

Rainwater Harvesting



We are always complaining about the weather in the UK. It is either too hot, or too wet. But if we save the rainwater whilst it is too wet, we can use it when it is too hot. A win-win situation. But how can we do it? Is it expensive? By reading these tips, you will find out.

Why save water?

Water is a valuable resource that in the UK is all too often taken for granted and squandered. Climate change is likely to produce long dry periods more regularly which will result in droughts and hosepipe bans becoming more commonplace.

Producing tap water and handling sewage are also relatively energy intensive activities. It takes power to pump water supplies to our homes and to handle the vast quantities of 'waste' water that we produce. For example, using figures from the 2004 Three Valley Water's environmental report, the average unmetered water customer uses 42.5kWh of electricity per year for their tap water supply. Our domestic water supplies also receive large amounts of expensive chemical treatment to make the water safe to drink – much of which never passes our lips!

Gardeners can be particularly heavy users of water and usually need it most when it is in shortest supply during droughts. Other common household tasks that place high demands on water supplies are bathing, washing cars and patios and flushing toilets.

However, much of the water that disappears straight down our drains can be reused. There are really three types of water that a normal house can produce and their potential for reuse varies:



Rainwater – a natural water source that runs off roofs and is allowed to soak away or enter the sewer system. This can be easily 'harvested' from down pipes, using 'diverters' that are widely available from garden centres and DIY stores, and stored in water butts. Rainwater stores well, can be used for watering both ornamental and fruit/vegetable beds in the garden and is better than most tap water for use on acid-loving plants.



Greywater – the water that we've washed ourselves in or used in the kitchen. Collecting this may be more involved than rainwater harvesting, depending on how the waste pipes from baths, showers and sinks are plumbed in your home. However, you can still make use of it without changing the plumbing. For example bathwater can be used straight from the bath in buckets for washing cars or flushing toilets and if you use a washing-up bowl in the kitchen its contents can be thrown around trees, shrubs and ornamental plants. Some people avoid using greywater on vegetables in case soaps, detergents and other similar things get into the vegetables and affect their taste. Because greywater often contains a lot of organic material it is not suitable for long-term storage without some treatment. Microbes will start to break the organic material down and cause the storage tanks to smell.



Blackwater – the water that is flushed away down toilets. This contains human waste and pathogens and is not suitable for reuse without extensive, and usually expensive, treatment. For most town and city dwellers it is best to leave this to the sewerage company's sewage works. On sites with large amounts of land available (for example farms or large rural properties) it may be preferable to have a self-contained sewage treatment system installed, especially if mains sewers are located some distance away.

Water storage

Often we experience gluts of water during storms, followed by shortages during dry spells. It is therefore useful to be able to store water for use later, especially in the case of rainwater which can be stored for a reasonably long time. Water butts are widely available in shops and also by mail order. Some councils and water companies offer discounts on them as well. When buying water butts it is worth noting what accessories are included in the price. What may appear to be a bargain butt initially may soon be rather expensive once you have added a lid, a down pipe diverter, a tap and a stand. Many suppliers now offer complete kits containing all the needed items.

Commercially available water butts come in a range of shapes and sizes, starting from space-saving mini butts with capacities of around 100 litres right up to large tanks that can be buried underground with capacities of thousands of litres. Some vendors sell kits to allow multiple water butts to be linked together to increase the amount of water storage available. There are even water butts available designed to look like elegant columns with brass taps!

You can also use other watertight barrels and tanks for storing harvested water. For example, second-hand Industrial Bulk Containers (IBCs) that have had cooking oils, fruit concentrates and other similar items in are popular with people who need to collect larger amounts of water. They come in a variety of shapes, sizes and colours and, in common with the purpose-made domestic water butts, can be connected together with hoses to increase capacity and/or provide butts in several convenient locations.

If you do opt for such reused containers you should seek assurances from the supplier that they have not been used to hold anything that could be harmful. Some chemicals can remain in the containers even if they are flushed out several times and could prove damaging to your plants or get into your food via your vegetable patch.

Whether you use a custom-made water butt or reuse barrels or tanks, it is useful to try to keep leaves, moss and other debris from the roof and guttering out of the tank if possible. Some diverters come with built-in filters to prevent this sort of material entering the butt, whilst other folk make their own filters using socks or nylon stockings suspended over the inlet pipe into the butt. These will need to be cleaned out occasionally.

Beat the bans!

Rainwater harvesting and greywater reuse are great ways to beat water restrictions and at the same time help the environment. For a relatively small initial outlay you can collect free water that can be easily and legally used on gardens during droughts and, if you are on a water meter, reduce your water bills too.

Why let such a valuable resource flow down the drain?

Save water and beat the bans!