are being established for operators of treatment systems where there is an elevated pathogen risk.

Complementary to the Code of Practice is the WIOA Certification scheme. This will be an audit check to ensure that operators have completed the correct units of competence to match their systems and that they have an appropriate amount of experience. In addition, the scheme will ensure that once they have completed appropriate qualifications, operators will receive ongoing refresher training and the opportunity to participate in a range of professional development initiatives. We believe this scheme will provide a positive mechanism to increase the level of skills and competence of operators across the board and additionally, should provide expanded career opportunities for all operations staff. It is hoped that the few remaining issues will be resolved shortly and the CoP and Certification will commence from 1 January 2010.

WIOA staff have been busy meeting with a number of Regulators outside Victoria to discuss the benefits of the CoP and Certification system and to investigate the possibility of introducing a scheme such as this on a National basis. It is still early days yet but we expect that the benefits in Victoria should be a catalyst for this to occur.

WIOA was pleased to be a participant in an Operationally focused working group established by Government Skills Australia (GSA). The group was set up to investigate operational issues in the water industry with a particular focus on training and skills related issues and to provide a report on its findings to GSA. Members of this group were nominated through GSA's Water Industry Advisory Committee and included representatives from most States and contained people with a wide range of water industry operational backgrounds and expertise. In short the group contained experienced operators, senior operational managers, GSA reps, a Govt Regulator and reps from industry peak bodies and RTO's. The group met in Melbourne in early July and a report from the meeting is due to be released for further discussion shortly. It is intended that the report will be provided to various organisations for use as part of the ongoing skills development and retention strategy for the water industry.

A couple of new one day seminars are currently being developed ready to roll out later in 2009 and beyond. Topics include membrane technology and also one on chemical dosing optimisation for water treatment. Keep your eye out for information on these events.

Finally, the 72nd Victorian Water Industry Engineers & Operators Conference is being held at the Bendigo Exhibition Centre (Prince of Wales Showgrounds) from 1-3 September 2009. Support for this event has again been outstanding with the trade expo a total sell-out (all 180 sites). The platform papers and posters submitted will provide something of interest for all of us to learn from. We'd like to encourage our Victorian, South Australian and Southern NSW Members to let everyone know about the event. Remember, there are products and technologies on display that are relevant to industries or businesses outside the usual "urban water industry" so don't be scared to invite other people or companies along. Keep in mind that entry to the trade expo (only) is free on either Wednesday or Thursday.

Until next time,

George Wall, WIOA Exec Officer

Profile of an Operator

Name

Michael Niven

Position

Service Worker

Employer & Location

PAWA Alice Springs



How long have you worked in the water industry and where?

1 year PAWA Alice Springs

What do you enjoy most about your job?

Spending time with Kristy Bourke!!!!

How did you get into your current role?

Working as a plumber for 10 years and then decided to try something different.

How long have you been a WIOA member?

Just new!

What does your current job involve?

Co-ordinating water and sewerage faults and cyclic maintenance including valve maintenance, access chamber clean & grease & sewer main descale.

What have been some of the big changes in recent years?

Safety, new products for use in the industry, quality of tradespeople.

Ok, a few quick questions to finish

Age:28

Nickname:Nivo

Family Status:Single

Pets:0

Favourite food: Roast anything

Least favourite food: Tomato

Favourite TV show: Three and a half men

Worst TV show: Home and away

Favourite Movie:Shawshank Redemption

Current CD in stereo:Eminem

Favourite book:Underbelly

Ambition in life:To retire early on a fishing boat somewhere

Hobbies:Cricket, AFL, golf and drinking while I'm breathing

Best Trait:

Worst Trait: Temper

Four people to invite to a BBQ:Michael Voss, Jason Akermanis, Shane Warne, and Kerry O'Keefe.

GSA News

2009 has been a year of change thus far for the Water Sector and GSA. Our previous Water Industry Liaison Officer Prue Madsen has moved from this role in order to continue work in the area of VET policy. Wayne Morling will now perform the role as Industry Liaison Officer and brings with him knowledge of the industry following 29 years service with Western Australia's Water Corporation and 12 years as a member of the Water Industry Advisory Committee and its predecessors.

The following projects have commenced for 2009:

National Learning resources Project

GSA has been contracted by the National Water Commission Canberra, to develop learning and facilitator resources for the Water Industry. All resources have been aligned from Units from the NWP07 Water Training Package for Certificates II, III & IV.

