

# Smart Water Fund Newsletter

November 2004

Melbourne has enjoyed a wet winter but there's no room for complacency about water conservation: we must be smarter with water to have enough for our future.

The Smart Water Fund – which is encouraging and inspiring innovation in water conservation and recycling – has awarded 22 projects of Round 2 Smart Water funding.

These projects will help us to all use less water and be smarter with what we do use.

**Dennis Cavagna**  
Smart Water Fund spokesman  
and South East Water  
Managing Director

## Smart Water funds innovation

The Smart Water Fund has been extended for four years and into regional Victoria, the Minister for Water, John Thwaites, has announced.

The Minister and water businesses have committed \$5 million annually to the fund until 2008 and widened its geographical scope as part of the Government's White Paper "Our Water Our Future".

"The success of the Smart Water Fund in metropolitan Melbourne in encouraging innovation and the real results in water savings have seen it extended to regional Victoria," says Dennis Cavagna, Smart Water Fund spokesman.

"While much of regional Victoria has been battling eight years of drought, its people and industry are already very water smart, so their access to funding will advance the cause," Mr Cavagna said.

The Smart Water Fund is a joint initiative of Melbourne's water businesses, City West Water, South East Water, Yarra Valley Water and Melbourne Water, and the Department of Sustainability and Environment, to encourage innovation in water conservation.

The fund awards research and development grants to help fulfil the government's targets of reducing Melbourne's water consumption by 15% and to recycle 20% of wastewater by 2010.



The Minister for Water, John Thwaites, extended the Smart Water Fund for four years and extended its reach to include regional Victoria.

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22 new funding recipients announced at successful Briar Hill project

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Sporting groups bid to be water-free this summer

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Sewer mining technology results promising

The Minister for Water, John Thwaites, announced the 22 recipients of more than \$3.5 million Smart Water funding on September 2, 2004.

The Round 2 projects range from a major research study into underground aquifers for storage of treated stormwater to an industry best practice guide for bakers.

The projects will span the community, with major industry, small business, education, private companies and sporting groups all represented.

Mr Thwaites congratulated the funding recipients on the innovative work they were undertaking to lead water conservation efforts across the community.

The announcement was made at the Briar Hill Primary School – a successful Round 1 Smart Water Fund recipient – who worked with 10 partner schools to conduct a water audit, install rainwater tanks for toilet flushing and create water efficient gardens across all the schools (see below).



The Smart Water Fund congratulates 11 schools within the council areas of Banyule & Nillumbik for an ambitious project to change water usage habits at a young age. The schools:

- Conducted extensive water audits at each school
- Identified new and existing products and practices that could reduce the schools' water use and recycle more water
- Delivered the Sustainable Schools Water program
- Installed the water conservation and recycling infrastructure recommended in each of the water audits
- Provided community outreach initiatives including signage, community information workshops and student-led demonstration of initiatives.

The 11 schools are saving about five megalitres each year of drinking water, says Ross Dudgeon, Principal of the Briar Hill Primary School. "It shows what can be done with a co-operative effort."

CERES' Eric Bottomley, who managed the Sustainable Schools Water Program, said: "Sustainable Schools around Australia are becoming demonstration centres of new technologies, designs and behaviours and are leading the way in community-based forms of sustainable development."

## Successful Round 2 Smart Water Fund recipients:

Applicant	The project will:
<b>Australian Car Wash Association</b>	Evaluate the water conservation performance of car wash technology and develop an accreditation system for consumers.
<b>Baking Industry Association of Victoria</b>	Audit water usage in bakeries and develop a best practice guide.
<b>Bio-Remediation Pty Ltd</b>	Design, develop and test a domestic greywater treatment system to produce Class A recycled water in homes.
<b>Cadbury Schweppes Pty Ltd</b>	Save 21,620 kilolitres (or 5% of water use) by removing water from wet lubricant on beverage conveyor lines.
<b>City of Boroondara</b>	Save up to 11,000 kilolitres of water a year by trialing fytofoam on selected sand-based sporting grounds.
<b>CSIRO Land and Water</b>	Map the sub-surface water storage and recovery potential in the greater metropolitan area.
<b>CSIRO Manufacturing &amp; Infrastructure Technology</b>	Trial a pilot plant using electrodialysis to desalinate effluent and improve wastewater's re-use capability.
<b>CSIRO Manufacturing &amp; Infrastructure Technology</b>	Research greywater treatment technologies by testing a range of treatment systems to class A standard.
<b>Davey Products Pty Ltd</b>	Conduct a public awareness campaign to encourage people to install rainwater tanks and connect them to toilets.
<b>Earth Systems Pty Ltd</b>	Develop a Water Map of Melbourne and interactive CD to educate people on their need to save water.
<b>Gisborne Junior Soccer Club</b>	Use sub-surface recycled water to reduce water consumption by up to 40% and save up to 12 megalitres within three years.
<b>Gordon Brandon (Victoria) Pty Ltd (trading as Brandon Molasses)</b>	Use up to 2.5 megalitres a year of recycled wastewater from a fermentation process for re-use in another industry.
<b>Heatherdale Tennis Club Inc.</b>	Install a waterless tennis court demonstration site, saving 2,600 kilolitres a year.
<b>Invetech Pty Ltd</b>	Trial 20 homes across Melbourne with a Smart Shower Meter and prototype test in selected households.
<b>La Trobe University</b>	Research lower cost methods for phosphorous removal from treated effluent.
<b>Laundrette Association of Australia Inc</b>	Audit water use in commercial laundries, create a best practice guide and launch an education campaign into smarter water use.
<b>Morison &amp; Morison Pty Ltd</b>	Test technology to manage contaminants in hydrocarbons to disinfect treated wastewater.
<b>Museums Board of Victoria</b>	Extend the six-month Water Smart Lifestyles exhibit to three years.
<b>State Netball Hockey Centre</b>	Contribute to the 'Green' Commonwealth Games by watering hockey pitches using treated rainwater.
<b>Victorian Golf Association</b>	Evaluate saline-tolerant grasses to increase use of reclaimed water on golf courses.
<b>Western Health</b>	Save up to 12,000 kilolitres a year by re-using water from steriliser pressure pumps for toilet flushing.
<b>Western Young People's Independent Network</b>	Develop a water conservation education program for young migrants and refugees in a way that is culturally sensitive.

