

What follows is an article submitted by PWNA Member and immediate past president, Paul Horsley. This article was submitted in an effort to educate pressure washing contractors, government agencies, and other industry professionals such as suppliers and distributors of alternative methods to save water.

Grey Water Ingenuity

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As the drought lengthens, people are becoming more and more ingenious about ways to capture and reuse waste water. The Victorian edition of My Country focused on grey water and its uses.

In Greater Bendigo for instance, the City is using storm water better by diverting it onto parks and sporting facilities. As well, companies such as Bendigo Mining are transferring water for the council to use to maintain important community assets such as the heritage trees in Roslyn Park, some of which are 150 to 200 years old.

Mayor Julie Rivendell says that while there's a good case for keeping these trees alive, not all grass is bad. Recreation grounds are important to community health, she says. The City is trialing warm season grasses which can use up to 85 per cent less water and "still produce an acceptable surface."

John Williamson is a rural officer with the EPA. On his own property at Woodend, which has been dry for a number of years, he uses grey water. The garden contains some exotics but it's surviving well because of that temporary diversion of water, coupled with very heavy mulching, he says. Overall, water use on the property has been reduced.

Mike Harris from the Alternative Technology Association has an alternative to the rubber funnels which can be put into waste pipes to divert grey water. These can become clogged with lint and hair and drain very slowly. An alternative, he says, is a small pump, 10-12cm long which goes into the washing trough and connects to the garden through a normal hose fitting. The pump uses a 12 volt battery.

- A two minute shower will use 30 liters of water

That's easier than bucketing the water out, he says. However, if you do need to empty by hand, there are collapsible-sided buckets available which are good for scooping up shallow water.

Using grey water isn't just a matter of running a pipe somehow out onto the lawn. Washing powders can contain salt and high levels of phosphate. According to Violet from Altona, fillers in the powder also are a problem in that they can build up and eventually kill plants.

The general agreement the consensus among the My Country guests is that concentrates have a lot less salt but that liquids are a better choice. However, the best practice is to leave the wash water and only divert only the rinse cycles.

For more detail, Lanfax Laboratories which has a free downloadable table on its website, says Mike. The table ranks most commercially available laundry brands for salt and phosphate levels.

Grey water guidelines

The EPA in Victoria has regulations and guidelines on the web for people who want to use grey water, advises John, covering using the right water and managing it properly.

Firstly, the right water is that which comes from the shower, bath, basin and laundry, explains John. Nappy soak is an exception because of the solids but also because of the bleaches in the powders.

Similarly, dish washing water shouldn't be used because of the food scraps and fats they contain. These can cause odor problems, say John. In addition, dish washing machine detergent is reasonably caustic and salty.

"Toilet water is black water and so is not for reuse. So the right water is baths, basins, showers and washing machines."

Secondly, use the water properly. It must be used within 24 hours, says John. If left longer, it can stagnate. Grey water must only be used on vegetables that are cooked, not on veggies that might be eaten raw.

Use only as much water as will soak away and be absorbed: this is so there is no runoff into the drains or onto another property.

Mike backs up John on that point. Grey water is meant to be distributed sub-surface, he says, that is, piped under mulches and the like. "And that's designed to stop any contaminants in the water pooling on the surface of the ground." If water pools and, for instance, if children ingest it, it could be dangerous.

Finally, says John, "Use general common sense: after you have been using grey water, go and wash your hands."

Pump up the grey

Shane from Maffra has three small children with the resultant wash load. So he's applied some brain power to make life easier. He's set up a small system to use the laundry water waste.

It's an automated system, he explains, that allows the wash water to run into the drainage but diverts the rinse water to a storage tank. The water is run through a lint filter and then he uses a small pump to bring it up to mains pressure to run out onto the garden. He reckons it cost around \$1,000 for the pumps and tank.

The CSIRO has a webpage which is useful for learning about water use at home, says scientist Andrew Grant. On the main site, just head for House Water Expert, he explains. It's a free download and a fun way to learn about use around the house. You can find out for instance, exactly how much water you can save with tanks or water reuse. It's also good for teachers.

The example Andrew gives is surprising. A person will use an average of 200lt of water per day, he says. Without a water efficient showerhead, a two minute shower will use 30lt.

Some people are being clever with evaporative air conditioners. Colin from Shepparton runs a pipe from his overflow into the swimming pool. It has the added advantage that the black plastic hose heats up as it runs across the roof so it helps to heat the water.

Bruce from Horsham cautions though to check whether or not the bleed valve is needed. If using reticulated, drinking standard water, that can be recycled in the unit and so the bleed off valve isn't needed.

Business and organizations are not sitting idle either as Andrew Rose from Goulburn Wimmera Murray Water (GWM Water) explains. Western Victoria has been dry for many years, he says, so reuse schemes have been put in place for all seweraged towns. The schemes "use 98 per cent of every drop that comes out of our sewerage system".

Ovals, vineyards, race courses, golf courses, use grey water, says Andrew, some for "many, many years". The water is treated to Class C standard and users are licensed by the EPA. The Department of Primary Industries in Horsham is running experiments with drought tolerant grains, says Andrew and they use waste water all year round.

There are no plans at this stage to go to on up to Class A standard which can be used for drinking water, says Andrew, at least not in the short term. "It maybe something that we would need to talk to the community about longer term."

Grey hair grey water

David in Myrrhee is the Chair of a St John retirement complex which has 104 units and is expanding. All water from the roads and from roofs is drained into flood retardation basins of which there are two with a wetland in between them. Some runoff also comes in from the neighboring properties. There's also a bore for back up.

The water is used for the lawns and gardens. "We're saving an enormous amount of water from the town supply and saving a heck of a lot of cost for our residents. So it's a great system," says David. It's obviously not small scale either. The village has the land to make it possible and grants of up \$50,000 from the federal government were used to finance the project.

This discussion was broadcast on My Country Victoria on the 7th February.