

WATER MATTERS

VICTORIAN WATER INDUSTRY ASSOCIATION NEWS

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WATER EDUCATOR'S FORUM

The Annual Water Educator's Forum was held on 22 and 23 of February this year in Halls Gap, and kindly hosted by Grampians Wimmera Mallee Water. Careful planning by the Victorian Water Educators Task Group resulted in a successful event. Even the educators were educated, as the event was held at the Brambuk Aboriginal Cultural Centre and staff there spoke of their education program.

The two day event was well attended by the network and included updates from several of the water businesses. An interesting and graphic presentation by Parks Victoria on the recent bush fires in the region was a highlight for many attendees. Parks Victoria is using the event to educate the community and tourist

groups about the benefits of fire on the environment.

Museum Victoria and Scienceworks Museum staff also attended and presented at the forum, clearly illustrating the similarities in water education roles of the businesses and the museums. The forum also provided excellent networking and idea-sharing opportunities for all attendees.

Participants were taken on a guided tour of the Bellfield Reservoir in Halls Gap and the Stawell water supply historical flume main and tunnel by GMMWater staff.

Water education in our schools and communities is a top priority in the current climate and VicWater continues its commitment to support the Water Educators Network and Victorian Water Educators Task Group.



Participants at the Annual Water Educator's Forum at Halls Gap

“from
the CEO's
desk”



Welcome to the autumn edition of Water Matters. The recent rain across the State was very welcoming and hopefully the start of better things to come; especially in the farming and catchment areas of the State.

Over recent weeks we have seen four MD's/CEO's announce that they are moving on to other endeavours. Dennis Cavagna (South East Water), Dennis Brockenshire (Barwon Water), Peter McManamon (GWMWater) and Rod Ralph (First Mildura Irrigation Trust) will all be finishing in the coming months and, on behalf of the industry, I would

like to thank them for the contributions that they have made. Additional information will be included in future editions of Water Matters but we certainly wish them all the best for their next ventures.

VicWater has been working closely with the Essential Services Commission (ESC) and water businesses regarding the issue of New Customer Contribution's and we are now working through the detail of some revised arrangements. Although the final position is not what some were after, the compromise by all has been very positive and the cooperation by the ESC and the businesses has been very much appreciated.

I am sure that all businesses have welcomed the extension of time for

the submission of the 2008-2013 Water Plans. There is a huge level of activity associated with the development of those plans so the extension of time will be very useful. Water businesses have done a wonderful job of teaching customers how to use less water and that reduced usage, combined with the unpredictable seasonal arrangements will make the forecasts extremely difficult, and interesting.

Finally, a quick reminder about the VicWater conference to be held in September. This year's theme is 'Planning for a Changing Future' and we recently distributed the 'Call for Papers'. Further information is available on the Association's website: www.vicwater.org.au

UPCOMING VICWATER EVENTS

3RD ANNUAL 'WATER & SUSTAINABILITY' TRAINING COURSE

The 3rd Annual Water & Sustainability Training Course – *“Decision-making strategies and tools for the Victorian water industry”* will take place on Wednesday 25 & Thursday 26 July 2007 at the Pacific International Conference Rooms, 471 Little Bourke Street Melbourne.

This is a two day course that provides water industry professionals with practical tools and strategies for addressing key sustainability challenges and ensuring informed decision-making. Developed by VicWater and RMIT's Centre for Design, the course provides: sustainability principles and concepts; the regulatory framework; case studies; tools and strategies; practical workshops; and focused discussion.

The Course is relevant to managers, team leaders, engineers, business strategists, environmental officers, procurement officers, customer service staff, project officers and new staff.

