Your guide to a waterwise garden

FRESH WATER THINKING

WATER CORPORATION

As our state experiences the effects of a drying climate, more Western Australians are choosing waterwise approaches to gardening. By taking a fresh look at how you garden you can be part of the solution, reduce your water use and still have a great looking garden.

Creating a waterwise garden involves improving the soil, choosing drought tolerant plants and lawn, applying waterwise mulch, installing efficient irrigation and only using fertiliser when needed.

Waterwise designs

Grouping plants with similar watering needs is an effective way to conserve water in the garden and give each plant the best conditions to flourish in. Whether adding a few plants or replanting whole areas, looking for information on the watering needs of plants is the key to success. See our Popular garden design brochures for more information specific to your region. To find waterwise plants, visit the Waterwise Plants for WA directory at **watercorporation.com.au**

Improving your soil as you garden

Good soil is the foundation of a healthy garden and will provide the best conditions for your plants to use less water. Improving the soil is a good investment when planting as sandy soils are common in WA and have a low water and nutrient holding capacity.

Below are the types of soil found around WA and what can be added to improve the soil's water and nutrient holding capacity.

Soil Type	Non-wettable (water beads on the top/ runs off)	Water holding capacity	Nutrient holding capacity	Benefits from organic matter	Benefits from soil amendment (various)
Sand	Very common	Poor	Poor	Greatly	Greatly
Clay	Very rarely	Good	Medium	Greatly	A little
Loam	Rarely	Good	Medium	Greatly	A little
Gravel	Occasionally	Medium	Medium	Greatly	A little

It's important to improve the soil, by thoroughly mixing organic matter and soil improver into the top 30cm of soil, when you're planting and maintaining your garden. You can also find soil improvers that contain wetting agents, which help water penetrate through to the roots of your plants.

Established lawn and gardens can also benefit from soil improvement.

What to add to your soil

Organic matter (also called compost) added to the soil will generate healthy plant growth.

Soil amendments (also called clays) improve the water and nutrient holding capacity of the soil.

Soil wetting agents (that come in granular and liquid forms) assist in water penetrating into the soil and should be applied during planting, at the start of winter rains, in early summer and as recommended by the manufacturer.

When buying products for your garden, look out for the Waterwise Approved and Smart Approved Watermark symbols.

Upgrading your irrigation system

It's useful to make a sketch of your garden so you can see where you need to water. A Waterwise Irrigation Design Shop can provide expert advice on matching sprinkler types to the needs of plants.

A good irrigation system will:

- Apply the right amount of water for the plants and soil (use the sprinkler types and run times in this guide).
- Time watering to meet changing weather conditions (less in cooler seasons and switch off in winter/wet season).
- Apply water evenly to the plants in each garden area.
- Apply water only where required to reach the root zone.

Plants only use water where the plant roots grow, for most plants that's the top 30cm of soil. The amount of water in a garden is constantly changing, the trick is to make sure the top 30cm is not dried out and adjust your irrigation run times to suit.

Hydrozones

Hydrozoning is grouping plants with similar watering needs and then watering them on separate stations. It's an effective tactic to conserve water in the garden, and should be considered during the planning and replanting phases of creating your waterwise garden. It's good to note that lawns have different water requirements to garden beds so should be on their own zones.

Water supply

Where will your irrigation water come from? Installing a garden bore can save precious drinking water. To find out whether a bore is suitable in your garden, consult the 'Perth Groundwater Atlas' at water.wa.gov.au

If you are connecting to the mains water supply, you'll need to install a double-check backflow prevention device at the connection point which should be installed by a licenced plumber.

Flow and pressure

Knowing your water flow and pressure will help you determine what type of watering devices you can use, how many you can use at one time and therefore how much water will be applied by your irrigation system. A simple way to test your water flow is to measure how long it takes to fill a standard 10 litre bucket from a garden tap, if a bucket fills in 30 seconds then your water pressure is 20 litres per minute or 1,200 litres per hour.

For a more accurate flow and pressure test contact your local Waterwise Irrigation Design Shop.

There are various ways to water your garden; this table is a useful guide to the different fittings and their ability to meet the basic principles of good irrigation.

Efficiency rating[1] poor very good

Irrigation types	Supplying the right amount	Even watering	Water to root zone
 Dripline	●●●	●●	●●●
 Sprayers/rotating sprinklers	●●●	●●●	●●
 Microjets	●	●	●
 End-of-hose sprinklers	●	●	●
 Hand-held sprayers	●	●	●

[1]The ratings in this table are based on the irrigation system being correctly designed, installed and operated.

