

How to build a Rain Barrel

Why Have a Rain Barrel?

In urban environments large amounts of stormwater runoff generated from impervious surfaces like our homes, businesses, streets, and more negatively affect our local water quality.

The average home generates more than 200 gallons of stormwater runoff from just a 1/4 inch of rain. Rain barrels help to put that water to good use!

Rain barrels are a low-cost, simple, and efficient way to collect and recycle water that also helps protect local water quality.

Rainwater is naturally "softened" and ideal for plants, washing cars, and windows.

Rain barrels collect and store stormwater reducing runoff that contributes to streambank erosion and pollutant transport to our waterways and lakes.



Materials List

A variety of materials found at your local hardware store can be used to build a rain barrel. Below is a simple and cost-effective list of all needed materials.

- 55 or 33 gallon plastic barrel*
- 1/2 inch male spigot (drill bit: 3/4" hole saw)
- Mesh/screen to keep our debris (small wire mesh or screen door mesh works well)
- Overflow tube
- 1 1/4" adaptor (drill bit: 1 1/2" hole saw)
- Hose clamp (3/4" - 1 3/4")
- PTFE thread tape

*recycled plastic barrels should be food grade or not have previously been used to store toxic chemicals

Tip: At local hardware stores sump pump drainage kits can be purchased which include a tube for an overflow, hose clamp, and adaptor. A 1 1/4" sump pump drainage kit includes the material sizes listed above.

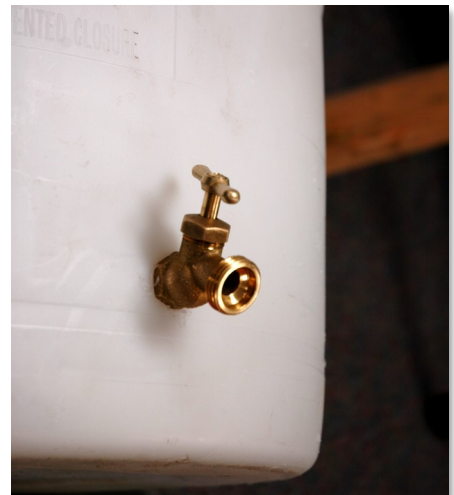
Building Your Barrel

Inlet

- On the top of the barrel, cut a hole large enough for water to enter through from your downspout. A jig saw or similar tool works well.
- Attach mesh over top of the hole to keep our debris and leaves. Mesh can be attached with small nails or glue.

Outlet/Spigot

- The spigot should be placed as close to bottom of the barrel as possible with enough room to hook up a hose or fill a watering can. Placing the barrel on a stand allows for lower spigot location for more water storage
- Drill a hole at the desired location near the bottom using a 3/4" drill bit.
- Using the PTFE thread tape, thread the spigot and screw into hole. If desired, use silicone chalk or caulking around the spigot.



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Overflow

- An overflow is needed to allow excess water to escape when the barrel is full. This is to avoid water backing up into your downspout or flow over the top of your barrel.
- The overflow tube should be directed away from building foundations
- The Overflow tube should be as high on the side of the barrel as possible to allow for maximum storage.
- At the desired location, drill a hole using a 1 1/2" hole saw.
- Thread 1 1/4" adapter and insert
- Attach overflow tube to adapter and tighten with hose clamp.

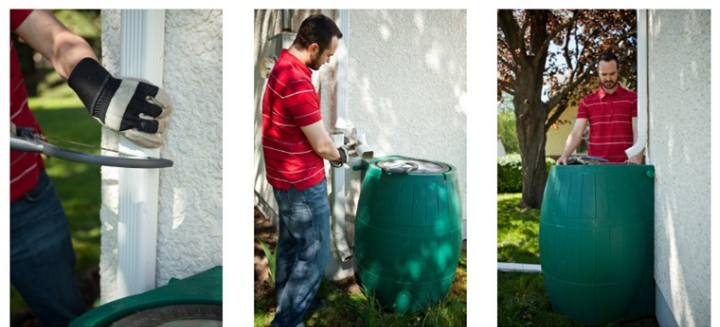


Downspout Adjustment

- Place barrel on stand at your desired location. Mark where the downspout should be cut and cut with tin snips or a hacksaw.
- Attach diverter or flexible elbow to direct water into barrel
- During winter, remove rain barrel and store. Reattach original downspout and direct away from building foundations.

Installation

- A 55 gallon rain barrel will fill with 1 inch of rain over a 60 square foot area. Choose a section of roof that is appropriate to the size of your barrel. Install a larger barrel or connect barrels together for more storage
- Place rain barrels on level ground
- Stands need to be able to support 450 lbs. (1 gallon of water weighs 8 lbs.) Use wood, cinder blocks, pavers, etc



Materials Photos



Adaptor



Spigot



Hose Clamp



Thread Tape



Drainage Kit



Hole Saw Drill Bits