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ESTATE

**Building Your
Waterwise Home**

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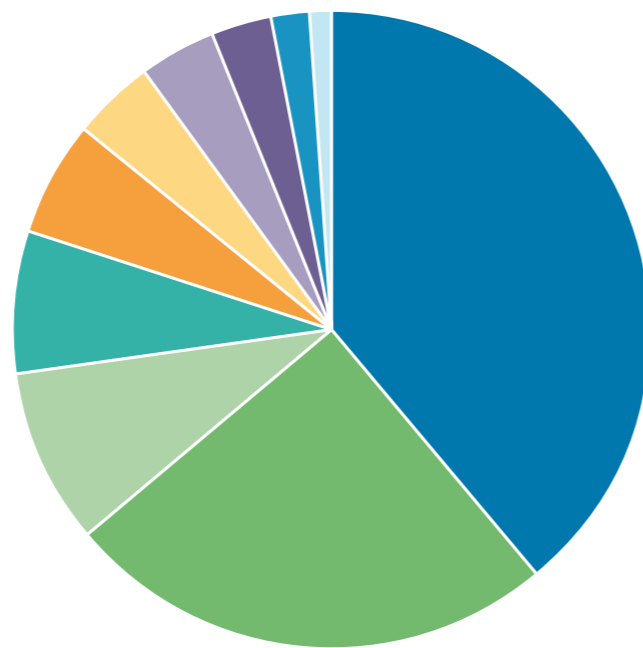
Sustainable Water Use



SAVING WATER AT HOME IS ONE OF THE SIMPLEST THINGS YOU CAN DO TO HELP THE ENVIRONMENT AND IT CAN ALSO SAVE YOU MONEY.

In Perth, the average water use per person is 126,000 litres of water per year (in 2014-15).¹

As water is one of the most precious resources on the planet and only comes in a finite supply, conservation of this resource is paramount to living more sustainably. These guidelines will provide you with a few easy steps to help save water in the garden and in your home.



Average Perth residential water use, by area (%)

- Irrigation 39%
- Shower and bath 25%
- Toilet 9%
- Washing machine 7%
- Taps 6%
- Evaporative air conditioner 4%
- Leaks 4%
- Handwatering 3%
- Pool & spa 2%
- Dishwasher 1%

¹ Water Corp: <http://www.watercorporation.com.au/home/faqs/saving-water/how-many-litres-of-water-do-people-in-perth-use-each-year>

IN THE GARDEN

WATERWISE GARDENING

Gardens can require a lot of water with many non-native species, like roses, demanding constant watering and maintenance. A waterwise garden will help you save water, (but also reduce the need to maintain your garden), provide habitat for local biodiversity and minimise the use of harmful chemicals.

DESIGNING YOUR GARDEN

Many waterwise principles can be incorporated into your garden when you first design it. This will save a lot of time and money when it comes to maintaining your garden, but most importantly save you a lot of water.

- 1. Avoid large areas of turf:** In Perth's dry climate, turf needs a large amount of water to survive. Minimise the amount of turf and use a waterwise turf species such as Couch, Saltene, Kikuyu or Buffalo. Also, plant areas of turf in combination with waterwise vegetation. This will minimise maintenance of your garden and minimise the amount of water your garden will require.
- 2. Install a drip irrigation system:** Drip irrigation slowly releases water below the soil surface, minimising the loss of water through evaporation.
- 3. Prepare your soil:** Healthy soil is important for plant and seedling survival, providing the necessary nutrients to help plants grow but also helps to retain water. To improve the quality of your soil, dig in organic fertiliser, animal manure and compost.
- 4. Microclimates:** Take note of the microclimate of your garden. For example, if your garden is exposed to sunlight and experiences dry easterly winds, you will need to choose more drought tolerant plants.
- 5. Plant locally native plants:** Locally native plants will be best adapted to the climate and will require very little water to survive. The Water Corporation has a useful list of waterwise plants for the Perth region (watercorporation.com.au) and many local nurseries also stock native plants (perthnurseries.com).

- 6. Hydrozone:** Group plants with similar watering requirements when you organise your garden layout. That way, the right amount of water can be applied, minimising water wastage.
- 7. Timing:** The best time to plant is in the wetter months of the year (June–August). The winter rainfall can help provide the water necessary for young plants, as well as reduce your water demand.
- 8. Install a rain sensor override switch:** A rain sensor override switch will ensure water is not wasted from your irrigation system on rainy days.

EXAMPLES



Drip irrigation can be directed onto the root zones of plants.



Use waterwise plants that do not require large amounts of water.



Apply mulch to garden beds to reduce evaporation from soil and minimise expanses of lawn.

MAINTAINING YOUR GARDEN

Once your garden is established, there are a few simple actions you can do to keep your water usage and garden maintenance low.

- 1. Mulch:** Mulch provides a great microclimate for plants, keeping the soil cool and ensures that water does not evaporate too quickly. Mulch also reduces the likelihood of weeds growing. When looking for garden mulch, aim for organic mulch with a pH range from 7.0–7.3 which still allows the soil to breathe. It is important that your provider can guarantee the mulch is free of weeds, disease and pathogens.
- 2. Keeping your soil healthy:** Maintain the quality of your soils by digging in compost, animal manure and fertiliser regularly. A worm farm is a great way to create good quality soil and can be fun to look after. A compost bin can also provide lots of nutrients for your soil and reduce your household waste.
- 3. Fertilise:** Fertiliser helps with seedling survival and should be used regularly. Fertiliser can also impact on water quality so it is best to use an organic fertiliser and minimise nutrient runoff. Try to prevent fertiliser spreading into any area, like your driveway or pathways, where it can be washed into drains or waterways.