We have currently completed all resources for Certificate II, which should be made available by the end of July. Resources may be purchased on our e shop: www.governmentskills.com.au

Certificate III & IV resources are currently under technical review and will be available in October and November respectively. These resources also include newly endorsed Hydrography units which will also be made available as a separate product.

Version 2 of the Water Training Package (NWP 07) has now been endorsed. For all feedback on existing units, please visit the GSA website's Feedback Register. This is our only repository for feedback specifically concerning units of competency.

A continuous improvement plan is currently being formulated for 2009/10. This will likely initiate a full review of the Training Package, although this will not necessarily equate to comprehensive change.

Pathfinders Project

The Pathfinder's Project funded by DEEWR, involves the development of possible pathways between High schools and VET. This included the building of a 'resource kit' to be made available to schools in order to assist with delivery of water related subjects. This project also aims to promote the water industry as a job role by focusing on sustainability and the environment.

Treatment Operations Reference Group

The Treatment Operations Reference Group has been formed to provide technical input into the maintenance, review and further development of units of competence in the Water Training Package as part of Continuous Improvement.

In the initial stages the Group will also examine a range of concerns relating to provision of training and assessment aligned to the Water Training Package.

The Treatment Operations Reference Group complements other Reference Groups formed to provide input into the following specialist areas: Dams (including Dam Safety), Trade Waste and Hydrography.

Plans are in place to form a similar group for Distribution and Collection in 2010.

Tamara Shinnars, Project Officer GSA

THE SOUTHERN MAN TOUR

The moment I found out that I would be joining the tour of New Zealand's south island, I was over the moon.

Friday 8th May

Off to Albury airport. Mark Welsh (North East Water) was already waiting for me eager and enthusiastic for the tour. We jumped on our 10:30am flight to Melbourne, and as the flight attendant asked us to turn off all electronic equipment I realized that I didn't have my mobile phone. After few minutes of panicking and wondering where the hell it was I realised I wasn't going to stop the plane from leaving so I took a deep breath and put it behind me, what a good start to the trip!

We arrived at Melbourne airport collected our bags and headed to the international departures. Both Mark and I were introduced to other members of the tour; Ross Waugh (Coffs Harbour City Council) David Heritage and Peter Huggins (Goulburn Valley Water) Ron Bergmeier and of course we all needed a 'Mother' for the trip and Cynthia Lim played this role extremely well. Our flight to Christchurch left Melbourne at 12:15pm, it was a mild 17°C and when we arrived in Christchurch we faced a bitter -0.2°C and howling winds. We were met by our 'Southern Man' tour guide John Clemens from Timaru District Council.



John Clemens our fabulous tour guide

On the Friday night we reached our hotel around 7:30pm (Kiwi time) and walked in the centre of Christchurch for some dinner and a few local beverages. By night Christchurch was a beautiful city, plenty of café and restaurants mixed in amongst old buildings, churches and Cathedral Square. It turned out to be a very good night to be Australian as the Kangaroos defeated the Kiwi's in the league test, although we weren't overly vociferous. Any supporting was done secretly so not to attract the attention of the New Zealand mad crowd of the Holy Grail Sports Bar.

Saturday 9th May



Day 1 - Adrian, Ross, Peter, David, Mark.

John decided to take us on the scenic route today and we were not disappointed, with brilliantly white snow covered mountains that stretch from the north of Christchurch far beyond the horizon to the

south. We briefly stopped in at John's home town of Pleasant Point where he showed us the water treatment process for the town; which involved drawing ground water from a shallow well (range 3-7m) and treatment via UV disinfection. A neat little plant to operate for John, considering he lived only 2 minutes up the road.

Onto Mt Cook where we were met by Ben and Blair; two young adventure seekers who loved the outdoors but, also operated the village's water treatment plant. Water was sourced from both Glencoe and Blackbirch streams; average water turbidity is 0.10-0.20NTU. The water is exposed to UV disinfection prior to being sent through the village's reticulation system.



