

Building a Rain Barrel

A rain barrel is a small-scale conservation practice that collects and stores rooftop runoff for future use to water lawns and gardens. It is estimated that during summer months, nearly 40% of household water is used for lawn and garden watering. Using a rain barrel may save the average homeowner up to 1,300 gallons of water during peak summer months.

This not only helps reduce stormwater runoff, but also conserves drinking water resources. Ready-made rain barrels are available from an assortment of companies. However, constructing a rain barrel from readily available materials is an affordable and equally effective alternative. To build a rain barrel, you will need the following materials:

- 45 to 55 gallon "food grade" barrel or trash can
- Two - 1/2" or 3/4" PVC to 3/4" Pipe male adapters
- 3/4" NPT female to garden hose brass faucet (sill cock)
- 3/4" Pipe to 1/2" or 3/4" i.d. hose adapter
- 4" slotted drain or atrium grate
- 6" inspection port (for access if the barrel top is non-removable)
- 12" by 12" window screen
- Waterproof sealant
- Miscellaneous fasteners (e.g., stainless steel sheet metal screws)



STEP 1:

- Using the appropriate tools (e.g., jigsaw, keyhole saw, drywall saw) cut holes in the top of the barrel for the inspection port and the slotted drain or atrium grate.
- Drill or cut a hole towards the bottom of the barrel (approx. 1 to 1 1/2" above bottom) to fit a PVC to pipe adapter.
- Drill or cut a hole towards the top of the barrel (approx. 1 to 1 1/2" from top) to fit a PVC to pipe adapter.

STEP 2:

- Insert the PVC to pipe adapters into the two holes from the inside of the barrel.
- Thread the brass faucet onto the bottom pipe adapter. Apply waterproof sealant, tighten, and then fasten the faucet to the barrel using two stainless steel sheet metal screws (preferably two #10 x 1/2" Pan Head Screws).
- Thread the hose adapter onto the upper pipe adapter. Apply waterproof sealant and tighten.

STEP 3:

- Fit the inspection port into its hole in the barrel lid and fasten with the appropriate stainless sheet metal screws (e.g., #8 x 1/2" Flat Head Sheet Metal Screws).
- Place the slotted drain or atrium grate into its hole in the barrel lid. Wrapping the fine mesh window screen on either the inside or outside of the drain will provide filtering of debris and prevent mosquitoes from entering the rain barrel.
- Realign or reconfigure the existing downspout as needed to direct runoff into the barrel.

For more information on nonpoint source pollution and stormwater management, please call the Maryland Department of the Environment, Water Management Administration at (410) 537-3543.

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