Avoid using fertiliser before heavy rainfall to prevent nutrient runoff or leaching of nutrients into the groundwater. More information on safe fertiliser use can be found on the Water Corporation website (watercorporation.com.au) or the Department of Agriculture and Food website (agric.wa.gov.au).



Native plants provide for native wildlife.

- 4. Strategic watering:** If you don't have an irrigation system and your garden requires a bit of extra watering over summer, the best time to water is at dawn and dusk to avoid any further evaporation. The Water Corporation has set watering days across Perth, which determine when people are allowed to water their gardens. This relates to your household address and postcode and can be found at the following website (watercorporation.com.au)
- 5. Weed regularly:** Weeds can multiply quickly so it's important to remove them regularly. Dispose of weeds carefully after removal. It is a good idea to check with your local council (swan.wa.gov.au) about what garden waste disposal facilities are available in your area.
- 6. Fix dripping taps:** By fixing dripping taps quickly you can avoid further water wastage.

The Water Corporation have also developed guidelines for waterwise gardens. These are available online at (watercorporation.com.au), or call 13 10 39 to contact a waterwise specialist in your area.

FERTILISER CAN ALSO IMPACT ON WATER QUALITY SO IT IS BEST TO USE AN ORGANIC FERTILISER AND MINIMISE NUTRIENT RUNOFF.

RAINWATER TANK

Rainwater is a free resource that you can harness in your own home by installing a rainwater tank. In Perth, the average home can collect 40,000 litres (L) of water a year. This could be used to water your garden, wash the car or can even be plumbed into your house to flush your toilet or wash your clothes. Before you install your new rainwater tank, make sure you include the following requirements as you design your home and garden:

- Allow for a 3,500L rainwater tank (1.7 metres in diameter and 1.8 metres high) as a minimum, which is the recommended tank size by Living Smart WA.
- Allocate a flat area around the house for your rainwater tank that is near the garden or appliances you want it to service.
- If your tank is going to help water your garden, it is best to place the tank at a higher elevation than the garden so that a pump will not be required.
- If your tank is going to service an appliance inside your home, you will need to install a pump. This will require a water-proof outdoor power point for the tank, a copper cold water line that connects to the outside wall of your home just above your tank, a down pipe/s within two metres of the tank plus connection to the mains water as backup.
- Allow for the cost of delivery, installation, labour and any required modifications. Some rebates may apply so make sure you check out the federal government website at (environment.gov.au/water).



Example of a rainwater tank that you could have in your home.

IN YOUR HOME

WATER EFFICIENT APPLIANCES

As a part of building your home you are required to build with water efficient appliances and fittings. Water efficient appliances such as a shower head or dishwasher can save you water and money. The best measure of water efficiency in appliances is the Water Efficiency Labelling and Standards scheme known as WELS. WELS gives all registered appliances a star rating for water efficiency. This rating is a good indicator of how water efficient an appliance will be.

In Western Australia, all new homes must comply with the WA Government's 6 Star Plus standards which require:

- All tap fittings to be a minimum of 4-star WELS rated.
- All shower heads to be a minimum of 3-star WELS rated.
- All toilets to be a minimum of 4-star WELS rated and to be dual flush.
- Insulation of all hot water pipes and for these to be located in close proximity to the hot water system. Alternatively, a recirculating hot water supply system must be installed.
- Installation of accredited Smart Approved Watermark cover for swimming pools and spas.

The following table demonstrates how much water you could save by installing water efficient appliances. For example, switching to a water efficient shower head can reduce your household water usage by as much as 14,500 litres a year.

APPLIANCES	WATER USAGE		OVERALL WATER SAVINGS PER ANNUM
	NORMAL	3-4 STAR WELS	
Shower head	15-25L/minute	7L/minute	14,500L
Tap ware	15-18L/minute	2L/minute	70,000L
Toilet	12L/flush	4L/flush	30,000L-40,000L
Washing Machine	60,000L/year	25,000L/year	35,000L
Dishwasher	40L/wash	15L/wash	9,000L



BY REDUCING YOUR WATER BILL YOU WILL ALSO REDUCE YOUR ENERGY BILL.

OTHER WAYS TO SAVE WATER AROUND THE HOME

There are other ways that you can save water, some of which have been included in the table below.

For more information and ideas, go to the Water Corporation website (watercorporation.com.au).



MECHANISM	WATER SAVINGS PER YEAR	WANT MORE INFORMATION?
Install flow regulators on taps and showers to reduce the flow of water through your tap	25,000L	<ul style="list-style-type: none"> • Living Smart 'How to install a flow regulator' • Department of Water (rebates)
Replace 50m ² of lawn with a waterwise garden bed	100,000L	<ul style="list-style-type: none"> • Living Smart 'Your Guide to water wise gardening' • Great gardens • Water Corporation
Take 4 minute showers	17,500L	Small egg timers are a great way to time your showers. These are available at local hardware stores.
Install an approved greywater system	100,000L	<ul style="list-style-type: none"> • Living Smart 'How to reuse greywater' • Department of Water • Department of Health
Fix leaking taps	4,500L	<ul style="list-style-type: none"> • Living Smart 'How to fix a leaking tap' • Water Corporation • Your local plumber



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