RAINBARRELS

AN EASY WAY TO GO GREEN!



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Rainwater Harvesting Basics

Learn how to set up a rainwater harvesting system to conserve water and support sustainable living. This guide provides the basics of collecting, storing, and using rainwater efficiently.

Why Harvest Rainwater?

- Reduces reliance on municipal water supplies.
- Provides free water for gardening and livestock.
- Helps conserve a precious natural resource.
- Reduces runoff and prevents erosion.

Supplies Needed

- Rain barrels or large storage tanks
- Gutters and downspouts
- Mesh screens to filter debris
- Spigot or hose attachment for water access
- Overflow system for excess rainwater

Rainwater Harvesting Basics

How to Set Up a Basic System

1. Choose a location: Place barrels or tanks near gutters for easy collection.
2. Install gutters: Ensure your roof has gutters that direct water to downspouts.
3. Attach a diverter: Connect the downspout to the rain barrel to channel water.
4. Add filters: Use mesh screens to keep leaves and debris out of the system.
5. Create an overflow: Install an overflow pipe to direct excess water away safely.

Tips for Safe Use

- Use collected water for non-potable purposes, such as gardening or cleaning.
- Avoid collecting water from roofs treated with chemicals or paint.
- Clean barrels and filters regularly to prevent algae and mosquito breeding.

Advantages

- Helps protect the environment by saving an average of 1,300 gallons of water per family per summer month.
- Lawn and garden watering account for approximately 40% of the water used during the summer months.
- Decreases water runoff that ends up in streams and rivers.
- Gives you a constant supply of clean, fresh water for outdoor use or indoor plants.

Yes, You Can DIY!

- Select your container….a food grade container is best. Avoid containers that used to house chemicals!
- Collect your tools and materials! Items you may need include the container, a drill, level, measuring tape, phillips screw driver, pencil or marker, scissors, safety glasses, gloves, a Flexfit diverter, winter hole cover, 3’ fill hose, spigot, drain, drain cover, hole saw set, water seals and screws.

Yes, You can DIY!

- Step 1 – Mark and cut the hold for the screen and mesh basket that goes on top of the rain barrel. If your container does not have a top, skip this step! Here's how:

Yes, You can DIY!

- Step 1 Continued - Use the skimmer basket (available at gardening or pool supply stores) to draw a circle on the top of the barrel. Draw another circle 1/2 inch smaller inside the first circle. Drill a hole in the center of the circles using the 1-inch drill bit. With a utility knife, expand the hole to the size of the smaller circle you've drawn. Place the basket in the hole you've cut and using a 1/8-inch drill bit, drill pilot holes through the rim of the basket and barrel. Attach the basket with small screws. Apply caulk along the rim of the basket to create a seal. Cut a square of window screening to cover the basket and attach with more small screws.

Yes, You can DIY!

- Step 2 – Mark and cut the upper and lower drain hole.

- Upper drain holes (or overflows) are often 90 degrees from the lower drain hole . Use a 1 5/8" hole saw to cut the drain hole.
- Lower drain holes are normally placed 1" above the bottom of the container. Use a ¾" hole saw to cut the drain hole.

Yes, You can DIY!

- Step 2 Continued - Thread the lower drain hole with a ¾" tap. Wrap the threads of a ½" PVC male adapter with Teflon tape, coat the threads of the adapter with a waterproof sealant, assemble and let dry for 24 hours.

Yes, You can DIY!

- Step 3 – Attach a garden hose to the spigot or use a watering can or bucket to drain the water into as needed.

- Here are some examples of homemade rain barrels!

Rain Barrel Options



Rain Barrel Options



Rain Barrel Options



Rain Barrel Options



How Much Rain?

- First, measure the area of the roof that drains to your barrel(s). If you have more than one barrel, add up the volume of all connected barrels.
- Rainfall depth that fills the barrel(s) = 1.6 * V / R
- 1.6 = Unit conversion factor
- V = Total rain barrel volume (gallons)
- R = Roof area draining to the barrel(s) (square feet)

How Much Rain?

- Example: A rainfall of 0.2 inches over a 450 square foot roof will fill a 55-gallon barrel. Any additional rain will either flow through an overflow pipe onto the lawn or bypass to the existing downspout, depending on your setup.
- 0.2 inches = 1.6 * 55 gallons / 450 square feet

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