Mt. Zero Tour

Sunday 10th May

Sunday morning, and what better way to start the day than with a light dusting of snow/sleet overnight. Outside it was bitterly cold, I couldn't believe how cold it was, -2°C and the forecast for the day didn't show much of an increase on that temperature. After breakfast we headed off for the day with the aim of reaching Queenstown by late afternoon. Only 5km into the trip the snow cover was starting to build up along the road side. Another 10km and the road was starting to disappear under the white blanket, this was really exciting for us Aussies who rarely would experience snow in autumn and at such a low altitude of 600m. We could also see that John was beginning to get concerned with road conditions and the increased snow and ice forming on the road. Relief for John was seeing the snow plough fly up and down Lindis Pass clearing a path for our slowly creeping Ford Transit. We managed to get over Lindis Pass with Ron and the guys at the back of the bus enjoying a few uncontrollable traction losses to get the adrenalin pumping.



Snow at Lindis Pass



Ron and Cynthia Sporting the WIOA beanies which were most welcome

Before arriving in Queenstown it was suggested that we would all go on a Jet boat ride on the Shotover River. On any other day this would have been a fantastic rush, but after 2 minutes of rain pelting into my forehead and wind chill that froze us like the biggest ice cream headache in history it was all about survival for the rest of the ride. It was a credit to the drivers of these machines who cannoned through the narrowest of rock canyons and over only 4inches of water. It was

at this point of the tour that Stu Craib joined us as a second tour guide.



Shotover group before

After - cold and very wet!

Monday 11th May

We dropped in at the Branhholme WTP. The operator here Nick, Martin and Kawa showed us around 2 different types of plant working together; solids recirculating clarifier and a flat bottomed clarifier. The plant draws raw water from the river, in which quality can range from $<1 - 5000\text{NTU}$. Chemicals used on site are lime, alum, poly, PACL, fluoride and chlorine. The treated water supplies the towns of Invercargill (Pop. 40,000) and Bluff (pop. <1000).

Then we dropped in at the Clifton WWTP; capacity of up to $75,000\text{L/d}$ but only operating at $48,000\text{L/d}$. Initially set up as a primary treatment plant (primary sedimentation tanks and anaerobic digestion) with ocean discharge, it has gone through two major upgrades with two trickling filters, secondary clarifiers with further aeration tanks (bypass). Effluent is discharged to a series of lagoons before released into the New River estuarine system. Peter Arnott & Paul Henderson the operators of the plant provided us with an in-depth tour of the treatment facilities (we also were privileged to view their collection of toys and lost property of the screening removal for the past 40years).



Invercargill WWTP

Tuesday 12th May

From Invercargill the tour headed east to Edendale and instead of snow like the previous days we received rain and plenty of it. In Edendale we toured the townships reticulation system with engineer Bill from the local shire council. We visited a new sewerage plant, still under construction, where the treatment process will involve a population of South African tigerworms. It will be interesting to see the progress and performance of the plant in 12 months time. Our last formal stop for the day was in Milton where we stopped into the new filtration plant. The process involves 2 Micro filtration submersible membrane skids with production capacity of $3,000\text{kL/d}$ with future production capabilities of $4,500\text{kL/d}$. The plant is only 12 months into its operational phase, with the majority of the plant indoors out of the extremities it would be a neat little plant to operate. By mid-afternoon we arrived in Dunedin, 'Edinburgh of the South', it has a huge Scottish influence and impressive architecture, one building

being the town hall where the WIOG operator conference was held.

Wednesday-Friday 13th -15th May

The WIOG operations conference was called the 'Exciting times' conference with around 165 delegates registered. The conference is very much focused on the presentation of papers and sharing information with other members within the industry.



Oz Team Participating in the conference competition

The trade exhibitors had their role too, and I was given the opportunity to meet various organisations and representatives from Cal-Val to Merck. The entertainment at the conference dinners was certainly from left field. On the formal awards night we were treated with acts from ABBA, Meatloaf, the Blues Brothers and Phantom of the Opera, the performers did not have to convince the audience very hard to begin dancing and partying into the night.

We said our Goodbyes to the Kiwi operators and WIOG members and our last day involved a comfortable drive up the east coast of the south island. We travelled through Waikouati, Palmerston and stopped for lunch at the Moeraki boulders ancient mudstone formations which looked rather out-of-place scattered along the foreshore. From there we passed through Oamaru over the Waitaki River and then on the Timaru (the birth place of Phar Lap). John's turn to give us a guided tour of the Timaru WTP. The plant is gravity fed from one source and pumps water from another. The Population of Timaru is 28,000 and the plant has approximately 12 days storage. The process also involves ozonation and chlorination.

