

Infosheet

Becoming Self-Sufficient with Rainwater, Stormwater and Recycled Grey Water

If you are considering becoming water self-sufficient, making your house independent from a main water supply, then you will need to do some careful planning. The most important thing is to obviously ensure such is sustainable, that you will have a continuous supply of high quality water supply all year long.

Safety Concerns with City Rainwater

Many are concerned, especially if living close to a city where there is higher traffic and industries than rural regions, that the quality of rainwater harvested would rooftops would not be safe to drink.

People like <u>Michael Mobbs demonstrate</u> that urban homeowners can disconnect from a mains water supply and harvest their own rainwater to drink. He reports performing tests every two week over 18 months which showed that his harvested rain water was as safe to drink as town water. What makes his feat unusual is that his property is located in the city of Sydney!

It is important that proper planning be done to maintain high quality water, for example, installing gutter screening, a rain head, water diverter and appropriate tank screens. Mr Mobbs also has a particular multiple tank setup (to make the most use of <u>recycled</u> <u>wastewater</u>, in addition to collecting rainwater), but the main point here is that one can easily cater to their own potable water needs, even if located in a city.

If you are seriously considering going <u>off the grid</u> with your water, then please ensure you are first aware of the range of potential hazards which can threaten water quality. The Australian Department of Health have put together an <u>information guide for the public</u> to do with using rainwater water, preventative measures to stop water contamination as well as monitoring and maintenance activities.

Planning for Water Self-Sustainability

Knowing *how much water you consume* is obviously important to adequately plan for how much water you will need to collect (read <u>How to Calculate Your Home Water Usage</u>).

Next, you should have an understanding of how much water you can actually harvest. This means measuring the surface area of your roof and catchment. Multiplying the surface area of your catchment area (m²) by the millimetres of rainwater falling will yield about 1 litre of water in your tank. You can estimate how much rain falls in your area by using the Bureau of Meteorology's <u>rainfall climate maps</u>.

Over time, you will learn to become more water efficient, however, if going down the route of being water self-sufficient, then definitely install water efficient shower heads, facet nozzles and other water saving devices. When purchasing appliances such as washing machines and toilet systems, aim for those with higher water efficiency ratings.

Usable Water Sources on Your Property

In a previous article, <u>Can Your Family Live Off Tank Water Alone</u>, two harvestable sources of rain water were mentioned:

- 1. **Rainwater**, water collected from your rooftop is typically considered "rainwater" and with a water diverter and appropriate screening is high quality water. You can use this for washing clothes, and as mentioned above, can even be used in cooking and drinking if properly maintained.
- 2. **Storm water**, is water flowing over the ground, down driveways and pavements and is a valuable water supply to hook into for use in toilets, gardens and outdoor use.

Another water source that you can tap into, which many people overlook using, is **recycled wastewater**. Approximately half your household water use will be used for flushing toilets and washing clothes and dishes. Showers and baths also consume much water. Re-using dirty water from your house allows you to double down on your water use.

Recycled water comes in two forms:

- 1. Grey water, all dirty water from the shower, bath, dishwasher, clothes washing, sinks
- 2. **Black water**, sewage water flushed from toilets in your home, you don't re-use but you can setup your own sewage disposal system.

To store recycled water, you will need separate wastewater tanks. Some tanks can be specially built with different compartments, and to re-use such water you will need to treat the water. Such treatment often consists of pumping through sand filters and sterlisation methods such as ultra violet lamps and/or chlorination.

Once treated, grey water will look clear and have no foul smell. It should technically be clean enough to drink, although you shouldn't do this in case your system breaks down somewhere! You can use this grey water in toilets, for washing clothes, watering garden and outdoor uses.

Going off the grid entirely, and even as much as possible, is a choice that many <u>environmentally conscious Australians truly love</u>. It is possible, and not only will it reduce your utility bills, it is ultimately a rewarding lifestyle that feels liberating in knowing you living independently. Obviously not for everyone, but if you are in need of water storage tanks, Clark Tanks are a <u>manufacturer of poly tanks</u>.

Web version (current):

<u>https://www.clarktanks.com.au/knowledge-base/</u> becoming-self-sufficient-with-rainwater-storm-water-and-recycled-grey-water/

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