At the end of the two days, participants will have a clear understanding of:

- ◆ Sustainability theory and practice in the water industry.
- ◆ Sustainability planning and developing vision and goals for sustainability within your organisation.
- ◆ The regulatory and policy frameworks that govern sustainability in the water industry.
- ◆ An overview of the different sustainability challenges facing metropolitan, regional urban & rural water industry sectors.
- ◆ Sustainability Tools for improved decision making – how and when to use them? Tools include: The Natural Step, Multi-criteria Assessment (MCA), Ecological Footprint, Life Cycle Assessment (LCA), sustainability reporting, greenhouse and sustainable energy evaluation; and community consultation.
- ◆ The sustainability industry networks and support services that are available to practitioners and the wider water industry.

For more information, please contact Kylie Brown from Centre for Design at RMIT on (03) 9925-3484 or kylie.brown@rmit.edu.au.

DHS AUDITOR APPROVAL PROCESS

RABQSA International has launched their drinking water quality management system (QMS) auditor certification scheme. RABQSA International has developed this scheme in collaboration with DHS, VicWater and WSAA. The scheme will be used by DHS to approve auditors in accordance with the Safe Drinking Water Act 2003, but is national and will have applicability for audits in other jurisdictions.

Detailed information on the scheme can be found at the following address on the RABQSA web site (http://www.rabqsa.com/cb_wsa.html).

Certification under this scheme will be a mandatory requirement for auditors seeking approval from DHS to conduct a regulatory audit. Victorian water businesses should alert potential auditors to the existence of this scheme.

To gain DHS approval as auditor, individuals will be required to demonstrate that they currently meet the following education and work experience requirements.

EDUCATION

All applicants are required to hold a degree or diploma recognised in Australia, in the fields of engineering, science or medicine.

WORK EXPERIENCE

All applicants are required to provide details of at least seven years full time work experience in at least two of the three following areas.

- ◆ Experience in the water industry, either employed directly in the water industry or being a consultant to the water industry (as an engineering, laboratory or environmental consultant).
- ◆ Experience in establishing, reviewing or running systems for quality management, environmental management, risk management or HACCP.
- ◆ Experience in undertaking audits of systems for quality management, environmental management, risk management or HACCP.

They will then be required to complete the four components to achieve auditor certification:

- ◆ Management Systems Auditing: RABQSA-AU.
- ◆ Drinking Water Services Auditing: RABQSA-DW.
- ◆ Personal attributes (PAAS Master exam).
- ◆ Skill Examination.

RABQSA International can provide information on training providers who offer training in Management Systems Auditing. The PAAS Master exam can be undertaken online through the RABQSA website.

The Drinking Water Services Auditing competency module is being delivered by RMIT short course centre in Melbourne. The module consists of sitting a 2.5-hour exam based on Chapters 2 and 3 of the Australian Drinking Water Guidelines, which can be taken into the exam.

If further information on the scheme is required, please contact RABQSA direct, on (02) 4728 4600, or via email to info@rabqsa.com.

FIXED LEAKS SAVE WANNON WATER THOUSANDS OF LITRES

Twenty five high water consumption customers in Hamilton were visited to assist in water saving actions and leak detection. During these visits 16 undetected leaks were found, with over 31,000 litres of water going to waste each day.

Wannon Water continues to work with their customers to assist them in understanding their water usage and help them to save water around the home as part of ongoing drought management activities. During these visits 16 undetected leaks were found, one of which was wasting 4,800

litres a day, the equivalent of almost 10 households.

Twenty five customers were visited and, with their permission, checked their meter when no water was being used. On 16 occasions the meter was still moving, indicating a leak. The customers' properties were then investigated and a range of leaks from leaking toilets and running taps to leaking pipes in walls were found.

The customers have been very proactive in responding to any leaks found and have worked to get their leaks fixed as soon as possible.

Customers can test for leaks themselves by doing the overnight leak test and following the 3-step check:

1. Turn off all appliances before going to bed at night and take a reading of the dial of your water meter;
2. The next morning before any water is used, read the meter dial again and compare the two readings;
3. If the meter readings are not the same then your property may have a leak that should be investigated by a licensed plumber.

GOING UNDER COVER TO SAVE WATER

Little did East Gippsland Water and scientists expect the dramatic benefits that would come from installing simple shade cloth covers over open air water storage basins – in protecting water quality and combating evaporation.