## No water? No problem! say two Smart Water Fund sporting clubs



Two sporting groups awarded Round 2 Smart Water funding have already 'dug the dirt' in a bid to be water-free this summer.

The Heatherdale Tennis Club, with local MP Tony Robinson and Yarra Valley Water's Tony Kelly, recently symbolically 'tied the knot' of the club's water hoses, to herald the installation of waterless tennis courts at a saving of 2.6 million litres of water each year.

The \$320,000 project – with \$180,000 injected by Smart Water Fund – will see eight red porous courts replaced with a revolutionary new surface that requires less maintenance than traditional courts, and importantly, no water.

With red porous courts comprising over 90% of club courts in Melbourne, Heatherdale Tennis Club wants to take the good news to other clubs.

"Some 5000 people from 100 clubs play at Heatherdale each year, so we provide an opportunity for clubs, councils and the recreation industry to try the new surface," says Club President Doug Terrill.

- One red porous tennis court averages 325 kilolitres of mains water each year
- Converting one third of Melbourne's tennis courts over 10 years would save over 500 million litres annually

Meanwhile, the Gisborne Junior Soccer Club has begun to install a recycled watering system for its Dixon Field ground.

The club received \$58,500 from the Smart Water Fund under Round 2 funding and a further \$6,500 contributed by Western Water to connect the ground to recycled water.

Jacqui Herrera from Gisborne Junior Soccer Club says: "Without a purpose built surface and regular water, the field would have struggled to cope with the demand required for competition and training."

Doug Terrill, President of Heatherdale Tennis Club, local MP Tony Robinson, Robert Chong, Mayor of City of Whitehorse, Tony Kelly, Managing Director of Yarra Valley Water and Jos Wolfkamp, Project Manager for the Heatherdale Tennis Club symbolically tie the knot on Heatherdale's hoses.



Western Water's Stephanie Gillespie, Gisborne Junior Soccer Club's Jacqui Herrera, local member for Macedon Joanne Duncan and children from the soccer club with their Smart Water Fund certificate.

## Refugees lead the way in water conservation efforts

Young Victorian refugees are helping lead water conservation efforts in the migrant and refugee community thanks to a Smart Water funded project.

The Western Young People's Independent Network (WYPIN) – a Footscray-based resource centre for young people – has been awarded Round 2 funding to develop culturally sensitive water conservation education material for migrants and refugees.

The material will be developed in consultation with City West Water and the Department of Sustainability & Environment for use by Victorian water authorities.

Kavitha Chandra-Shekeran, youth coordinator at WYPIN, said: "Some young refugees have a limited understanding of their new environment and the need for water conservation, but they may bring knowledge from their country of origin."

With the project in its planning stages, young refugees and migrants will ultimately become 'peer' educators.

Thao Pham, a young refugee helping spearhead the WYPIN project, said: "Young people often arrive in Australia without their parents and no older role model to look to for guidance on issues facing us in a new country."



Refugees Yonas Tesfamichael, Thao Pham and Michael Nguensiri talk with the Minister for Water, John Thwaites, about water conservation in their countries of birth.

## Racing Victoria

Racing Victoria is set to implement its 'Drought-proofing Racing' water management strategy, developed with \$100,000 of Smart Water funding.

The strategy aims to improve water efficiency and management across 11 racing venues and will save around 180 megalitres a year.

Racing Victoria will launch a demonstration project at the Cranbourne Training Complex, said Racing Victoria's chief executive officer Robert Nason.

"The racing industry is one of the state's largest water users and we're playing our part in saving water and ensuring the long term stability of the Victorian thoroughbred racing industry," Mr Nason said.

