



Rainwater Catchment Costs

Our most frequently asked questions are about cost and, because there are so many variables, they are our most difficult questions to answer. Since there are many types and sizes of rain harvesting systems available, finding the right one to fit your requirements is challenging, especially when you have tight budget limitations. In this month's CTGCD article, we'll present rough costs of how much the most popular components of a rain harvesting systems cost. Although there are many options to choose from, we hope this guide will make it simpler for you to make your decisions.

Before you invest in a water collection system, it is important to understand component costs. This helps you understand—and plan—what you need and what you can afford. Most critical is knowing what you will be using the water for; it helps determine what components you need and what you can do without. Following is a list of components you can include in your rain harvesting system. Some are optional and some are nice-to-haves. We'll list each component and give an estimated cost range.

Roof Surface: We have not included a cost on roofing because obviously you will have or already have one; we just included this to show that you need a roof to harvest rain, and if you are planning a new roof, metal standing seam roofing works best.

Gutters (required), Leaf Guards (optional): Cost - Between \$15.50 and \$17 per lineal foot for installed 6" gutters. Considering that the average home has about 200 feet of gutter, homeowners should expect to pay about \$3,100 - \$3,400 for professional gutters & leaf guard installation. The leaf guards are installed on gutters to stop leaves and debris entering into them. A CTGCD news article follower reports recent bids for 6" gutters & leaf guards with downspouts for two separate single-story structures on his property at ~\$1,700 for 1,770 sq ft and ~\$2,600 for 4,400 sq ft.

First Flush Diverter (optional): Cost - \$50 each. These are installed in the pipe that is coming from your gutter to your tank. They are designed to separate the initial "dusty, dirty water" that comes off your roof from the clean water. More on first flush systems in a future article. Although not essential for landscaping or irrigation applications, they are recommended for potable uses.

Tank Screen (optional): Cost - \$15 each. These are installed at the top of your tank lid. They vary from socks to screens and in how porous they are. They are useful for removing that final debris from your water before it enters the holding tank.

Tank Base: You will need to choose between road base with gravel or sand, and concrete; concrete will be a bit more costly. Tank underlayment with base, gravel, and sand cost - \$200 to \$800 depending on whether excavation is involved. Flat bases are critical as is having the right tank.

Tank: Choosing the right size tank depends on rainfall amounts (Bulverde/Spring Branch gets about 30" per year), how much water your family consumes, and how much room you have for the tank. Water storage tank cost varies widely from 250 gal at \$400 to 30,000 gal at \$23,000. Directors at the CTGCD with total rainwater collection systems have 30,000 to 50,000 gallon systems and we all feel one should size their tank to withstand long dry periods—keep at least a 6 month supply of your consumption demand in storage tanks.

Screens at the end of overflow pipes (optional): Cost - \$16 each. These screens prevent insects and critters from entering your tank through overflow pipes which often lay on the ground and are usually 4" to 6" diameter PVC.

Tank top-off system (optional): Cost - \$100. This system allows you to automatically top up the tank with piped main source water (e.g., a well or water company). This stops your water level falling below a designated minimum level. Note that this top-off system would not be an option when rainwater collection is your sole source of water.

Pump system (optional): Cost - \$450 to \$850. Having a pump to distribute your water gives you flow and pressure. You can then use the water for inside or outside use.

Filters and UV protection (optional): Cost - \$350 to \$1,200. Fitting filters after your pump (e.g., 20 micron pleated filter followed by a 5 micron carbon filter followed by a UV light) will help reduce residual sediment, color, taste, and odor. If your water is coming in contact with humans or a pet, we highly recommended filtering. We'll write articles here about potable water filtering in the upcoming months.

Tank Gauge (optional): Cost - \$50-\$75. Having a gauge attached to your tank allows you to closely monitor the tank's water level.

Pipes & fittings: These costs vary dramatically because it always depends on distances, foliage, elevations, how much rock is encountered on the property, and whether you are installing a 'dry' system or a 'wet' system. To get this approximate cost, we suggest you consult with a rain harvesting tank dealer. More on wet vs dry systems in future articles.

Feel free to send more of your rainwater capture questions to us at the Comal Trinity Groundwater Conservation District by emailing Dr. Sunn at comaltrinitygcdsecretary@gmail.com. Our rainwater and well water consulting services are offered to the public without charge.