In Autumn 2004, following encouraging initial results at Bemm River where the town's open air water storage was covered, the Authority participated in a \$1 million research project to comprehensively test the effectiveness of shade cloth covers. It was effectively the first experiment of its kind in the world, with partial funding coming from the Federal Government.

Working with the CSIRO, shade cloth specialists Gale Pacific and SuperSpan (who designed and constructed the shade cloth structures), covers were erected over open air storage basins at Omeo, Mallacoota, Swifts Creek and Cann River. Two storage basins were left uncovered, at Sarsfield and Orbost, to act as a control for the test and all sites were monitored closely through to Spring 2006 to check for evaporation, as well as for algal, bacterial and air borne contamination.

The results were dramatic, with the study showing that shade cloth covers drastically reduce the incidence of algal blooms.

Covering storage basins also reduced evaporation by an amazing 90%. In the case of Mallacoota's storage, evaporation fell from 10 megalitres (or ten Olympic size swimming pools) a year to just one megalitre (one Olympic size pool). In total across all covered storage basins, evaporation was drastically cut from 29 megalitres to just 2.9.

East Gippsland Water's Chief Executive Officer Les Mathieson says the test results have been very impressive.

"This could revolutionise the way water authorities go about protecting water in storage basins from bacterial and air borne contamination, how they minimise algal growth and reduce losses through evaporation", he said.

"What we have here is an economic solution for urban and regional water

storages", he said. "It's no surprise that the water industry and water authorities have been sitting up and taking notice of this project, given the far reaching benefits offered.

"The significant decrease in evaporation alone has helped us during the current drought in delaying the introduction of water restrictions at Omeo for example."

The cloth used is 97% light proof and intended to prevent, or at least minimise, the growth of algae, weed or vegetation by hampering photosynthesis. It also pretty much eliminates water contamination from bird droppings and other wind borne material.

Needless to say, East Gippsland Water has every intention of continuing with the use of shade cloth covers well into the future.



This shade cloth cover over the Mallacoota storage basin is 110 metres long and 90 metres wide. Photo courtesy of SuperSpan

WATERAID AUSTRALIA AGM



At the WaterAid Australia Annual General Meeting, held on the 18 April 2007, WaterAid took the opportunity to thank their supporters in particular those organisations that played a significant role in fundraising activities over the past year. VicWater was jointly awarded the 'Best Fundraising Organisation' with Yarra Valley, South East and Melbourne Water for their work in organising the 2006 Victorian WaterAid Ball. The 2006 Ball raised approximately \$204k for WaterAid projects to improve water and sanitation conditions in some of the poorest communities in the world.

Nathan Smith receiving Vic Water's Award from Tony Kelly (Chair of WaterAid Australia) and Barbara Frost (CEO of WaterAid UK)

WIMMERA MALLEE PIPELINE PROJECT

Implementation of the Wimmera Mallee Pipeline is on schedule with landowner liaison procedures in place, coordinated pipe deliveries to site, pipe-laying rates achieving targets, and rehabilitation of the pipe route generating good feedback from landowners.

Construction of the Lake Bellfield to Taylors Lake main transfer trunkline is utilising 711mm and 1016mm diameter steel pipe at various locations along the route. The PVC trunk and distribution network supplying Longerenong, Dimboola, Jeparit, and Rainbow communities and farms is progressing with multiple work crews. These sections will be operational in October 2007.

The tendering process for Supply System 5 (Berriwillock and Culgoa) is well advanced with



construction to commence by June and the system commissioned in 2007. This is the final area to be supplied from the Murray River. Planning for the 'rest of the system' is well advanced, in response to the record low storage capacity in the Grampians of 4.9%. Priority in GWMWater planning for 2007 is to supply towns and provide water carting points for farm access.

The original construction plan of ten years has been reviewed – to a targeted completion of five years.