Saturday 16th May

Early morning flight and like all holidays (work related trips) it was over too soon, and after driving 1800km John still insisted on driving us to the Airport at 5am. It was a super effort and everyone appreciated the commitment John and Stu gave.

On behalf of the touring party 'The Southern Man' tour was an unforgettable experience and certainly a highlight of my short time in the water industry. Many thanks to all those involved from Cynthia and Ron from WIOA to John and Stu of the WIOG, a special thanks to both IWA Vic and WIOA for the opportunity to be part of the tour this year it was very much appreciated. I would encourage anyone and everyone to be part of next year's tour, you certainly will not regret it.

By the way, if you're wondering what the Southern Man reference is all about – Speight's is a very popular beer in NZ, especially in the South. They have a song, a series of ads and lots of references to this Southern man – YouTube it and see for yourself. Also on the cover of this mag a few of the conference delegates were dressed up and paraded around the venue saluting the Hagus! Ron did a great job in being a red-headed Scotsman.

Adrian Rijnbeek, EGL Supervising Operator.

Qld Workshop Report:

Caloundra was the venue chosen for the 34th Queensland Water Industry Operations Workshop in June. This year saw the running of a one day seminar on water quality and distribution system management attached to the workshop. Both events were well attended by operators and interested parties from across Queensland and from interstate.

My employer which is located in Central Queensland once again sent a reasonable contingent of staff to keep updated on the latest happenings in the water industry. Nine brave souls gathered from around the 60,000 square kilometres that make up the Council and made their way down to the cooler climes of southern Queensland in order to further their knowledge in the water industry. I think it's great that our council supports the operators and sent so many to the seminar and the workshop (there were certainly heaps of councils not represented, that should have sent operators) to learn and network.

The distribution seminar was a huge success with all that attended walking away with a greater knowledge of the issues surrounding their distribution systems.

Speakers included Peter Mosse who spoke on the impact of distribution systems on public health. Jill Busch presented an interesting lecture on pathogens in water infrastructure and Greg Ryan spoke on swabbing and scouring. Other subjects covered were system monitoring, water storage design, Iron-Manganese management and managing small work teams. It was great to see these speakers come together and share their knowledge with the industry operators. I really encourage all operators to attend these seminars and consider purchasing the Practical Guide books as they are a fantastic resource.

The Workshop held on the Wednesday and Thursday lived up to its usual high quality again with a variety of papers being presented and an outstanding trade display. The highlights of the workshop were Brian Davis being the first Queenslanders being inducted into the "IDIOTS" (he has now proven to the entire Qld water industry at the Wednesday night dinner that he is truly deserving of his IDIOT title – Congratulations and keep fishing. And Mr Brian Caplick being awarded Qld Operator of the Year. It is nice to see your peers being recognised for their hard work.

Once again the dinners and entertainment were of a high quality along with the refreshments. The predominant theme of the week seemed to be training and its importance to the industry. Sounds like there is a lot more work to do to ensure all operators around Australia have reliable training, constant refreshers and updates to keep our skills current and proper recognition of our skills.

WIOA go a long way to bring new ideas and ways of thinking to the operators but it is only with the support of the Councils and Water Service providers that these workshops and seminars can be truly successful.

Our staff members had a great time even though some of them had to drive down while the others jumped on an airplane. However this made for some healthy competition in the Trade exhibition competition which was once again rigged!!! Gives us more time to prepare for next year and be sure to win.

Well done to George, Cynthia and their team for yet another successful conference.



Chiz Ruxton

– WIOA member & happy workshop attendee!

2009 “LEON HENRY MEMORIAL” QLD OPERATOR OF THE YEAR –

Brian Caplick, Wide Bay Water Corporation



Brian Caplick (Cappo) is well known and respected by treatment plant operators in Queensland through his attendance at Water Industry Operations Workshops and operator visits to Hervey Bay to inspect wastewater treatment plants and the effluent reuse scheme. Brian co-authored a paper on the Pulgul treatment plant upgrades at the 2006 Annual Water Industry Workshop in

Rockhampton. Brian also presented a paper at the 2004 workshop held in Hervey Bay (The Contemporary Operator and Odour Control).

He has worked in the water industry for 25 years at Hervey Bay City Council and Wide Bay Water Corporation.

