

News

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30,000 litre iodine treatment tank.

Iodine treatment facility.

Trucks access the treated water supply from the two holding tanks.

Helping the dust settle: Mildura's smart water plan

Mildura Rural City Council (MRCC) has successfully installed a stormwater recycling system reclaiming water for suppressing dust at a local landfill site.

Using stormwater diverted by an overflow channel from nearby wetlands, a solar pump transfers the water to a treatment tank for filtering, testing and iodine treatment.

"Just three months into the project, we were taking more water than we anticipated and now expect to save 10 megalitres of potable water each year," said MRCC project manager, Andrew Powell.

"This means we can look at other potential uses for the excess water, such as a truck washing facility or using it for our parks and verges if the quality is suitable."

The project benefits go beyond water savings. The council has partnered with the National Centre for Sustainability at Sunraysia Institute of TAFE to allow students to conduct monthly water quality testing for the project.

"We're buying dedicated water-testing equipment and chemical water-test kits for the students, giving them industry-standard equipment to work with. We'll be able to assess other uses for recycled stormwater based on sound, scientific data."

The Diploma of Conservation and Land Management students will also help MRCC to assess the affect of climatic conditions, like dust storms and significant rainfall, on the quality of stormwater run-off.

"This is a very positive project for us. Having the students involved means we'll have trained water testers to undertake future water-testing activities onsite and at other MRCC wetlands, which is great for our community."

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Smart Water Fund in the news...



Top left: Header tank with pipe. Bottom left: Testing processed wastewater and harvested rainwater. Above: Micro Irrigation in CERES Community Gardens.

A huge reduction in mains water... right before your eyes!

A demonstration project which will show the successful replacement of mains water through the use of wastewater and harvested rainwater will be seen by over 200,000 visitors each year at the CERES community environment park in Brunswick.

The Centre for Education and Research in Environmental Strategies (CERES) aims to foster awareness and action on environmental and social issues affecting urban areas.

The site has displays and functional demonstrations on a range of environmental issues to show just what can be achieved in the household and at community and

global levels. About 60,000 students – from pre-schoolers to postgraduates – visit the park each year.

The project, titled: “Smart Water – Not Mains Water – for Urban Communities” will demonstrate the successful replacement of mains water used at CERES through the use of onsite processed wastewater and harvested rainwater for irrigation, toilet flushing and hot water supply installed at the site’s café and events area.

CERES Project Manager Keith Jesse said, “Allowing the community to observe and participate in demonstrations has proven

an effective way of influencing their behaviour.”

“The grant from the Smart Water Fund will allow us to demonstrate the latest technologies for water conservation and recycling in a variety of settings, including the site’s home, nursery, café and community centre.”

CERES will promote the project onsite and through outreach programs as a working example for schools, community groups and councils to learn from.

Reusing stormwater for the suburbs

In a world first, Suburban Water will be given the green light to trial an integrated urban stormwater harvesting system in suburban Melbourne. Stormwater normally destined for the ocean will be collected and stored for reuse.

“The costs associated with traditional storage for the amount of stormwater required to irrigate public land are onerous for any council,” said Jim Townsend, Director of Suburban Water.

“There are also problems with storing the water and how to transport it through built-up

urban landscapes. We hope to provide a cost effective way for councils to do this.”

Based in the City of Kingston, the Suburban Water project, supported by the Smart Water Fund, involves two sites: the Southern Road Reserve in Mordialloc East and the Parkdale Secondary College. A “node” will be built at the reserve to harvest, treat and pump stormwater into an underground aquifer for storage. Stored water will be retrieved for irrigating the reserve using a sprinkler system.

The existing Heatherton main drain will transport water recovered from the aquifer

to the Parkdale Secondary School, where it will be used in a sub-surface drip irrigation system and for flushing toilets.

Using software specially designed to remotely operate the entire system, Suburban Water plan to oversee the project from its office in South Australia.

The project, which will also involve Melbourne Water, South East Water and the City of Kingston, is expected to be fully functional in 2007. Initial proving operations are planned to continue throughout 2008.

