

# 5 shades of GREY

Come rain or water restrictions, we'd better get used to South Africa being a water-scarce country. Nick Dall investigates how you can use grey water to drastically reduce your reliance on the trusty old tap.



catch all the water before it goes down the plughole, and they're not great for your back either. Once you've spent a few months carrying buckets and dealing with baths that take an eon to drain, you'll probably be ready to take things to the next level. The good news is that a basic grey-water system is relatively cheap and easy to install.

"As soon as you store grey water in a tank it is starved of oxygen and contamination sets in," explains Jeremy Taylor of Water Rhapsody (below), who has been installing systems since 1994. "Diversion systems sidestep this issue by using the water immediately and allowing the soil in your garden to filter all the nasties out of the water."

All diversion systems, from basic to larney, work on the same premise:

- 1 Use gravity to get as much of a home's grey water as possible to a single sump.
- 2 Use very basic filters to get rid of large objects like hair and skin particles.
- 3 Use a small pump powered by a float switch to get this water out of the sump and onto your garden as soon as it arrives.

Because the water is used immediately the sump can be exceptionally small (we've heard of some the size of shoe box, but a capacity of 30 to 100 litres is the norm), which is great news for the average homeowner. Depending on the size of the pump and sump (and the layout of your house) you may be able to harness all of the grey water you produce, or you may have to focus on the main bathroom.

Because these systems come on automatically whenever you bath, shower or do laundry, you have to move your hose around the garden every day or so. Systems with larger pumps can power a low-pressure sprinkler, while home-made ones may have to be used for flood irrigation (that is, a hose with no sprinkler attached). No matter how big the pump, you'll never be able to hook them up to an irrigation system.

Grey water does have a slight odour (imagine walking into a busy laundromat) and the systems do have to be cleaned every few weeks. This is a simple, albeit vaguely unpleasant, task: empty the filter basket of hair and skin, and brush down the inside of the sump with a toilet brush. >



Put simply, there is no way South Africans can survive if current population trends and water-usage patterns continue. In 2016 a drought crippled the north of country, while the first half of 2017 has been the Western Cape's turn to go without water. While the government may have to increase supply at some point, we can all play our part in reducing demand through a few simple interventions – from planting waterwise gardens, harvesting rainwater and minimising toilet flushing to reusing grey water.

Reusing grey water may be a great idea but for many this is still shrouded in a faintly stagnant cloak of mystery.

## What is grey water?

Grey water is defined as water that comes from baths, showers, hand basins and washing machines. Depending on the system you use, grey water can be utilised to water your garden, flush your loo and, in some (expensive) cases, to fill your pool and do your laundry. Water from toilets and bidets is classed as black water, and water from the kitchen (and especially the dishwasher) is a no-no too.

The following rules apply if you plan on reusing grey water for irrigation:

- **Use phosphate-free laundry detergent** Surf, Omo and Ariel are all okay but Skip is not.
- **Avoid bleach-based cleaning products** Sodium-hypochlorite, to give

it its proper name, which is present in Jik, Domestos and several other products, is bad. Handy Andy, however, is great for your garden.

- **Continue with ablutions as usual** If it's gentle enough for your skin, it's fine for the garden.

## Choose the right system

If you shower with buckets on the floor and then use this water to flush the loo, you're engaging in grey-water recycling at its most basic. The same goes for diverting your washing-machine outlet onto the lawn or throwing tubs of bathwater on your roses. DIY hacks such as these are better than nothing and are cheap too. But they can't possibly

## Typical domestic water usage



30%+  
Irrigation



30%  
Grey water  
(15% bathing/  
handwashing  
and 15%  
laundry)



30%  
Toilets



3%  
Drinking,  
cooking,  
dishwashing



## FOR THE HOME HACK

If you're prepared to invest a tiny bit you can buy fittings that attach to the outlet of your bath, shower or basin and then connect to a regular garden hose or something with a larger diameter such as ordinary black irrigation pipe. Be warned: a regular hosepipe drains very slowly (although 20mm drains twice as fast as 15mm) and irrigation pipe isn't great for moving around your lawn.

My local hardware store prepared two options for me. To connect to a hosepipe: a 40mm connector plus a 40-20mm reducing bush plus a male tap connector; or to connect to an irrigation pipe: a 40mm connector plus a 40mm male elbow plus 40mm irrigation pipe.

**Price** R52 (to connect to a hosepipe) or R41 plus R19/m for 40mm irrigation pipe (to connect to irrigation pipe)

**Contact** Sherwood Hardware  
☎ 021 715 1520



## THE DIY DIVERSION KIT

When Cape Town went through its previous bout of serious water restrictions about 15 years ago, Mark Joubert rigged up a basic above-ground system powered by an old washing-machine pump.