DESIGN OF WATER SUPPLY RETICULATION SYSTEMS TRAINING ON OFFER

Engineers and technical officers involved in water supply reticulation design or related activities are encouraged to attend a training course for the Design of Water Supply Reticulation Systems. The course is based on the Melbourne Retail Water Agency version of the WSAA Water Supply Code of Australia and is valuable for water industry professionals.

Developed by City West Water (CWW), the course will be held over three full days on 14, 15 and 16 August 2007 at the Victoria University Sunshine Campus.

City West Water Standards and Design Manager Ross Carruthers will conduct

the lectures focusing on planning, hydraulic design and approved products; general and structural design; and appurtenances and design review. Participants have the option to take a three-hour examination after the course for assessment. Certificates will be awarded for attending and for passing the examination.

There is a cost of \$450.00 to attend the training, which includes catering and a comprehensive set of course notes. Fifteen places are allotted for the course, additional courses will be considered depending on the number of nominations received.

The course is part of CWW's Technical

Development Program (TDP). The TDP has now established itself as an important industry initiative, and is designed to improve the technical capability of the Urban Water Industry. It consists of a rotation program which is now in place; a lecture series which is over half way through its first round; and dedicated project work.

Nominations for the course will be accepted before 1 August 2007. For further information contact Bruce Freer at City West Water on 03 9313 8579 or email bfreer@citywestwater.com.au.

TRAINING AND OH&S MATTERS

The Victorian Water Industry OH&S Network met at the Westernport Water Office on 18 and 19 April 2007.

With a very full agenda, the Network heard presentations from Craig Parker of Southern Rural Water on OH&S Compliance, Dr Kal Fried, sports medicine physician to the Melbourne Football Club on the comparisons between sport and work-related injuries and Andrea McLinden of Allianz on injury claim trends in the water industry. Wayne Gearon of WorkSafe also presented to the Network on the latest WorkSafe initiatives.

Special Guest speaker at the informal dinner was AFL legend Tom Hafey who coached four AFL teams in his career.

The Network nominated a number of representatives to the new OH&S Steering Group which will meet at VicWater on 28 May to develop its work plan for next financial year.

TRAINING

The Industry Advisory Committee which assists Government Skills Australia with the development and implementation of the National Water

Training Package met in Sydney on 26 and 27 March to consider a number of project proposals to provide underpinning resources for the Training Package.

Victoria was well-represented at the meeting with VicWater, Goulburn-Murray Water and the Water Training Centre in attendance.

The VicWater Training Consultative Committee will meet at VicWater on 22 May to determine its work plan for 2007/2008.

QENOS LEADING THE WAY

Qenos is the cornerstone of Australia's plastics industry and is a major supplier of raw materials used in thousands of household, consumer and industrial products. Their plants in Botany, Sydney and Altona, Melbourne produce olefins and a full range of polyethylene products (HDPE, LDPE and LLDPE). They also supply a diverse range of specialty polymers.

Qenos Altona is City West Water's biggest water saver, with their Olefins, Plastics and Resins sites together reducing their water use by over 1.2 giganlitres per year since 2002.

Recently Qenos also completed a joint audit with City West Water and EPA to look for further reductions in water use and Total Dissolved Solids (TDS) in their trade waste discharge.

The main water reduction project for 2006 was the recovery of the Resins effluent stream through the Plastics waste water treatment plant for re-use in both the Plastics and Resins cooling towers.

This project was originally projected to achieve savings of 90 million litres per year, but refinements have resulted in actual savings of up to 150 million litres per year early in 2007. Qenos is

continuing to refine the design to ensure maximum amount of treated water is re-used. They won the 2007 savewater! Award in the industrial category for this project.

They have also reduced their Olefins TDS discharge volume by 30% due to major conversions of their plant which resulted in less caustic soda (sodium hydroxide) being used as part of the treatment process.

Qenos is continuing to work with City West Water to implement innovative programs to reduce their reliance on potable water and to reduce their TDS discharge volume.

WELCOME LEANNE!

