

Water Conservation

being wise with your water...

info sheet 9



Check out the water level indicator on the Water Walk, to see how full Emigrant Creek Dam is at the moment.

The level of Emigrant Creek Dam varies over time.

Water consumption, however, continues to rise. This is partly because of continuing development and increasing population pressures in the region.

If we do not manage to reduce our water consumption, or our 'demand' for water, we need to increase its 'supply'. This would mean building more dams (which have significant environmental and social impacts), and/or finding alternative water sources, such as rainwater tanks, recycled water and desalination. All of these options require extra investment in technical infrastructure, which costs money.

In recent years, the demand for water in our region has exceeded the amount of water that can be reliably supplied* from all available Rous Water sources (Rocky Creek Dam, Emigrant Creek Dam and bore water - see *Info Sheet #7 - Water Supply*). Whilst the Rous Regional Water Supply Strategy includes developing new water sources, the first priority remains using less water.

* The technical term for this is 'total secure yield' - see Glossary.



Emigrant Creek Dam when empty - 2005

WHY SAVE WATER?

We could easily run out! In times of drought, we use way more water than is being replaced by rainfall. In January 2003, for example, an average of only 1 megalitre a day was flowing into the dam, while 5 megalitres a day was being used. We need to remember that Emigrant Creek water supply services about 20,000 people in an area of more than 100 square kilometres. The *catchment* of Emigrant Creek Dam, however, is only 20 square kilometres! That's about 20% of the area that it supplies water to!

Water quality in the dam reduces as the water level reduces. This is because the concentration of nutrients and organic matter increases. This means that the water needs to be treated more intensively, which uses more chemicals, more electricity and more money. Everyone pays for this, and it is likely that the water will not taste as good.

Low water levels and poor water quality affects **ecosystem health** in and around the dam as well as downstream from the dam. The more water we use, the less there is available for nature. (You will learn more about this later in the Water Walk.)

Even if there is a plentiful supply of water, and the dam remains topped up and healthy, there are still reasons to save water.

The more water we use, the more we have to process through the **water filtration** plant. This costs money, electricity and chemicals. We pay for this in our water rates, and the environment is also affected because using electricity contributes to the production of Greenhouse gases and global warming.

The more water we use, the more **wastewater** that we produce which then needs to be treated, recycled and finally released appropriately back into nature. This costs money, electricity and chemicals (which everyone pays for in our sewerage rates). If the

Saving water is important for us and for nature!

Save money, save the environment!

Wastewater treatment



wastewater treatment plants are overloaded, then improperly treated sewage can be released into the environment with negative effects. Upgrading wastewater treatment plants requires more investment in technological infrastructure, which also costs a lot of money and other resources.

Even when wastewater is treated and recycled (eg, used for growing crops, rehabilitating wetlands or watering playing fields), it would be less energy intensive to use less water in the first place!

The less water we use, the longer we can manage with existing water sources without the need to develop new ones. This means that we can postpone the **building of new dams and pipelines**. Delaying construction can mean that new technologies can provide other alternatives, or water use can be reduced even further.

Using less water also means that the dams that are built can be of a smaller size. This means smaller construction and operating costs, and also less environmental impact.

Saving water is important for us *and* for nature!
Save money, save the environment!

HOW CAN YOU SAVE WATER?

In the home

- install water saving appliances (showerheads, dual-flush toilets, front-loading washing machines, dishwashers, tap aerators)
- fix leaking taps and toilets
- flush the toilet less
- don't run the tap when you brush your teeth
- have shorter showers (have a bath if you plan to have a shower longer than 5 mins)



In the garden

- reduce lawn area, and water only when it really needs it
- wash the car with a bucket, not a hose, and do it on the lawn
- use mulch and compost, plant native species, and group plants according to their water needs
- use a broom not a hose to clean pathways and driveways
- cover your swimming pool, and allow it to be topped up only by rainfall
- install a greywater treatment system so you can reuse the water from the shower, laundry and kitchen
- install a rainwater tank



In businesses and schools

- dual flush toilets and urinal controllers
- flow regulators on taps used in hand-basins
- improvements to industrial processes and re-use systems (eg commercial laundries and carwashes)
- landscaping improvements

It is up to all of us to play our part. It may seem that the water we each save is a very small amount, but taken together, the water saved will have big effects!

For example, did you know that by installing a water-saving shower-head, a dual-flush toilet and a front-loading washing machine, you and your family can save:

- \$100 every year (at current water and energy costs)
- 80,000 litres of water every year (that's one-and-a-half backyard-sized swimming pools).

WHAT IS ROUS WATER DOING TO HELP YOU SAVE WATER?

Rous Water has developed a series of what they call 'demand management' projects including:

Home Tune-Up.