"One morning the old lady who lived next door accused me of watering my garden at night, so I showed her what I'd done and she asked me to make her one." Within a few months he'd made about a dozen systems for family and friends.

Without telling Mark, his elderly neighbour entered his prototype in an SABS contest, which he won. Fast-forward several years, patents and prototypes, and you have Garden ResQ, an above-ground system that is the size of a cool box and can be installed by the average homeowner in an hour and a half. Because it's small and self-installed it's generally connected to one bathroom only, but if you can convince the whole family to use the same bathroom you'd still save a lot.

"Being above ground," says Mark, "means you won't have to dig a single hole in your garden." It's proving popular with people staying in rented houses: when the lease expires they simply take their Garden ResQ to the next place.

Mark posts units all around the country and estimates that there are about 3 000 in use in South Africa. "Six months ago 90% of my orders were coming from the Free State, Gauteng and Mpumalanga," he says. "Now nearly all of my clients are in the Western Cape."

**Price** R5 730 (excluding hose and sprinkler, plus R100-R200 for joints, depending on your requirements).

Postage is R275, or you can collect in Noordhoek.

**Contact**  
📧 gardenresq.co.za



### Testimonial

"I've been using the Garden ResQ Maxi system for just over four years. As a DIY enthusiast, I found the unit very easy to install and the only maintenance is cleaning out the filter brush once a month. My house has a single bathroom with a bath, shower and basin. The outlet pipes pass through the wall into the gulley outside and exit the wall just above ground level, so installation was a doddle. I am now hardly aware of the pump, there's just a faint hum as it starts up and this continues until the shower has stopped running or the bath has emptied. It's great to know that the water isn't going to waste down the drain."  
– Philip Schedler, photographer and video producer from Parkview, Johannesburg

PHOTOS THE GARDENER/DIETJUNIER, NICK DALL AND SUPPLIED



## THE PROFESSIONAL PLAN

There are many reasons why a small DIY system may not be perfect for your family. You may have a large house with bathrooms that are very far apart, or the lay of the land may mean that an above-ground unit simply won't work on your property. Or you may quite simply not have the energy or the know-how to install the unit yourself.

Over the past 23 years Water Rhapsody has installed systems in every situation imaginable, at surprisingly affordable prices. Its nationwide network of franchisees also ensures that its quality products are available to folks in every corner of the country.

Both the pump and the sump of Water Rhapsody's Garden Rhapsody system are larger than the Garden ResQ and the entire drum is buried so that the lid of the unit is at ground level (it can even be installed underneath wooden decking). All Water Rhapsody systems come with a good-quality hose and a Gardena pyramid sprinkler. And if you want to water both your front and your back garden, a second hose and sprinkler can be added easily.

**Price** R12 000-R24 000, all inclusive. No two installations are the same, but even if your house requires two separate units you won't have to spend more than R25 000.  
**Contact** 📧 waterrhapsody.co.za



### Testimonial

"Water Rhapsody installed my system about 10 years ago. We've had to replace the pump once, and some contractors put a pitchfork through one of the pipes about a week ago, but other than that it's given no trouble. Cleaning the filter isn't the most pleasant task but it's a small price to pay. We never use municipal water on our garden." – Mike Scur, an architect from Meadowridge, Cape Town

## GO GREY IN THE LOO

Diversion systems are a great, affordable grey-water option but they are limited in their use (irrigation only) and virtually redundant in the rainy season. Water Rhapsody's Second Movement system filters grey water sufficiently for it to be used to flush your toilets, which you do

have to do all year round. The system can be very difficult to retrofit, but if you're doing a new build or an extensive renovation it may be a wise long-term investment.

**Price** R22 000 for the first toilet and R12 000 per toilet for a further five toilets  
**Contact** 📧 waterrhapsody.co.za

## THE ROLLS-ROYCE SYSTEM



The Aqualoop, a groundbreaking system from German manufacturer Intewa, is touted as the Rolls-Royce of residential grey-water units and makes it possible to use grey water in your loos, laundry and pool. It ain't cheap, though, and, like the Second Movement system, it can be difficult to retrofit, says Steve Parker.

The unit, which measures 1m x 2m, comprises two tanks. The first tank pre-filters the water mechanically before breaking it down biologically and passing it through an Ultra-Fine membrane, which is one step below reverse osmosis. The germ-free water is then stored in the so-called "clearwater tank", from whence it can be sent to your loos, laundry or pool.

**Price** R62 000, installation excluded. Installations start at R10 000, with about R15 000 being the norm.

**Contact** 📧 purerain.co.za