For most of this time he has been a Supervisor managing the operation and maintenance of water reticulation, sewage collection and treatment systems but for the past 15 years he has been responsible for wastewater treatment and effluent reuse. However, he regards himself more of a collaborating senior operator and not a manager. He is fiercely proud to be part of the water industry and is best described as a very competent, conscientious coach.

Congratulations

Stu Craib, WIOA member from NZ who was presented the Royce Water Technology Coffee machine at the WIOG conference.



QLD Workshop Award winners:

QLD Operator of the year - Brian Caplick, Wide Bay Water Corporation

Best Overall Paper, WITA Award; Charlie Suggatè, Gold Coast Water (Pic 1)

Best Papers presented by Operators: Actizyme Award:

1st John Granzien SEQ Water (Pic 2)

2nd Ian Johnson Gold Coast Water

3rd Sam Magill Aqualift Potable Diving

Best overall trade site – winner of the WME Media prize – sebaKMT Aust. (Pic 3)



KEMPSEY SHIRE COUNCIL FLOOD EVENTS 2009

Macleay Water (a business unit of Kempsey Shire Council) has experienced 3 significant flood events in 2009 to date. All the events had varying consequences on water and sewage treatment facilities and reticulation operations.

The old adage “every flood is different” ran true in all three of the Shire’s 2009 floods.

The February flood had very high local rainfall (583mm over 7 days) causing Hat Head village to be inundated by stormwater. The stormwater overloaded the vacuum sewage system (pots) causing it to become inoperable.



Hat Head 583mm in 7 days

Council had “port-a-loos” placed throughout the village and sought assistance from Hat Head residents to reduce the loading on the system. Macleay Water staff and contractors worked relentlessly over several days to reinstate to the full operation of the system. Over 100 pots were individually pumped out into septic receival trucks and Macleay Water’s “pot trailer” to enable repairs to be carried out on the vacuum valves and controllers.

All sewage pumped out of the reticulation system was transported to the Hat Head sewerage treatment plant. Aeration (Dissolved Oxygen) set points were modified to help cope with the high inflow of stale sewage which had a significant impact on ammonia levels.

The localised rain also caused Gills Creek to flood, inundating the pasveer channel, sludge lagoons and tertiary ponds in the South Kempsey sewerage treatment plant during February 2009. Again operators worked to maintain operation of treatment processes and effluent quality.



South Kempsey STP Feb 09 flood

The March-April flood had other unique impacts. The rise in the Macleay River covered a section of the gravity sewer reticulation system in South and East Kempsey resulting in sewage pump well overloads. Some required electrical isolation until the river water subsided to a safe level.

The May flood had the most significant impact on Macleay Water’s infrastructure and treatment processes as well as the Macleay valley as a whole. Homes, roads, businesses and the community were impacted upon as the Macleay River height reached a peak level.

A brief exposé of the operational and treatment issues Macleay Water encountered during the May flood follows.

Macleay Water has 7 main water treatment and 7 sewerage treatment facilities, in which some of these plants were completely cut off with the road closures from flooding. Several of the outlying towns had operators confined to their respective areas. These operators were engaged to help with the high number of work order requests and treatment operation issues.

Some outlying water and sewerage treatment plants remained inaccessible to operators. Operators were flown in by helicopter or transported in by SES to enable the treatment plants and reticulation system to be inspected and monitored for operations.



**Operator brief before a flight to the
South West Rocks STP**

North St, West Kempsey sewerage treatment plant had a considerable amount of storm/flood waters entering the site and covering the tertiary ponds, sludge lagoons, digesters and humus tanks. The electrics and motors were damaged and had to be removed / dried and repaired prior to reinstatement. Some electrical components could not be salvaged or repaired. Treatment operations were hampered for a considerable time at this plant due to the flood. Operations at the plant were modified to help deal with and lessen the process impacts.



**Irrigation shed North St STP May 2009
water height on building**

Sewer reticulation systems throughout the Shire were put under considerable pressure, with some access chambers being totally submerged as well as some sewage pump stations being covered with swirling flood waters. These systems were monitored via the telemetry system and repaired as soon as the flood waters receded.



K21 pump station May 2009 flood

Water supply systems were also greatly affected. The ferocity and force of the flood waters damaged the borefield recharge channel and caused the raw water to have a high nutrient loading.

Contamination caused by high nutrient levels resulted in the borefield being taken off line because pumping to Kempsey's main water supply dam had the potential to accelerate algal growth within the Dam storage.

