

## Water-wise garden design – take responsibility – this is how



Agriculturalists refer to water as the ‘gatekeeper’. It determines the viability of their agricultural proposals. As a landscape-gardener and horticulturist I have come to know this ‘gatekeeper’. It stands firmly at the gate of my landscape designs. It is partly out of respect for the water shortages that the Western Cape is dealing with that I urge those, who have not decided to take action towards a water saving lifestyle, to do so.

We will always be gardening, knowing that we are essentially motivated by the genius we experience in the ecology that sustains us.

Nothing can be of value before it is counted. Be it empty bottles the recyclers teach us. The Tshwane Municipality has updated their website. It is user-friendly and you can register on [www.tshwane.gov.za](http://www.tshwane.gov.za) and submit your monthly meter reading. My house has a ‘waterbook’ it contains charts like the ones below.

Months	Total consumption	Ideal household consumption	Garden consumption
June 2017	52 kilolitres	12 kilolitres	40 kilolitres
July 2017	49,8 kilolitres	12 kilolitres	37,8 kilolitres
August 2017	32 kilolitres	12 kilolitres	20 kilolitres

Footnote: It is estimated that as a minimum a person needs about 100 litre per person per day for a family of 4 =  $100 \times 4 \times 30 = 12\,000$  litre = 12 kilolitres per month.

Recording your monthly water utilisation is the first step in demonstrating your commitment and contributing to water saving. It will spark many great idea’s towards water saving.

The next step in my ‘waterbook’ was to try to calculate how much water we use in the house and how much is for the garden?

<b>Household Estimate:</b>			
<b>One person per day</b>	<b>One person per month</b>	<b>4 people per month</b>	
100 litre	3 000 litres	12 000 litres	Very low

Note: Water delivery is on average 2,5 bar delivers 35 litre per minute

<b>Garden Estimate:</b>			
			<b>Comments</b>
A single irrigation station has 14 Dela's sprinklers delivering 2,5 litre per minute per Dela spray for 10 minutes	Nine irrigation stations in one watering cycle to cover your garden	Irrigation cycle of 3 times a week 4,5 times per month	
350 litres per station	2 800 litres per irrigation cycle	37 800 litres	Very high

## Working it back to bring the water consumption in the garden down by 70%

Every sprinkler is unique with its own delivery rate and coverage area. The Dela's have a very high delivery rate. I like using them because they are highly efficient water savers. I want to use 12 000 litres of water on my garden per month. A Dela-sprinkler has a coverage of 1,5 m<sup>2</sup> and supplies 2,5 litre per minute. With 14 sprinklers on a line. I cover 22 m<sup>2</sup> of garden with one station. This translates into 35 litres of water per minute. Run the station for 10 minutes and you have 350 litres per irrigation rotation and with two irrigation rotations per week for 4,5 weeks a result of 3 150 litres per month. 3150l per Irrigation Zone. 4 Zones on your program will use 12 000 litres per month. 12 000 litres per month over 88m<sup>2</sup> is 143mm per m<sup>2</sup> x 6 for the 6 dry months per year gives us 894mm per year.

This program will give my garden an average of 143mm per month on 88m<sup>2</sup>(6 months) or 849mm per year. Pretoria average 600mm to 800mm rainfall per year. 600mm will be enough for all plants endemic to our area. I have 88m<sup>2</sup> of garden to design. I know I can irrigate it by using less than 12 000 litres of water per month. At R24,69 per liter it will cost me R300 per month.

That gives me four irrigation lines (22 m<sup>2</sup> per line) = 88 m<sup>2</sup> of garden beds to plan.  
1litre =1mm over 1m<sup>2</sup>.

This is how it can work, if you are not ready for the calculations get an expert.  
With careful Garden Design we can garden Water-wise and beautify at the same time.  
The images show a few of my Water Wise Garden Designs.

Now we can start planning:

- Welcome-garden for the pavement 30m<sup>2</sup>
- Focal-point at front door 18m<sup>2</sup>
- Hedge for privacy 40m<sup>2</sup>