Racing Victoria's report can be downloaded from the news section of <http://www.racingvictoria.net.au>

## CDS Technologies demonstrate on-site recycling

CDS Technologies Smart Water-funded sewer mining trials have shown their high rate screening process can be used successfully to mine sewage and produce a high class of fit for purpose water.

The CDS Technologies projects at Brushy Creek and Cranbourne have shown its recycled water can comply with current EPA guidelines, using a revolutionary screening plant just six metres long.

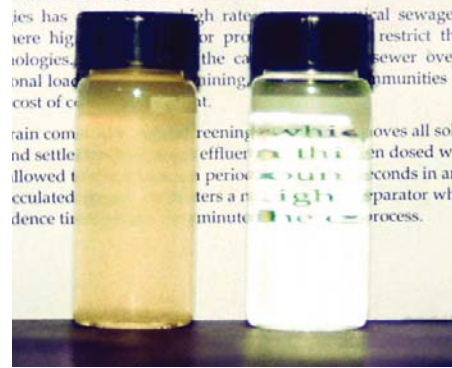
Sewage is removed from a nearby sewer, its 95% water content recovered and treated for on-site use. Unwanted solids are discharged back to the sewer for conventional treatment.

Re-use water can replace drinking water for certain applications such as garden watering, washing down hard surfaces, irrigating new land developments and industrial processes.

CDS Technology's Sean McKinney says: "One of the biggest barriers to producing re-use water with a sewer mining plant is the operational cost, but our innovative Australian technology demonstrates that this need not be cost prohibitive".

Based on its technology for cleaning up stormwater, CDS has developed a non-membrane sewer mining plant that incorporates high rate solids removal followed by a high rate biological treatment.

### High Rate Sewage Clarification Process



The vial on the left shows raw sewage water, with the vial on the right showing the clarified - or screened - fluid having gone through the Fine Solid Separation process but before further treatment.

These processes reduce the solids and organic materials to produce high quality recycled water at competitive rates.

"Sewer mining not only offers the opportunity for businesses, councils or industries to reduce their reliance on drinking water, but it will also go a long way towards meeting reduction targets for outfalls set by the Government for 2010," says McKinney.

Copies of the trial reports are available at: <http://www.cdstech.com.au>

## Smart Water funds smart showers

A smart meter is being developed to tell the user how much water and energy is being used in the shower.

Invetech Pty Ltd, which has won Round 2 Smart Water funding, says the smart shower meter is installed between the showerhead and the water pipe in the wall, with a display at the base of the showerhead providing information about the volume and energy usage in the shower.

Demonstration prototypes of the meter will be trialed in selected Melbourne households, says Invetech's project manager, Simon English.

"Our target is to save an average of 15 kilolitres of water per household per year. With lower volume showers, households can expect a drop in both their water and energy costs."

## Mapping Melbourne's water dilemma

Environmental research company Earth Systems has launched a water map of Melbourne and interactive CD Rom to encourage young people – and the wider community – to think about the water issues facing Melbourne.

The Water Map of Melbourne (map and CD Rom) provides information about Melbourne's water history, water use and sustainable practices in a creative and user-friendly format, says Earth Systems director Nigel Murphy.

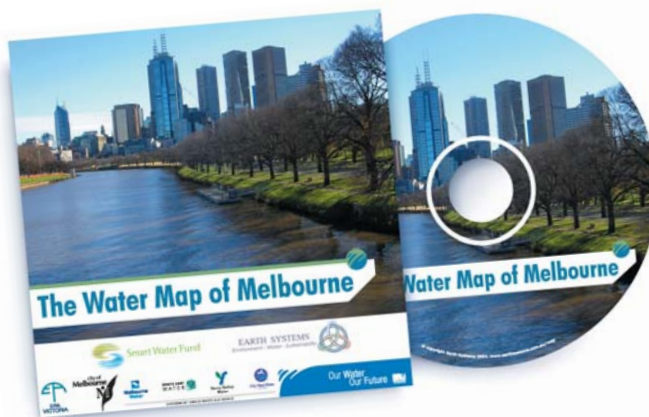
"Before we can make good water management decisions, we must be armed with factual and easily accessible information," explains Nigel.

"The poster-sized water map poses and explores where Melbourne's water comes from, how much water Melbourne uses, why we need to save water and how we can do it."

The map and CD Rom includes extensive water cycle information – from rainfall and stormwater to reuse and recycling.

Smart Water Fund contributed to the development of the map and CD Rom. Under its funding commitment, Earth Systems will distribute copies of the water map and interactive CD Rom to every Melbourne school.

For more information about the water map (or to obtain copies), visit [www.earthsystems.com.au/map](http://www.earthsystems.com.au/map)



## Smart Water Fund

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The Smart Water Fund is an Unincorporated Joint Venture established in August 2002 by City West Water Ltd, South East Water Ltd, Yarra Valley Water Ltd, Melbourne Water Corporation and the Department of Sustainability and Environment.



City West Water  
Melbourne Water  
South East Water  
Yarra Valley Water  
Department of Sustainability & Environment



Our Water  
Our Future