Leanne Cini commenced working for VicWater in March as a Project Officer. As well as working on a number of specific projects, she will also be involved with the Victorian Water Educators Task Group and the Water Efficiency Task Group.

Over the last three and a half years Leanne worked at Coliban Water. For about two and a half of those years Leanne was Coliban's Environmental Officer and for the remaining time was a Project Engineer on the 'Superpipe' Project and Epsom Spring Gully Recycled Water Project. Prior to working at Coliban Water, Leanne worked for EPA Victoria in the role of VSAP (Victorian Stormwater Action Program) Coordinator in the North West Region.

Leanne's background is in the environmental area, with qualifications in Environmental Engineering Technology and she is looking forward to continuing her involvement with the water industry from yet another perspective.

Leanne has enjoyed her return to Melbourne after her stint in Bendigo, and has so far spent most of her lunch breaks shopping up a storm – shame she can't actually make it rain!



TASK GROUP TOPICS

FINANCE ISSUES STEERING COMMITTEE (FISC)

The 2007 Finance Issues Workshop is to be held on the 31 May & 1 June 2007 at the Crest on Barkly, 47 Barkly Street, St Kilda. The key speakers at this year's event will be the new Auditor General, Mr Des Pearson and the Chairman of the ESC, Mr Greg Wilson.

The Workshop provides the water industry with an update on key financial issues facing the water industry and an opportunity to discuss issues and network with key industry stakeholders including the Department of Sustainability and Environment, Department of Treasury and Finance, Victorian Auditor General's office, Treasury Corporation of Victoria and the Essential Services Commission.

SUSTAINABILITY TASK GROUP

The Sustainability Task Group met on the 22 March 2007. The Group welcomed new members Alison Teese (Director, Central Highlands Water), Beatrice Fisher (City West Water) and Win Laing (Sustainability Victoria). Ken Thompson (Yarra Valley Water) and Ken Baxter (Melbourne Water) provided two very high quality presentations sharing their respective water business' approach to reducing greenhouse gas emissions and practical business applications. The presentations covered: opportunities and limitations for greenhouse emissions reduction; practical applications for reducing emissions; costs involved in such applications; and what's in store for future greenhouse reduction efforts. Download presentations (<http://www.vicwater.org.au/?sectionid=538>)

SUSTAINABILITY SEMINAR

The 2007 Sustainability Seminar "Opportunities and Realities for the water industry" was held on the 15 May 2007. The Seminar showcased emerging ideas and opportunities that have potential to improve the sustainability of the water industry including; centrally managed decentralised wastewater systems; emerging water-trading and carbon-trading markets; nanotechnology; environment & resource efficiency; and the latest developments in community consultation.

A highlight of the Seminar was an afternoon workshop by keynote speaker Dr Kevin White from the United States, who is an internationally recognised expert on 'centrally managed decentralised wastewater systems'. Download presentations (<http://vicwater.org.au/sectionid=538>)

GREENHOUSE EMISSIONS REDUCTION

As part of the Greenhouse Emissions Reduction Framework, Sustainability Victoria have commissioned a panel of external consultants to provide a 1-week 'Greenhouse and Energy Review' of each water business. The aim of the review is to identify the most appropriate actions for the business to reduce greenhouse emissions and utilise renewable energy, which forms the basis of their five-year 'Greenhouse Action Plans'.

WATER EFFICIENCY TASK GROUP

The key agenda item at the recent Water Efficiency Task Group meeting was to discuss the progress of the current business plan and to update the

plan for the coming year. With extreme pressure on many supply systems across the state, the issue of effectively managing supply and demand is top priority. The plan will focus on improving knowledge of and access to other water efficiency programs; improving knowledge of water efficiency of alternative water sources; working towards the industry further clarifying the links between energy use and water use; keeping abreast of advances in irrigation efficiency; and improved data analysis methods to measure the effectiveness of water efficiency campaigns.

The Water Efficiency Task Group also welcomes a new member, Sue Rogers. Sue is the Communications Manager at Southern Rural Water. Having Sue as a member will ensure that the rural perspective is represented within the group.

