

A quick reference guide to rain water tank design principles

Rainwater tank design - getting the size right

Installing a rainwater tank is a great way of reducing the demand on potable water use and protecting local streams by reducing the frequency of storm flows.

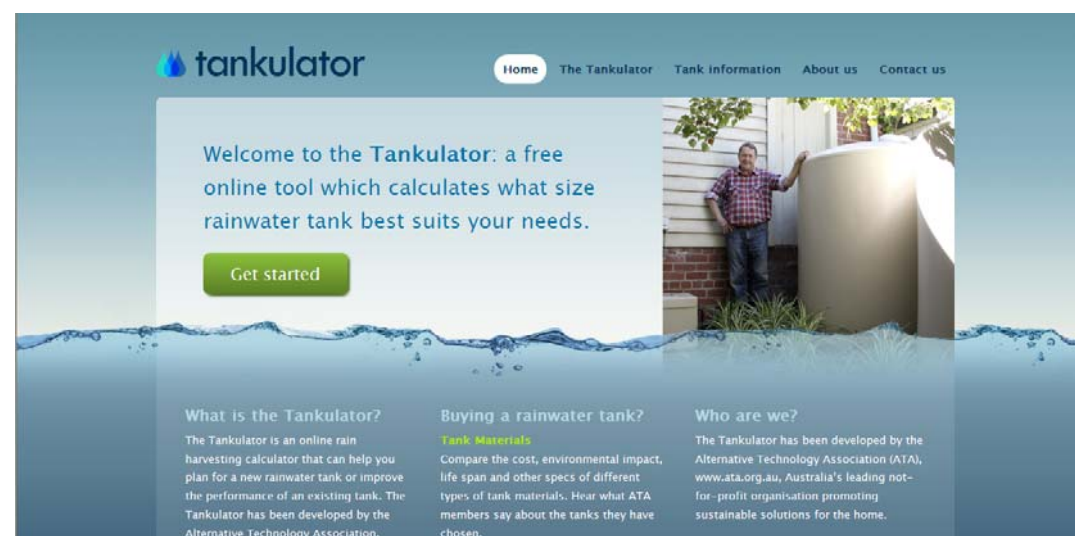
The amount of potable water saved will depend on the following components:

- Rainfall
- Size of tank
- Area of roof
- Reuse demand (volume and timing)

The ideal size of a tank needs to be calculated for maximum efficiency – it is not a case of buying the largest rainwater tank you can afford!

To help you size the tank the Alternative Technology Association have developed a new tool – The Tankulator. This is a free online calculator to help determine the best size for your rainwater tank. You will need to provide some simple information and your postcode as it takes into account rainfall data for your area. Link -

<http://tankulator.ata.org.au/index.php>



Types of tanks

Plastic (Polyethylene) – most common type, easy to move, many shapes and colours

Fiberglass – Above ground, many shapes and colours

Steel and stainless steel – above ground, selected colours, many shapes

Bladder tanks – many shapes and sizes, can be placed under house

Concrete – underground, many shapes

For price comparisons and more information on the types of tanks available see -

<http://tankulator.ata.org.au/tank-materials-price-comparision.php>

Using the water in the tank

Capturing and storing water within can significantly reduce a household's potable water usage and reducing flows into the waterways from storm events. To achieve both benefits you need to make sure the water in the tank is used.

By maximizing the amount of water you use each day to ensure the tank has reserve space for future rain events. So make sure your take is connected to:

- Garden irrigation
- Laundry
- Toilet flushing

Tip – installing a water tank can help you meet Victoria's 5 Star Standard for new buildings

Thinking outside the square

This photo is taken in Warrnambool, where a Roof Water Harvesting Project was undertaken by Wannon Water in partnership with Warrnambool City Council, Cove Land Developments Pty Ltd, and the Australian and Victorian Governments.

This Project was carried out in conjunction with a 142-lot residential subdivision.

The roof water from the houses is captured, treated and put back into the cities potable water supply.



For more information see –

<http://www.clearwater.asn.au/content/warrnambool-roofwater-harvesting-project>

Links to more information

Little Stringybark Creek Project – This video clip outlines the opportunities of keeping excess stormwater in the catchment rather than discharging it to the creek, rainwater tanks are used as one of a range of methods to capture stormwater for re-use -

<http://www.clearwater.asn.au/content/little-stringybark-creek>

Infrastructure Design Manual – Chapter 20 Stormwater Management Section – provides standards for rainwater tanks - <http://www.clearwater.asn.au/content/idm-infrastructure-design-manual>

Urban Stormwater Best Practice Environment Management Guidelines, CSIRO Publishing - <http://www.clearwater.asn.au/content/urban-stormwater-best-practice-environmental-management-guidelines>