The resulting flood also impacted on up-river water treatment plants as high turbidity forced Macleay Water to "truck" in potable water for the few hundred residents of Bellbrook and Willawarrin. This procedure was made difficult as local flooding and impassable tracks caused delays and anxiety.

The fast flowing river in the higher reaches had a devastating impact on the 300mm trunk water main which crosses the river at Belgrave Falls. The pipeline was totally destroyed at the river crossing with current estimates of over 1.5 million dollars to replace it. This pipeline was the main feed for East/South Kempsey from Steuart McIntyre Dam. This has put a heavy reliance on the back up feed main to the southern side of Kempsey.



300mm flood damaged trunk main

With the overwhelming magnitude and clustered number of flood related incidents, many opportunities for improved management and operational procedures emerged. The co-operation within Kempsey Shire Council's departments, emergency services and other entities (eg. water and statutory authorities) was outstanding. As a result of this networking and experience Macleay Water has also updated its flood operation procedures for treatment plants and infrastructure systems.

Peter Anderson, Todd Graham & Barry Young, Macleay Water

CROSSWORD Competition

Actizyme participated in the Qld Workshop Competition and produced a crossword for the participants.

We have changed it slightly and are pleased to offer 3 x Bunnings \$30 vouchers for the first three correct entries faxed to 03 5821 6033. Remember to include your name and contact phone number on the fax.

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

ACTIZYME

DOWN

- A1 Slimey muck often fouling SPS
- D1 Chemical nomenclature for smelly gas often associated with sewers
- G1 A slang term for a bodily fluid
- J1 What should you first do to a centrifugal pump prior to attempting suction lift
- E3 Another name for greasy muck. Also lubricates engines
- D5 One of the principle states of matter
- F5 Ground water under natural pressure (a collection of)
- H6 Electronic device used to control pump cycles
- A8 Another name for greasy muck. Also builds up on obese persons gut.
- J8 Common anagram for Sewer Pumping Station
- I10 Necessary for survival

ACROSS

- C1 Explosive, odourless gas often present in sewers
- G1 Mechanical device found in sewer pump stations
- D3 Type of valve. Opens and close when timer activates
- A5 The most common sewer pump station complaint
- F6 Hole, deep, dark
- H8 Fine water Droplets
- A9 Something done
- H10 A _ _ _ _ by any other name would smell as sweet!

Retention Recognize, Reward, and Retain Operators

Editors Note: we saw this article in a recent edition of AWWA Opflow magazine and we requested approval to produce it here. Interesting how close the issues in the USA and Australia are. The full article is available on the WIOA website on the "Operator Resources" page.

Small systems face high operator turnover, causing utilities to invest vast resources in rehiring and training operators. But, with careful planning, the cycle can be broken.

Much has been written about high turnover among water operators. The University of North Carolina Environmental Finance Center decided to go directly to the source, asking more than 300 water operators at small systems in North Carolina about what would make them more satisfied with their current jobs.

OPERATOR SURVEY

The survey consisted of questions about current job satisfaction and how operator recognition could be improved. The survey wasn't distributed randomly, and it involved operators from only one state. However, the results offer insight concerning water operator turnover and ways to improve job satisfaction. The survey's response rate was about 40 percent.

Aging Workforce. The survey showed a wide distribution for longevity at a particular utility, with 4 percent of operators working at their current utility for less than one year. However, more than 20 percent of respondents had served for 20 yr or more at their current plant.

A significant percentage of operators have been at the same utility for more than 25 yr, which indicates these operators are probably at least 45 yr old. The 13 percent of operators with 25 yr or more of experience represent a concern for employers, because these individuals have the most experience and knowledge, and their retirement could cause important information to be lost. Therefore, questions about knowledge transfer and transition become crucial.

Voluntary Turnover. Organizations with high voluntary turnover rates face additional challenges, making the need for an effective retention program even more important. Most operators leave a job in search of higher pay, more opportunities for advancement, and better benefits.

Job Satisfaction. Respondents were also asked about their level of job satisfaction. Although responses varied, 84 percent indicated they were satisfied or very satisfied with their jobs. Only 3 percent said that they were dissatisfied or very dissatisfied.

Considering the high level of turnover within this profession, these levels of job satisfaction are surprising. However, the discrepancy could be attributable to sample bias, because people happy with their jobs may have been more likely to respond to the survey. Although satisfaction was high overall, 13 percent of those surveyed claimed they were indifferent or simply didn't respond to this particular question.