DAMS WORKING GROUP

On 17 March the Dams Working Group members attended a special Seminar sponsored by DSE on Risks to Dams posed by the Drought. The speaker on this topic was Dr Gamini Adikari, Principal Engineer Dams, SMEC Australia.

With Victoria's prolonged drought conditions, most dams are empty or are operating well below normal levels. This situation is unprecedented. Of particular concern are the potential effects of the dry conditions on earthen and rock fill embankments. The Seminar addressed the risks posed to Victorian dams by the extended drought, as well as the type of measures dam owners can adopt to reduce them. Other aspects covered included monitoring and surveillance as well as emergency planning and response for potential dam threatening situations.

WATER QUALITY ISSUES AT LAKE GLENMAGGIE AND MACALISTER RIVER

As the Gippsland community recovers from the devastating bushfires which caused havoc across the region over summer, Gippsland Water is continuing to monitor raw water supplies at Lake Glenmaggie and the Macalister River in the north-east of its service area.

Recent heavy rainfall has caused significant amounts of dirt and ash to wash down into the river and dam water.

Gippsland Water's Chief Executive Officer John Mitchell said that although the raw water quality continues to be of concern, treated water supplies to the local towns of Maffra, Stratford,

Boisdale, Coongulla and Glenmaggie remains suitable for drinking.

"At this stage, test results show that the raw water quality is stabilising, and is becoming more manageable. However, further rainfall events may cause ongoing issues over future months," Mr Mitchell said.

Gippsland Water has increased the treatment capacity at the Maffra water treatment plant to assist treating the raw water from the Macalister River. Drinking water has also been transported into Coongulla for customers supplied by this system.

To assist the systems to cope with this increased demand on treatment

processes, Gippsland Water has since introduced Stage Four Water Restrictions for all customers in the five towns affected.

Mr Mitchell said an issue like this has not occurred on this scale before in the region and Gippsland Water is currently uncertain of its severity, or how long it will persist.

"If noticeable colour, taste, or odour increases occur in the treated water supplies, Gippsland Water will immediately issue a boil water alert for to these towns. However, current trends indicate the likelihood of a boil water event is reducing, although future rainfall events may change this situation."

Gippsland Water will continue routine monitoring of the raw water quality to assist, manage and plan for any activities that may be required to maintain supply to customers. Stage Four Water Restrictions will also remain in force for those customers until further notice.

Those who have concerns about the quality of their water, or would like more information about water restrictions, can contact the Gippsland Water Service Centre on 1800 066 401 or visit the Gippsland Water website at www.gippswater.com.au.



SEWERAGE AND TRADE WASTE SERVICES FOR COODE ISLAND

The Coode Island industrial area is a major port facility for the receipt and distribution of bulk chemicals and shipping containers.

In August 1991, a fire at one of the bulk chemical facilities prompted concerns that contaminated runoff from the island may potentially threaten the Yarra and Maribyrnong Rivers and ultimately Port Phillip Bay. In addition, the Island was also a "backlog" sewer area with discharges from the facility needing to be trucked away or treated independently on-site.

As a result of these concerns, it was

agreed that sewerage and trade waste services were needed.

The site is underlain by 'Coode Island Silt' which is thixotropic and is a very difficult construction environment. This, combined with a high water table, very heavy traffic and the sensitive nature of the materials handled on the site, gave this project a high degree of complexity.

The works, undertaken by City West Water, involved a 2.5 kilometre pressure sewer network and included a bored siphon crossing under the Maribyrnong River to reach the North Yarra Sewer Main.

The project was completed on schedule and within budget by City West Water contractors, Australian Project and Design Delivery and CDP Networks Pty Ltd, using directional drilling. The use of directional drilling saved considerable time and cost over conventional trenching methods in this difficult situation.

City West Water completed the pressure sewer system during 2006 as a cooperative arrangement involving the Department of Innovation, Industry and Regional Development and the Port of Melbourne Corporation.