



COMMUNITY WATER GRANTS PROJECT: “Catch it if you can!”

Report from MacKillop College

MacKillop College recognises the need to instil in our students the concepts of sustainable living and environmental stewardship. Towards this goal, in late 2006 Corey Peterson, our computer network manager, lead the effort to complete an exhaustive application for \$50,000 from the Federal Government Community Water Grant programme to institute water saving measures and an educational campaign within the school. Substantial assistance was provided by then Year 10 student, Brad Menzie. Basic steps to determine the type and size of system required include size estimates of runoff areas (school buildings, paved areas, etc), rainfall data from our in house weather station as well as government data to estimate monthly values, determining runoff values for different surface types, and actual water use estimates for various usage activities. Tank specialists and engineering firms were consulted to achieve a specific design that was then submitted to Clarence City Council for approval.

We were notified of being selected to receive the maximum amount of \$50,000 due to the quality of our design, the substantial community contributions provided, the College’s financial commitment, and the degree of consultation and support provided by the larger community. With assistance and advice from numerous sponsors, the design has been implemented that ties into the existing water reticulation system.

In brief, the College is now collecting stormwater runoff from 60% of our catchment area from a 3000 litre stormwater in-line tank and an on-demand 7.5 kW pump to rapidly transfer the water to three 45,000 litre tanks. From there a 4.5 kW pump is used to water the front lawns from these tanks as well as transfer water to two 12,000 litre tanks near the school oval. These two tanks supply the oval watering system through use of another pump. These efforts should save at least 1,200,000 litres of water (1.2 mega litres) per year!!!

Work-related learning students helped design and construct the pads for the collection and storage tanks, as well as work out the details of trenching and running pipes. Other students engaged in the process through a number of promotion design competitions, involving a MacKillop College waterwise logo, posters, and a flyer. The winners of these competitions received \$50 Commonwealth Bank accounts. In addition, all of these designs as well as some of the others were on display at the MacKillop College stall with Corey Peterson a scheduled workshop presenter on the project during the Sustainable Living Expo 20-21 October at the Hobart City Hall.

In 2007, a Year 10 class studied the whole project from initial data gathering, completing the on-line application, to implementation. A interpretive “Water Wall” is in mid-design for our Library/Science Block stairs to visually demonstrate the water cycle from alpine areas to ocean and everything in-between. Students in all year levels in and in many different classes have been involved in this Art/Science/SOSE collaborative project.

A special thanks needs to be extended to our community sponsors, some of whom provided gratis services or equipment use or discounted products, including Accru+ financial, Ampersand Signs, Associated Pumps, Catholic Earthcare, Catholic Education Office, Chris Keil Electrical, Clarence City Council, Coates Hire, Commonwealth Bank, Derwent Estuary Program, Global Contract Services, Hobart Water, Johnstone McGee & Gandy, NRM-South, Parents and Friends, Print Centre, Retravision, Robert Kat Excavation, Sustainable Living Tasmania, and TasCon Constructions.

MacKillop College is furthering our sustainability efforts by applying to install a 2000 Watt grid-connected photovoltaic array on our Library/Science block by February 2008 through support funding from the Federal Government’s Photovoltaic Rebate Program which provides up to \$12,000 for the system. MacKillop College has committed the remaining \$13,500 for complete system installation. An interpretive display will be established around the meter and inverters, both of which will be visible to students and staff in the science labs. We believe we will be one of the first schools in Tasmania to incorporate an active grid-connected solar array into our energy conservation and educational efforts.

We are also taking advantage of the Federal Government’s GreenVouchers program by using the nearly \$33,000 for which we qualify to expand our water collection system to collect off a second stormwater pipe. We envision adding another collection tank and pump, two more 45,000 litre storage tanks, and reticulation of this water source to also be used in our main student toilet block, thus putting our total water savings into the millions of megalitres per year. We will also use the GreenVouchers monies to install a number of water savings devices throughout the school such as flow restrictors, low flow showerheads and toilet cisterns, and waterless urinals, as well as installing solar hot water systems onto various buildings to significantly cut down on our electricity consumption.

The College has also committed to a further review of our paper use for printing. Two years ago, we installed a printer management software that resulted in at least a 20% reduction in paper use through our printers and photocopiers, effectively putting a price on each page printed so that students and staff would be more selective in what they are printing. We are down to 800,000 sheets a year and are hoping to reduce that further with continuing education efforts. For our required ongoing paper use, we are exploring options to switch paper types to increase the recycled component and source locally made paper to lower our contribution to global carbon emissions through transporting stock in the Europe and other faraway places.