Subsidised check-up of home water fittings, providing and fitting of water efficient shower roses by an accredited plumber.

Washing Machine Subsidy.

From time to time Rous offers rebates to encourage people to buy water efficient washing machines (eg, front loaders save 50 litres/load).

Dual Flush Toilet Subsidy.

Rous Water offers rebates to encourage people to replace old single flush cisterns with dual flush units.

Non-Residential Subsidy.

Water customers such as schools, industry and commercial premises can be funded up to 50% of the cost of water-saving projects.

'Every Drop Counts' Primary Schools Program.

A dynamic and interactive education session to motivate students to save water at school and at home. Supporting educational materials (eg., posters and worksheets) are provided.

The 'MAD' Water Team Primary Schools Program.

Students are invited to join the team and 'Make A Difference' for wise water use at school or home. A 'School Water Check-Up' helps students undertake a school water audit, write a water conservation action plan and make a

presentation to the Principal. A 'Home Water Check-Up' provides an audit and several challenges for the students to undertake, all via the Rous Water website.

'H₂O Awards' Schools Grant Program.

Grants to schools in the Rous Water area to support water management projects by school students and their community.

Rainwater Tank Rebate.

Town water customers who buy a rainwater tank over 2,000 litres are eligible for a substantial rebate. Rainwater tanks, used for 'non-potable' purposes, could provide up to 57% of total household water demand.



Water Recycling.

Perradenya is a new residential estate being developed by Rous Water as a model for 'dual reticulation'. This means using high quality recycled water in a second set of water pipes for garden use and toilet flushing. Rous Water is working on another dual reticulation project with Ballina Shire Council at Ballina Heights.

Restrictions & Permanent Water Conservation Measures.

A series of restrictions are put in place as the water level in the dams drop, which are enforceable by law. Even when the dam is full, however, there are certain things we shouldn't do.

User Pays Water Charges.

Water meters read how much water is used by each property connected to town water. Your water rates are based on how much water is used. The more you use, the more you pay. Saving water means saving money.



Community Education & Support.

Check out our website www.rouswater.nsw.gov.au or ring the office on 66218055 to learn about water saving rebates, dam levels, education programs, Rous Water projects, ongoing conservation measures or water saving tips.

Did you know that by installing a water-saving shower-head, a dual-flush toilet and a front-loading washing machine, you and your family can save \$100 a year ... and 80,000 litres of water every year!

TRY THIS!



Learn with your ...



"In January 2003, how many megalitres of water were being lost every day from Emigrant Creek Dam? If one Olympic swimming pool contains 2 megalitres of water, how many Olympic swimming pools of water were being lost every day from Emigrant Creek Dam?" (And for the really keen: How many times bigger is the Emigrant Creek water supply area than the Emigrant Creek Dam catchment?)



"Think of a time in your life when you have saved, or cared for, something really precious to you. It might have been finding a favourite toy or special thing when you thought it was lost, or saving your pet from having an accident, or nursing your child through an illness. How do you feel inside when you think back to that time? [pause] Now, imagine yourself practicing a few of the water saving activities. Visualise yourself very clearly, consciously turning taps off, taking shorter showers, and any of the other things that would seem easy for you to do. [pause] Now, bring together that feeling of 'saving something precious' with the image of saving water. Realize that you are indeed doing an important thing for yourself and for the natural environment."



"If you are with another person or in a group, take turns speaking out loud your ideas for saving water until you can't think of any more. Let your imagination run wild. Crazy ideas are often good ones! (And for the really keen: Make a list of things that you will do when you go back home, or to school or work.)"

Learning objective: To understand the need for water conservation, and ways in which everyone can do this.

You can get your own copy of Rous Water's 'Your Guide to Saving Water in Your Home and Garden' by phoning 6621 8055; writing to us at PO Box 230, Lismore NSW 2480 or water@rouswater.nsw.gov.au; or visiting our educational showroom at 218-232 Molesworth Street, Lismore.



Let Rous Water know if you have any other good ideas for projects that will help us all save even more water. Good ideas can be sent to the following address:

Water Saving Ideas
Rous Water Centre
218-232 Molesworth St
PO Box 230
Lismore 2480
email: water@rouswater.nsw.gov.au

(Sources: water efficiency brochures produced by Rous Water, Department of Land & Water Conservation, and WaterWise (Qld Department of Natural Resources); The Water Cycle newsletters and W.E.T. youth 'zine' produced by Maclean Shire Council)



For further information contact:
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These information sheets were prepared for Rous Water by Sustainable Futures Australia in liaison with Widjabul elders. © Rous Water & Sustainable Futures Australia, 2007. This is an educational project for the protection of water and land, and for reconciliation.

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