

## Rainwater harvesting

Rainwater harvesting is the collection of free rainwater from various areas such as roofs or clean hardscaped areas. The collected water is then stored and used for all non-potable water demands and greatly reduces the potable water consumption in any type of building. Captured rainwater can also be treated for potable use.



### Recommendations

- ❑ Direct gutters onto your lawn and plant beds.
- ❑ Connect rainwater downpipes to storage tanks.
- ❑ Assess your roof. Certain roof types are more efficient at capturing water with metal sheeting being the most efficient (around 95%).
- ❑ Avoid roofs with lead, asbestos, certain paints or tar.
- ❑ Install a first-flush device or mesh filter for storage tanks to remove leaves and debris.
- ❑ Dedicated rain water piping and a pump will be needed to connect the storage tanks to toilet cisterns.
- ❑ Installing filtration systems such as sediment filters, carbon filters, UV light sterilisation or ozonation (depending on legislation) can take rainwater to a potable quality.
- ❑ An estimated annual yield may equate to 146 000 litres based on an average annual rainfall in Paarl (Western Cape Province) of 650mm and a roof collection area of 225m<sup>2</sup>. A storage capacity of 10 000 litre is suggested (2 x 5 000 litre tanks).
- ❑ Contact [Ecolution](#) for more details.

Environmental Improvement	High
Awareness Impact	High
Capital	Medium
Payback	1- 5 years

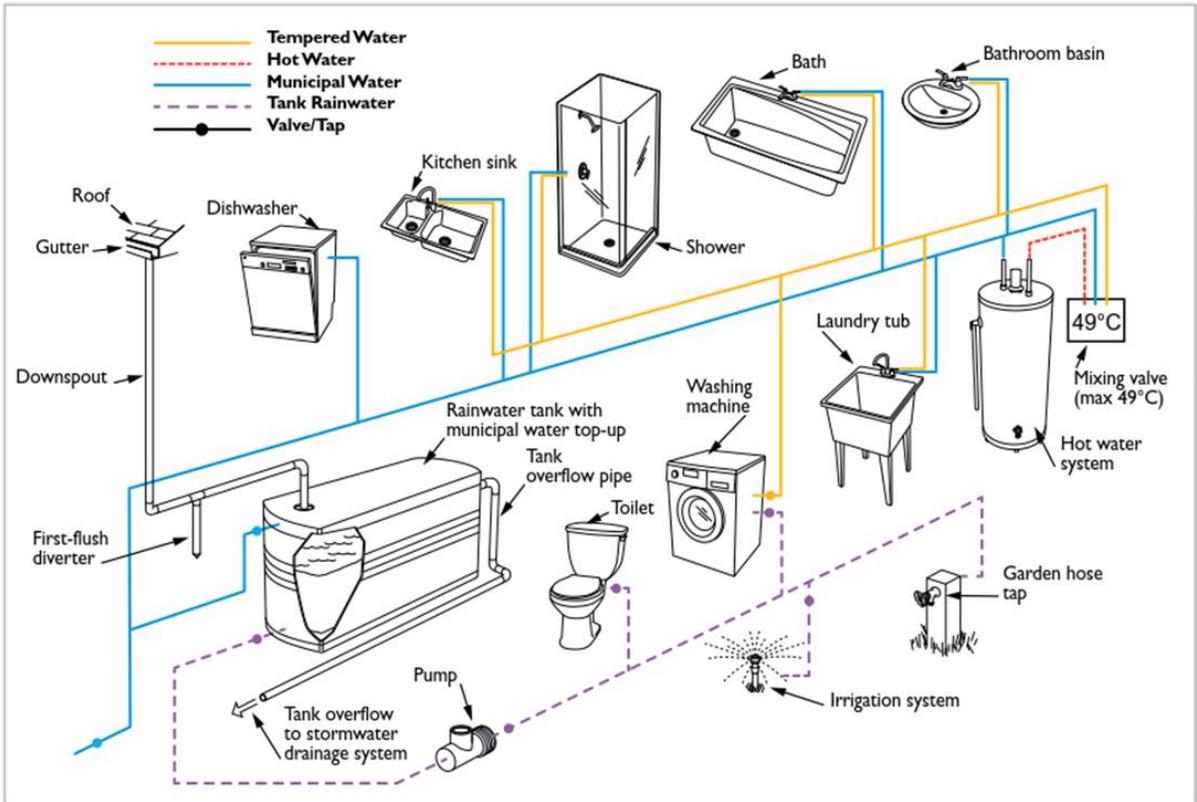
### Savings and Benefits

- ❑ Reduces potable water consumption.
- ❑ Reduces storm water provisions.
- ❑ Counters rising costs for water and sewage.
- ❑ Relieves strain on sewer networks because rain is retained for later use.

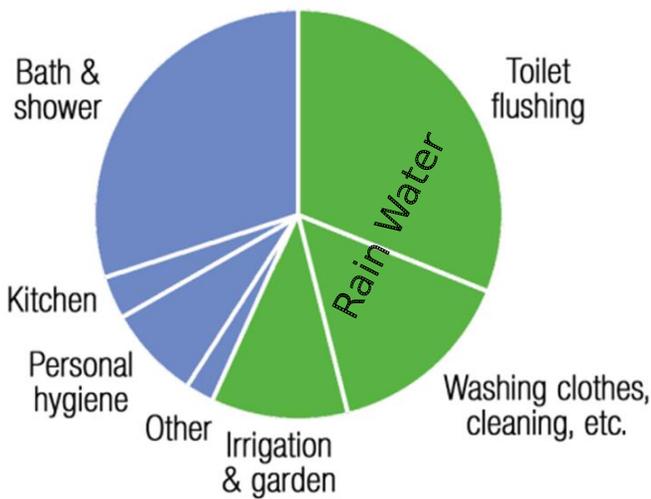


(Watts Rainwater Harvesting Systems, 2012)

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(Collecting and Using Rainwater at Home: A Guide for Homeowners, 2013)



Good design = maximum efficiency

The better the pre-filtration the better the longevity of a system.