

# Institute for Sustainable Water Resources



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## Welcome to the ISWR Newsletter

Welcome to the first of the ISWR Newsletter's. Many of you have identified the need to improve communications within our group, and this idea – which came from the Strategic Planning Workshop (see below) – is a great way to do so!

At the risk of pointing out the bleeding-obvious – this newsletter will only work if you contribute. It doesn't have to be a journal-paper submission – just a few words on what you are doing, so that others can contact you if they're interested. Send contributions to [maryann.drogemuller@eng.monash.edu](mailto:maryann.drogemuller@eng.monash.edu).

I would welcome your feedback on the appropriate frequency of this newsletter. The initial suggestion was fortnightly, but I think that monthly will be a better optimisation of the effort-reward objective function. What do you think?

I look forward to reading with interest the great research, training and other activities going on! I also look forward to reading more great 'time-saving tips', like the ones provided by Tony Ladson in this edition. Sharing these sorts of ideas is a great way to help each other. Thanks Tony!

Tim Fletcher  
**Director**

## ISWR Strategic Planning Workshop

The ISWR strategic planning workshop held on 7th February was very successful, and provided a chance to decide, as a group, our future strategic directions and priorities. Also discussed were the 'image' we wish to portray to the outside world. Participation focussed on the need to ensure good 'internal communication' in the ISWR - hence this newsletter! A draft Position Paper summarising the workshop outcomes will be prepared by 25th November, and circulated for comment. The final paper will then be presented to the Dean, Associate Dean (Research) and Heads of Department.

## Stormwater Lifecycle Project – New Zealand

Tim Fletcher and André spent three days in Auckland, running workshops for Auckland Regional Council. The workshop focussed on the collection of Lifecycle Cost data for stormwater quality management measures, and on tasks necessary to facilitate adoption of MUSIC in New Zealand. Discussions with eWater will commence, to explore ongoing opportunities. There are several opportunities in urban water research in New Zealand. For those who are interested, have a chat to Tim or André.

## Australasian Facility for Stormwater Biofilter Technologies: Grant Application

The final stage of assessment for the Victorian Government's Science, Technology and Innovation (STI) grants occurred on February 18th. Ana Deletic, Tim Fletcher, Tony Wong and Russell Mein (and Malcolm Eadie from Ecological Engineering) attended the interview as part of this assessment, for their proposal to establish an "Australasian Facility for Stormwater Biofilter Technologies", and expect to hear the outcome in late March. If successful, it will bring in \$2.5 million to the Institute's urban water research. The Facility will involve a wide range of people from within the Institute and outside.

## Student news:

David McCarthy completed his summer studentship on Friday 18th February having worked with Grace Mitchell on assessing yield-storage relationships for urban stormwater reuse. He was a great asset to the stormwater reuse program during his studentship. Currently he is taking a month off before rejoining us as a PhD student.

## Litter Trap Testing - Frank Winston

The hydraulics laboratory has been a hive of activity lately. A consulting project that has been carried out for Clevertek Pty Ltd is investigation into the effectiveness of a proprietary litter trapping device, a Gross Pollutant Trap or GPT. This ingenious device has shown itself to be a very effective trap for keeping our waterways clean. Unlike many other traps, this one is not prone to blockages occurring and they are easy to clean. Further work is continuing. Below are some photographs of the model structure undergoing tests, as well as a large unit installed in the Northern suburbs.



## Current Research - Tony Ladson

I just sent off a paper '*Improving stream health in urban areas by reducing runoff frequency from impervious surfaces*', with Tim Fletcher and Chris Walsh. This is part of our work on retro-fitting urban drainage systems so they are less damaging to streams.

I've also been working with James Grove to put in a grant application to look at the effect of urban runoff on stream shape and size. With conventional urban development, channel size may increase by up to ten times in highly urbanised areas and streams may not stabilise for many decades. We'd like to test and identify those Water Sensitive Urban Design approaches that can protect stream geomorphology.

I'm also finishing up some work on stream condition assessment, looking at how to sample streams to determine their baseline condition, to see if they have changed, and to detect threshold changes that require management action. Hope to send off a paper on this in the next week.



**Dandenong Creek at Dandenong – putting in shopping trolley rapids is probably not the best way to restore habitat.**

## **Current Research – Gavin Mudd**

### **Great Artesian Basin Co-ordinating Committee (GABCC)**

In March, Gavin Mudd will be travelling to Coober Pedy to participate as the environment representative at the fourth meeting of the GABCC. The GABCC is charged with advising the Commonwealth (and State) Ministers for natural resource management on cross-jurisdictional groundwater management issues of the Great Artesian Basin. The meeting will be furthering discussions of issues such as the Strategic Management Plan (SMP), which is the 2000 blueprint for sustainability initiatives for the GAB, as well as discussing upcoming projects which threaten the potential sustainability achievements to date. Another issue on the agenda is protection of the unique mound springs across the GAB. The meeting, which includes a field trip to William Creek on the Oodnadatta Track west of Lake Eyre, promises to be quite interesting!!