ORGANIZATIONAL INCENTIVES

The survey also explored ways to help operators gain knowledge and feel appreciated.

Orientation. The first chance to transfer knowledge and establish organizational loyalty among new employees is during orientation.

Most operators (60 percent) indicated they had been provided enough background information during employee orientation. This is a positive factor in any profession but particularly important when turnover is high. The results imply that new hires are benefiting from the experience and knowledge of their predecessors.

Incentives. It's important to understand what, if any, motivation or incentive programs are currently in place. Survey results are encouraging, with more than half of the utilities rewarding their operators financially for achieving new certifications. These financial rewards are usually in the form of a general increase in salary or a one-time bonus. A "consistent and reasonable workload" was the most common incentive identified by operators.

Recognition. In addition to incentive practices, operators were also asked if they thought different groups—management, governing boards, and customers—adequately recognize the value operators provide. For the most part, operators thought management recognized operator value, but governing boards and customers weren't as likely to value operators' work.



Attendees watch the pipe-tapping team from Spotsylvania County (Va.) Utilities.

Photograph David Hatchcox.

Operators indicated there were several nonmonetary ways their contributions could be recognized, including

- flexible work schedules.
- verbal comments about operators' work.
- letters, plaques, certificates of appreciation, and service awards.
- appreciation banquets, cookouts, etc.
- vacation or compensatory time off.
- a pat on the back.
- recognition by the board and mayor.
- vehicles.
- being allowed to attend conferences or workshops.
- local news coverage of operator certifications.

PLANNING FOR THE FUTURE

Utilities are finding ways to stem the tide of high operator turnover and to combat the effects of massive retirement among Baby Boomers. Operator recognition and incentive programs can pay big dividends in a stable workforce. Perhaps Aristotle foresaw the situation when he said, "Pleasure in the job puts perfection in the work."

By **Stacey Isaac Berahzer**, a project director with the University of North Carolina Environmental Finance Center (www.efc.unc.edu), Chapel Hill, N.C.

Article adapted from Opflow, Vol. 35, No. 8 (August 2009), by permission. Copyright © 2009. American Water Works Association.

Corporate Member News

How to make your own chlorine...

With over 35 years experience, Australian Innovative Systems Pty Ltd (AIS) is one of the world leaders in disinfection of water by the process of electro chlorination.

The company's most recent development provides a unique water disinfection solution to water and waste water treatment. Ecoline™ is a revolutionary high performance in-line onsite chlorine generator that requires only two basic ingredients: water and electricity. Chlorine is activated from the small amount of natural mineral salts present in the fresh water.

Ecoline™ is safe

Ecoline™ eliminates chemical contamination risk to the environment and operator exposure to dangerous fumes. Australian made and designed, Ecoline™ is robust, reliable and comes with a three-year warranty. Ecoline will reduce the public liability as it helps to

- Eliminate dependence of commercial chlorine suppliers;
- Avoid the risk inherent in the transport and handling of other chlorine products;
- Lower operating cost;
- Achieve a complete automatic process which require minimal operator attendance

Ecoline™ is unique

Member of the Australian Technology Showcase and Finalist in the 2009 International Stevie Award for the Best Innovative Product of the Year and 2009 Telstra Business Awards for most innovative technology, Ecoline™ is a new, revolutionary on-site in-line chlorine generation plant capable of producing chlorine in fresh water from the small amount of natural mineral salts already present.



Ecoline™ is green

Virtually eliminating the need for dangerous chemicals, Ecoline™ is a safe and environmentally friendly alternative to traditional water treatment. Green Building Scheme Pre-Assessment found this product highly likely to contribute to the achievement of Green Building rating tool credits.

Ecoline™ is versatile

AIS have developed various designs to suit many applications. Ecoline™ can be retrofitted to any existing installation and automatically adjusts to suit the different water chemistry. Ecoline™ comes as a skid-mounted pre-assembled for easy installation; or as a modular, allowing the system to be installed into confined places.



Phone: (07) 3396 5222, Fax (07) 3393 3441,
Email: info@aiswater.com.au, Web: www.aiswater.com.au

Reduced Risk for WWTP Operators

Challenging installation conditions required the Wingecarribee Shire Council to utilise AWMA's specialist installation services to complete the recent upgrade of the Mittagong Wastewater Treatment Plant (WWTP).

