

Where do I Start? Collecting Water with Rain Barrels

Harvesting systems can vary from the simple use of barrels aided by the force of gravity to deliver the water, to more advanced systems using cisterns, pumps, and flow controls. There are a few things you can do to find out what kind of rainwater harvesting system is right for you. The information presented in the rest of this website consists of a few simple steps to help you learn about rainwater collection before you buy a rain barrel or water harvesting system.

To get an idea what's out there on the market, you can check out our page on buying rain barrels. Next, we can help you find out:

How Much Water Can You Collect in Rain Barrels During a Rainfall?

Believe it or not, for every inch of rain that falls on a catchment area of 1,000 square feet, you can expect to collect approximately 600 gallons of rainwater. Ten inches of rain falling on a 1,000 square foot catchment area will generate about **6,000 gallons** of rainwater! That's right, 6,000 gallons! More than you were expecting?

Your **roof catchment area** is equal to the total square feet of your house plus the extension of your eaves. You don't need to consider the angle of your roof, like you would if you were buying roofing material, because rain falls evenly on every part of the roof.

To calculate the square feet of your house's catchment area, measure the area of the outside walls and then include the overhang of any eaves. For example, let's say you have an oblong house with outside dimensions of **36 feet by 46 feet**. You've calculated the overhang of your eaves as **2 feet**. So, add the **4 feet** of the eaves to each wall length (2 eaves of 2 feet equals an additional 4 feet for each wall) to get the total length of the walls plus the eaves (**40 by 50 feet**).

Now multiply **40 times 50** (length times width) to get your **total roof catchment area**.

$$(36 + 4) \times (46 + 4) = 2,000 \text{ sq ft}$$

Your roof catchment area is thus **2,000 square feet**.

Since one inch of rainfall provides approximately 600 gallons of water for a 1,000 square foot catchment area, and our theoretical house has a 2,000 square foot catchment area (twice the area), you will multiply 600 gallons by 2.

$$600 \text{ gal} \times 2 = 1,200 \text{ gallons}$$

If you have an average rainfall of say 20 inches per year, you have the potential to collect 24,000 gallons of water in one year. (You can use the following website to get a good idea of the average rainfall in your area: <http://countrystudies.us/united-states/weather/>)