Calculating the Amount of Rainwater Capturable from Your Roof

Rainwater collected from the roofs of your house or sheds provides high quality water that can be a valuable source of drinking water. The volume harvestable is dependent upon your roof catchment area, but can be quite substantial over the course of a year. This article will help you to know how much rainwater you can capture on your property.

**Step 1: What is the Rainfall in Your Area?**

Before you can estimate how much rain you can potentially harvest month-to-month or in a year, you need to know how much rain could fall from the sky. Every area is different, but you can visit Australia’s Bureau of Meteorology website to find out your exact rainfall.

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**Source:** Average annual, seasonal and monthly rainfall, Australian Government Bureau of Meteorology.
Step 2: Calculate Surface Area of Your Roof

Since rainwater is collected from rooftops, you will need to work out the total surface area of roof/s that will be used to catch rainwater. To work out the surface area, simply multiply the length in metres by width for square or rectangular roofs. The resulting figure represents the surface area of your roof in square metres.

Step 3: Calculating Your Harvestable Rainwater

To calculate how much rainwater can be harvested, multiply your rainfall (mm) by your roof surface area (m²) being used to catch rainwater. The resulting number represents how many litres of water you can expect to collect.

To be particularly accurate, you might minus a small percentage of water that gets lost in your water diverter or the first few drops moistening your roof, but the figure is simply an estimate to give you a good idea of how much rainwater you can harvest.

Examples of Harvestable Rainwater

Along coastal areas of Australia and even kilometres inland, it isn’t uncommon for an area to receive 500mm of rain in a year. An average suburban roof of 200m² with such a rain fall can potentially harvest 100,000L of rainwater (200m² * 500mm = 100,000L).

Keep in mind most rain falls over 2-3 months of a year. It isn’t uncommon for an area to collect up to 350mm+ of rain in just one month, even in rural areas. When it is dry, it can be dry, but when it rains, it often pours down buckets of waters.

If you live out on a rural property or farm, then you will likely have multiple sheds. Smaller sheds for machinery or feed mills are often around 300m², and it isn’t uncommon for larger sheds used for cattle, dairy, hay and grain to be around 1000m². With quite conservative 200mm rainfall, a 1000m² shed would provide you with 200,000 litres of high quality rainwater.

Rainwater tanks can clearly provide an invaluable amount of water. There are two common practical reasons people choose to install rainwater tanks. The first is out of necessity, if for example you are located on a rural property that isn’t served by mains water. The second is to have an alternative source of water, perhaps meet building requirements, help preserve waterways or simply be more self-sufficient.
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