Installation of the AWMA Undershot Gates required a partial site shut down. To maintain minimum flows the installation was restricted to two hour work periods to ensure minimal disruption to normal processes.

This upgrade required the replacement of traditional stopboards with automated undershot gates to achieve greater efficiencies and reduce the OH&S risks associated with manual handling.

Working together with Wingecarribee Shire Council, AWMA's installation team adapted to the on-site conditions and completed the works proficiently and safely, within operational requirements.



VISIT WIOA AT THE TRENCHLESS AUSTRALASIA CONFERENCE

WIOA is pleased to be supporting Trenchless Australasia Conference in 2009 and will have a booth at Melbourne Park from 20-22 September. WIOA members are invited to visit the exhibition. Trade visitor passes allowing free entry have been included in this edition of Operator.

ABOUT TRENCHLESS TECHNOLOGY

Trenchless Technology is the science of installing, repairing or renewing underground pipes, ducts and cables using techniques that minimise or eliminate the need for excavation. The benefits of Trenchless Technology are many: the potential to install, replace or renovate an underground utility service at the least cost; minimising damage to highways and disruption to traffic; minimising any adverse impact on the environment; and maximising the safety aspects for both the worker and the public.

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

Jack Garraway, Chris Davis, Mark Gogala, Tony Lawson, Peter Lewis, Geoff Warren, Glen Wicks, Trent Betts, Col Johnson, John McKenna, Christopher Wilson, Paolo Turri, Chris Hand, Ashley McGraw, Darryl McCulloch, Neil Ulrick, Errol Engstrom, Greg Tobin, Grant Kerrison, Tony O'Neill, Philip Smith, Michel Van Der Schyft, Dave Holloway, John Beck, Graham Hood, Chip Clarris, Michael Davis, Grant Connelly, Jeff Haydon, Steven Letcher, Graham Holt, David Holstein, Sarah Powell, Sharlene Jacquier, Chris Witney, Jamie Goodwin, David Duroux, Tryon Finnie, Terry Johnson, Kim Roberts, Jim Llewellyn, Gary Bently, Gregory Marino.

New Corporate Members include

Queensland Water Directorate, Bintech Products, Odour Technologies, Smart Water, Repipe, ITS Trenchless, Aeroharmonics, AvivaPure

Membrane systems for Class A

Water Infrastructure Group is Australia's largest supplier of Class A recycled water for residential and agricultural use.

The company owns and operates the Eastern Irrigation Scheme in Melbourne, which features two membrane plants using different membrane systems.

David Aitken (pictured below) is one of Water Infrastructure Group's operators and has been operating the plant since 2005.

"It's interesting working with the two different systems. They are both accredited to produce Class A recycled water but the systems are configured very differently. One system uses an X-flow dead-end UF element with Poly Ethylene Sulphide fibre material and filtration from inside out. The other system uses Polyacrylonitrile fibre material and filtration is from outside in," David explained.

"From an operations and maintenance point of view, there are positives with both systems. I was the commissioning manager for our second system, which began operating late last year, and it will be interesting over the longer term to compare its performance with our original system," David said.

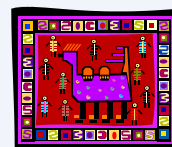
Leif Ericson

A one day seminar on Membrane filtration will be held on 25 November. A tour of the Eastern Irrigation Scheme plant will be available on November 26. More details on the seminar will be available soon.



Postcards

Postcard from Kristy Bourke up North:



"Things in the NT are going well, there seems to be more here to do in the winter than in the summer - I got to buy (and detonate) fireworks the other day - for territory day - I was like a kid in a lolly shop and only received a minor burn on my thumb for my troubles!!! There was also the Alice Springs show the next week, the beanie festival in there somewhere and last week all of this activity culminated with the camel cup. You have never seen anything more entertaining - the gun went and then some camels ran, some didn't and some went backwards. The riders just hold on and pray. Anyway I hope that everyone is well. KB"



Coming Events - 2009

1 to 3 Sept	72nd Annual Victorian Engineers and Operators Conference, Bendigo
2 Sept	VSORG Meeting at Victorian Conference
25 Oct	Charity Golf Day, Kilmore Golf Club
25 Nov	Membrane Systems Seminar, SE Suburbs, Vic

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Next Edition

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