### **Aquifer Storage & Recovery in Melbourne**

Researchers from the ISWR (Gavin Mudd, Anke Wendelborn and others) have recently begun collaborating with the CSIRO on potential "Aquifer Storage & Recovery" (ASR) projects in Melbourne. The ISWR work will focus on investigating the behaviour of heavy metals in stormwater, groundwater quality and the geochemical processes controlling metal mobility at an ASR site. It is likely that a project site will be identified in the south-east of Melbourne in the very near future, followed by detailed field work and follow-up laboratory testing.

### **Groundwater Recharge, Climate Change and the Tropics**

A recently established research project is looking at the methodologies that can be developed to model the rates of groundwater recharge over the long-term - 10,000 years (or more) - while including the possible effects of climate change. The project is being led by Gavin Mudd and forms the PhD of Mobashwera Kabir. Initial work to date has involved reviewing various groundwater, unsaturated flow and water balance models to decide the best approach to combine what traditionally has been conducted separately or on different spatial and temporal scales. The goal is to predict long-term groundwater recharge rates as a way to help improve the environmental assessment and ultimately the design of rehabilitation of mining in the wet-dry tropics.

### **Tony's Time Management Tips**

Ever been in the situation where you know there is a really useful file on your computer somewhere but you just can't find it? Well there are some good ways to quickly find what you are looking for.

As part of the Windows XP operating system, there is a search tool. It's a bit of a dog but it can be sped up by allowing the computer to index your files. To turn indexing on do the following:

Click 'Start', 'Search', 'For files or folders', 'Change preferences' (this is an option at the bottom of the dialogue that comes from the mouth of an annotated character on the left hand side of the screen), 'With Indexing Service (for faster local searches)', then click the radio button 'Yes, enable Indexing Service'. The computer will index your files when it is not busy with other things and the search tool will work much quicker.

Another, and I think better, approach is to download a free search tool called Copernic Desktop Search from [www.copernic.com](http://www.copernic.com). This provides a text entry area in your system tray and once your files are indexed, just type in some words and it will return a list of all the files on your computer that contain these words. You can also search for phrases or use Boolean operations. I use this all the time and it works well.

## CERES Biofilter Working Bee Mark I and II

A few of us have been spending time at CERES lately and I thought the rest of you might like to see some of the photos. CERES stands for the Centre for Education and Research in Environmental Strategies and is a community environment project located beside the Merri Creek in Brunswick. (CERES is also the name of the Roman Goddess for agriculture). See [www.ceres.org.au](http://www.ceres.org.au) for more information.

As part of the water team's contribution to the CERES, we have been involved in the design of a biofilter which was subsequently built by CERES staff and volunteers.

Due to the constrained nature of the site, there have been some teething problems with vegetation establishment and erosion within the biofilter. So, it was decided that us going out and getting our hands dirty was a good way to get out of the office, provide some practical experience in biofilter construction and also be of a community service.

The first working bee was on the last Friday before the Christmas break (17 Dec). Justin, Pete, David, Belinda, Bernd, Tim and I spent a full day replanting and modifying the profile of the cells within the biofilter.

The replanting was very successful and the vegetation is looking great, thanks to loads of people who kept an eye on it and hand watered when necessary of the hot periods of summer. Yes, it was occasionally hot.

But then there were also those big storms! This highlighted the need for a second working bee to stop the erosion which over time would have compromised the biofilter. So, on Friday 11 February a hard core group of four (Tim, Justin, Belinda and David) took on the role of brickies laying bluestone blocks at the end of each cell to ensure the water slowed down enough to dissipate its erosive energy. Sorry, I don't have photos from this second day as I was stuck back in the office ☹. But by all reports it's looking great.



And just for fun.....

### Best Things to say if Caught Sleeping At Your Desk...

"They told me at the blood bank this might happen."

"This is just a 15 minute power-nap as described in that time management course you sent me."

"Whew! Guess I left the top off the White-Out You probably got here just in time!"

"I wasn't sleeping! I was meditating on the mission statement and envisioning a new paradigm."

"I was testing my keyboard for drool resistance."

"I was doing Yoga exercises to relieve work-related stress."

"Damn! Why did you interrupt me? I had almost figured out a solution to our biggest problem."

"The coffee machine is broken..."

"Someone must've put decaf in the wrong pot..."