Abattoir shares water saving findings

Smallgoods manufacturer, KR Castlemaine, takes its environmental impact seriously.

With funding from the Smart Water Fund, KR Castlemaine undertook a review of manufacturing processes at its Castlemaine abattoir to assess opportunities to save and recycle water.

The carcass dehairing system was identified as one of the most water-intensive processes, using large volumes of potable water and discharging this as wastewater to the sewer.

Pig dehairing is a vital step in preparing a pig carcass for pork production. A machine termed a 'dehairer' performs this process. The machine uses water heated to 60°C combined with steam to dehair the carcass.

The feasibility study concluded that by filtering and reusing the dehairing wastewater, a manufacturer could save water, reduce energy consumption needed to heat the water and reduce the amount of chemicals used in dehairing and wastewater treatment.

It is estimated that this technological approach could save up to 8 megalitres of water each year, equating to a 26 per cent reduction in water consumption.

The feasibility study, containing the research and design of the project, is available to download from the Smart Water Fund Knowledge Bank at www.smartwater.com.au to assist other businesses with like processes to achieve similar water savings.

“It is estimated that this approach could save up to 8 megalitres of water each year, equating to a 26 per cent reduction in water consumption.”

‘Smart’ homes can save hundreds of thousands of litres of water

EME Group has started its second Smart Water Fund project, presenting free seminars to councils throughout Melbourne, highlighting innovative ways to integrate water conservation and water recycling programs into house design.

Building on EME’s research into water usage in the urban environment, EME Group’s founder, Luke Middleton, will present the seminars.

EME Group’s design experience ranges from large scale urban design projects, undertaken both locally and internationally, to exceptional residential architecture and innovative water saving systems.

Mr Middleton said with Stage 3 water restrictions now in place, the need to save water around the home has become more important than ever.

“As council plays such a crucial role in promoting the water saving message to the wider community, we believe the seminar will provide the tools to raise local awareness of energy and water conservation, as well as establish new standards and innovation in the fields of residential planning and design, building and real estate,” Mr Middleton said.

The Smart Water Fund and Yarra Valley Water are currently working with the EME Group to develop an educational program focusing on water sensitive urban design for residential homes.

Demonstration projects in Mitcham, Prahran and Brighton showcase practical actions that can be taken to save or reduce potable water consumption in the domestic environment.

“Our Smart Water Fund demonstration projects have shown that with a small investment of \$450 to retrofit bathroom fittings, an existing large home can save up to one million litres of water over ten years. That’s more than two hundred litres a day, said Mr Middleton.



Top: EME seminar in the City Booroondara. Bottom: Luke Middleton of EME Group with Rob Hauser of Yarra Ranges Council.

Tap into a wealth of information with the Smart Water Fund

The Smart Water Fund has supported over 75 projects. All of them provide unique learnings on innovative water conservation, recycling and biosolid management solutions.

Newsletters, case studies and comprehensive project information on a wide range of innovative sustainable water use projects are available from the Smart Water Fund Knowledge bank at www.smartwater.com.au

Case studies are available for:

- Sporting Facilities
- Waste Water Treatment
- Building and Renovating
- Educational Programs
- Food and Beverage Manufacturing

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More innovative projects

Stay tuned for the announcement of successful Round 4 funding recipients later in March. An announcement event will be hosted at the Melbourne Aquarium. The Aquarium plans to save up to 10,000 litres of water a week by treating and reusing water from its freshwater display and further recycling in its salt water display that will reduce salt discharge by up to 2 tonnes per week.

Smart Water Fund in the news

Senviro has begun testing sensor-activated irrigation at Carrum Downs Recreation Reserve. The Frankston Standard Leader was on site to see first hand, the installation of stakes, containing sensors, into trenches around the reserve. The launch of the pilot program was reported in the Frankston, Hastings and Cranbourne Leader papers. Senviro will monitor the water savings from the sensor-based watering system with a view to developing low cost moisture sensors for gardens, turf, agriculture and nursery markets.



Simon Lees of the Smart Water Fund and Steve Davis of Senviro with a soil moisture sensor at Carrum Downs Recreation Reserve.

Securing Our
Water
Future
Together

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