

# Rain Garden 500

## Information Sheet

Issued May 2015

Rain Garden 500 is part of a South Australian Environment Protection Authority (EPA) Catchment to Coast project, funded through the Australian Government National Landcare Programme. It is a three-year grant program where local governments, community groups, schools, sports clubs and groups of motivated individuals can apply for funding to build a rain garden in the Adelaide region. The purpose of the rain gardens will be to improve the quality of stormwater from our streets and other hard surfaces, such as car parks, before it travels to our local creeks and the sea.

The improved stormwater from the rain garden may be collected and used for irrigation or returned to the stormwater system. Collectively, rain gardens and other stormwater quality improvement features, such as wetlands, installed in catchments will contribute towards less stormwater overall going out to sea and improved water quality in urban waterways and Adelaide's coastal waters. This will reduce pollution and contribute to improving seagrass health, which will benefit our marine environment and keep our beach water cleaner.

An important component of the project is to build an understanding in the community of how activities we carry out on land impact on water quality in urban waterways, creeks and coastal waters. A focus of Rain Garden 500 promotion will be the importance of improving stormwater quality and where and how rain garden installations may be incorporated. It will allow local communities to contribute to improved stormwater quality and, ultimately, seagrass health. We can all take action at our local street and community levels to improve water quality.



Established bio-filtration rain garden beds at Linde Reserve, Stepney



Rain garden bio-filtration system, prior to planting, City Of West Torrens



Tree pit bio-filtration system, Beechway Ave, Brooklyn Park

## What is a rain garden?

A rain garden is a constructed garden designed to capture stormwater from roads, car parks, driveways, roofs and other hard surfaces, and is designed in such a way to improve the water quality of stormwater. Beneath the surface of the rain garden is a special porous soil layer (filter media) overlaying a drainage layer. The stormwater is detained in the rain garden through the design and vegetation, slowly filtering through the soil layer to the drainage at the base. Stormwater

flows are diverted and pollutants are removed through the processes of settlement (sedimentation), binding with components in the filter media and by the action of specially selected plants and associated microbial communities. Bio-filtration systems can be scaled to various catchment sizes, from a single small garden or part of a larger project, to manage stormwater. The treated stormwater from a rain garden may be collected and used for irrigation or returned to the stormwater system.

## Why is improving stormwater quality important and what are the benefits?

In the Adelaide region, stormwater is collected from hard surfaces, kerbs and gutters in the stormwater network and discharged to our urban creeks and, ultimately, into coastal waters. As stormwater travels over these surfaces it picks up pollutants that are not naturally found in receiving waters. The increased runoff, or stormwater, has also changed the water flow regime in our creeks, rivers and at the coast. With less infiltration into the soil and groundwater, our soils are depleted of the moisture they need to sustain vegetation, and higher flow in urban waterways results in greater erosion of stream banks and beds, further adding to the pollutant load. Stormwater pollution does not usually come from one readily identifiable source. Instead, it can come from a large range of sources over a large area that, cumulatively, have significant environmental impacts.

Stormwater containing high sediment and nutrient loads has been found to impact on seagrass health and sediment stability along the Adelaide coastline. The *Adelaide Coastal Waters Study* found that the loss of more than 5,000 hectares of seagrass along the Adelaide metropolitan coast could be attributed to pollution, some of which is due to stormwater contamination. It may also impact on recreational experiences and aesthetic values of the Adelaide coast. The *Adelaide Coastal Water Quality Improvement Plan* provides strategies to improve coastal water quality and our understanding of water quality issues across the Adelaide region. One of these strategies is to promote action people can take to improve water quality. Rain Garden 500 and the broader Catchment to Coast project is part of this strategy, and is one way people can be involved in improving water quality in the catchments that are connected to the Adelaide coast.

Rain gardens also offer other benefits. Not only do they improve the quality of stormwater, they also retain some of the excess stormwater generated by paved surfaces within the local soil profile, rather than allowing it to flow out to sea, and enable vegetated areas to be sustained over time, thus beautifying our streets and neighbourhoods.

Even if you don't install a rain garden, there are actions you can take around your home, school or community neighbourhood that will improve water quality and ensure only rain goes into stormwater drains:

- Use chemicals such as fertilisers sparingly, and dispose of them responsibly.
- Sweep up leaves around your home and put them in a green bin or compost—never sweep them into the street gutters or hose them down.
- Wash cars on the lawn so the water does not flow into the stormwater drain or use a commercial wash area where water is recycled.
- Dispose of chemicals, such as paint or oil, responsibly rather than down the drain.
- Clean up after pets and don't allow water from washing pets into the stormwater drain.
- Have gravel or permeable driveways, which allow rainwater to soak into the ground.

All these actions will help improve water quality in urban waterways across Adelaide's catchments and also improve water quality at the coast.

**For further information on Rain Garden 500 visit the EPA website [www.epa.sa.gov.au/raingarden500](http://www.epa.sa.gov.au/raingarden500) and download the Rain Garden 500 Application guide.**

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