

CWMR ENEWS

March 2009



SA Water Centre for
Water Management
and Reuse



Research news

CWMR (**John van Leeuwen, Linda Zou and Simon Beecham**) and the Mawson Institute (Peter Majewski and Rob Short) have been successful in winning a \$1.2 m Premier Science and Research Fund (PSRF) grant. Their research partners include Flinders University, SA Water (Australian Water Quality Centre) and United Water International Pty Ltd. The title of the project is Development of materials engineering solutions for treatment of Murray-Darling Basin sourced water supplies. The project will develop new technological approaches to address the variability in quality of Murray Darling Basin –sourced water, ensuring the continued provision of high-quality drinking water during periods of sustained drought. Investment will deliver a complementary suite of technologies employable within the existing water treatment infrastructure and exploitable within 3-10 yrs. Equally important, spin-offs will include a new generation of products and services that will be translatable to other water resources and exportable, across Australia and internationally. This will be delivered by a multi-disciplinary and multi-institutional team of internationally renowned researchers in water treatment, materials and surface engineering and nanotechnology.

Linda Zou has been successful in receiving a research grant of \$50,000 from the Smart Water Fund. The fund will be used to conduct the second stage of a research project on an alternative membrane treatment process to produce low salt and high nutrient vale fit for purpose recycled water. The project will be in collaboration with City West Water in Victoria and Victoria University. The project will start in 2009 and last for one year.

John van Leeuwen of CWMR has been successful with two minor capital works applications. The first is for a laboratory upgrade to house a new Sensors Group that has been established within CWMR. The second is for a new fumehood for the CWMR laboratories.

Simon Beecham has been invited by the New Zealand Water and Wastes Association to present a keynote paper at the 6th South Pacific Stormwater Conference in Auckland in April.

A Coagulation Pilot Plant was designed, constructed and installed at Kimberly–Clark Pty Ltd Millicent over the Christmas break, and commissioned in mid-January. The aim of this work is to evaluate the potential chemical treatment of wastewaters and to investigate the options for wastewater recycling. Preliminary technical performance results are positive and the second phase of trials, for performance optimization and evaluation, commenced in March.

Visitors to the Centre

Dr. Jaya Kandasamy, who is a senior lecturer in Civil Engineering at UTS, spent part of his sabbatical leave working in CWMR with Prof Simon Beecham. Jaya was at CWMR in January and February working on research relating to flood and water quality modelling.

Prof Magnus Jaeger from University of Amberg-Weiden, Germany visited the centre for a week in February to plan investigations on small scale decentralized reverse osmosis units. This is supported by a German company and will also be supported by SA Water. Two German students are planning to come to Australia in winter.

Mr **Sabir Hussain** has joined CWMR as a visiting researcher for 12 months. He has an MSc in Environmental Engineering from the University of Science Malaysia and a BSc in Agricultural Engineering from the University of Faisalabad in Pakistan. He has research experience in wastewater treatment and will work with A/Prof Linda Zou on using capacitive deionisation to overcome silica scaling in brackish water desalination.

Conferences, seminars, workshops

Assoc Prof Dennis Mulcahy attended the Water Educators' Forum In February. The forum was an Australian Water Association event and was held in the new SA Water Learning Centre.

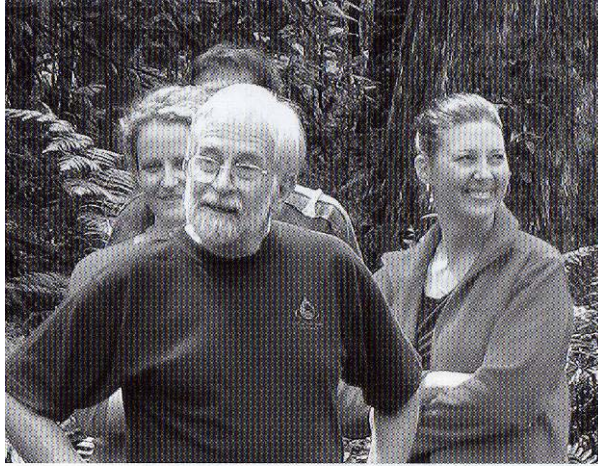
Simon Beecham presented a 2 hour workshop on permeable pavements at the 4th Australian Road Engineering & Maintenance Conference 2009 in Melbourne on the 18th of February, 2009. This was attended by over 100 engineers and government officers.

Awards

CWMR is a very active partner in the International Centre of Excellence for Water Resources Management (ICE WaRM). ICE WaRM's entry has recently won the Australasian Association for Engineering Education Excellence award for Programmes that Enhance Learning in the sub-category of Educational Partnerships and Collaborations with Other Organisations. The entry focused on the Master of Water Resources Management programme, into which several CWMR staff teach.

People

After being associated with the Water Centre for the past 13 years **Carolyn Bellamy** left the Centre at the end of February to take up a position with Water Quality Research Australia (WQRA). Carolyn has made a wonderful contribution to CWMR, not only in terms of helping the Centre run smoothly, but by also being the social heartbeat of CWMR. We wish well in her new workplace and will miss her greatly.



Dennis Mulcahy and Carolyn Bellamy

Publications

J. van Leeuwen, M. Holmes, U. Kaeding, R. Daly and **D. Bursill**

Development and Implementation of the software mEnCo© to Predict Coagulant Doses for DOC removal at Full-Scale WTP's in South Australia." (JWSRTAQUA-D-08-00054R1) Journal of Water Supply: Research and Technology – AQUA in press

Hassanli, A. M., Ebrahimizadeh, M. A. and **Beecham, S.** (2009), The Effects of Irrigation Methods with Effluent and Irrigation Scheduling on Water Use Efficiency and Corn Yields in an Arid Region, Journal of Agricultural Water Management, Elsevier, 96, pp93-99