Installing your system

1. Before you begin, ensure you have all the parts and tools that you need.
2. Mark out and dig trenches for the main line (PVC pipe) and a conduit with any wiring for solenoids. Make sure you space your sprinklers so that your garden is watered evenly and only watering the garden. Overspray onto the road or nearby buildings is a waste.
3. Start at the water source, connect your master solenoid valve (if installing an automatic system) and then install the mainline. Flush the mainline before installing any solenoid valves so that you don't have dirt in the pipes.
4. Install lateral lines, and finally, the sprinklers themselves. Don't install any nozzles until you have thoroughly flushed each station. Solenoid valves may have to be operated manually until you have made final connections to the controller. Make sure you install the right number of sprinklers on one line. Too many may result in not enough water pressure and too few may lead to high water pressure and water being wasted.
5. Fit nozzles and make sure each station waters evenly.

For professional installation assistance please contact your local Waterwise Garden Irrigator.

It's important you remember to check your irrigation regularly ensuring the system is working properly and not wasting water. And always remember to change like for like when you are replacing sprinklers in your system.

When to water

To get the best results from your irrigation system turn it on during the early hours of your rostered watering days (aim for as early as possible before 9am), this will reduce evaporation and allow plants to draw moisture as needed throughout the day.

Watering rosters and a state-wide daytime sprinkler ban between 9am and 6pm are in place across WA. However, watering exemptions are available for establishing a new lawn or garden if you meet certain criteria.

To find out your watering days or to apply for an exemption, visit watercorporation.com.au or contact the Waterwise Helpline on 13 10 39.

How long to water for

Setting irrigation times for your garden should be determined by the type of sprinkler in each garden area. The following table shows the suggested times to water your garden. By reducing the time slightly your garden can still look great. Switching off your sprinklers will save you enormous amounts of water.

Sprinkler type	Approximate watering rate (per hour)	Suggested run time for 10mm (standard drink)	Recommended run time for reducing water use
Pop-up/ fixed spray	35 - 45mm	13 - 16 minutes	10 minutes
Rotary	10 - 15mm	40 - 60 minutes	30 - 40 minutes
Gear drive rotor	10 - 20mm	30 - 40 minutes	25 - 30 minutes
Dripline	15 - 20mm	30 - 40 minutes	20 - 30 minutes

This table shows the recommended watering times to apply 10mm of water to your garden for a range of sprinklers. Watering for longer will waste water.

Mulch

Mulch is like sunscreen for your soil. By applying a thick layer of waterwise mulch you will be protecting your garden. Be sure to look for mulch with the Waterwise Approved and Smart Approved WaterMark symbols. The best mulch is a coarse grade mulch, so be sure to avoid stringy black mulch as it soaks up the water and stops it getting to the plants.

The benefits of applying waterwise mulch include:

- Saving water by reducing evaporation.
- Reducing weed growth.
- Reducing stress on plants' roots.
- Reducing wind erosion.
- Makes your garden look great.

To apply mulch to your garden, first remove any dead plants or weeds from the garden beds and finish planting any new plants. Then apply a thick layer of chunky waterwise mulch 5 to 10cm deep. A good waterwise mulch is one that has large, particles that hold little, if any, water. Always keep mulch just clear of stems and trunks and be prepared to spread more mulch over the surface as the material breaks down to feed the soil.

Fertilising your lawn and garden

Plants need food just like people – they need a range of nutrients for good health and growth. Applying fertiliser to your lawn and garden will provide them with nutrients to help them grow.

Slow release fertilisers work best as they are designed to release a steady supply of nutrients over a longer period of time.

Generally, it's better to apply slow release fertiliser in spring and autumn. It's not necessary to feed plants in winter or when rain is expected. Rain and over watering washes nutrients past the roots. Most fertilisers have a recommended application rate on the packaging. This is the maximum amount that should be applied.

Some fertilisers can be harmful to the environment so don't spread fertiliser onto paths, driveways or roads where it can be washed down the drains and into waterways and avoid overwatering to avoid washing nutrients away.

Quality Products

When searching for products like sprinkler systems, mulches and soil improvers look for the Waterwise Approved and Smart Approved WaterMark symbols. Waterwise Approved Products are preferred as they suit WA's climatic conditions and improve water efficiency.

For professional assistance with saving water in and around your garden, visit our website to find a Waterwise Specialist near you. They include Garden Centres, Garden Designers, Garden Irrigators, Irrigation Design Shops, Landscapers, Lawnmowing Contractors, Plumbers and Water Auditors. Waterwise Specialists have been trained especially to help you save water by providing specialist advice on waterwise products and services for your home and garden.

For more information on how to save water and be waterwise visit **watercorporation.com.au**

13 13 85 Account Enquiries
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This information is available in alternative formats on request.

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