

HOW TO BUILD A RAIN BARREL

WHAT IS A RAIN BARREL?

A rain barrel is a container that collects rain water from rooftops (this is called stormwater runoff). Rain barrels come in several different shapes and sizes, but they all do the same thing: they save water and decrease stormwater runoff.

Placed at the base of a downspout, a typical rain barrel can hold 55–75 gallons of water at one time.

HOW CAN I USE THE WATER COLLECTED IN MY RAIN BARREL?

Water collected in a rain barrel should NOT be used for drinking, or cooking. We also do not recommend using this water to irrigate vegetable garden beds. So what can you use it for?

- Water house plants
- Water flower gardens
- Clean your tools
- Wash your car
- Water lawns and trees

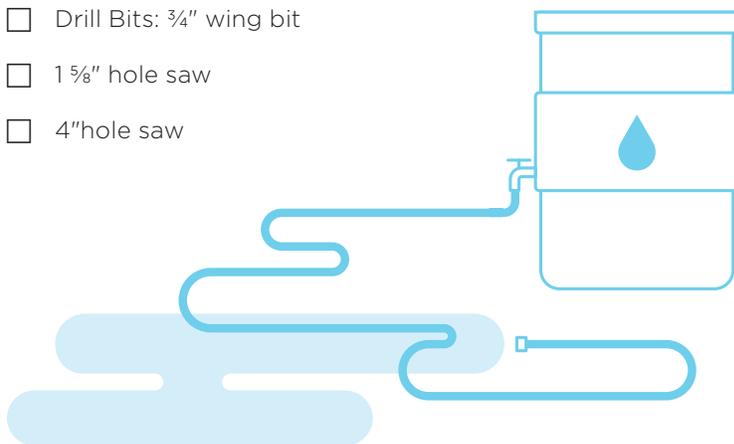
CONSIDERATIONS BEFORE YOU BUILD:

- Your rain barrel must have an overflow to a safe discharge point away from your home and foundation. Details about installing an overflow are included in the instructions.
- If you use a moss-control product on your roof, be sure to use a product that is garden-safe.
- The rain barrel must be located at the base of one of the downspouts draining your roof. You may want to install your rain barrel nearest to where you will use the water in your yard.
- Keep the lid secure so children or animals cannot fall in.
- Elevate your rain barrel slightly on a secure raised foundation (a full rain barrel may weigh over 400lbs!) to make access to the spigot easier. A few stacked cinder blocks work well, or you can build a stand from lumber.
- Empty your rain barrel often so that it has room to catch water from the next rainfall

- Make sure the rain barrel remains securely screened to prevent mosquito entry
- You can attach a hose to the spigot to fill a watering can.

MATERIALS

- 1 55 gallon plastic barrel
- 1 Boiler Drain Spigot—Heavy Duty, Brass male threaded, ½"
- 2 Rubber Garden Hose Washers
- 1 Locking Nut: Rigid Conduit Locknut Steel ½"
- 1 Hose Barb for a sump pump 1 ¼" (Adapter Insert Poly, 1.25 MPT)
- 1 Sump Pump Hose: 1 ¼" x 8" Discharge hose
- 1 Soffit Vent: Maurice Franklin RLW-100 4" round aluminum screen louver
- Plumber's Tape
- Caulk (clear acrylic)
- Tools
- Drill
- Hacksaw
- Flashlight
- Drill Bits: ¾" wing bit
- 1 ½" hole saw
- 4" hole saw



1. ATTACH THE SPIGOT



Using the 3/4" wingbit, drill a hole about 6-8" from the bottom of the barrel.



Wrap the spigot with plumber's tape and place a rubber washer flush against the base of the threads.



Screw the spigot into the hole until the fitting is snug.



From the inside of the barrel, place the other rubber garden hose washer over the threads of the spigot and tightly screw the locking nut on the threads. (A flashlight may come in handy for this step)



Spread a layer of acrylic caulk around the outside of the spigot for added protection.

2. INSTALL THE OVERFLOW



Use the 1" hole saw to drill a hole about 6" from the top of the barrel. The hole should be at a 90° angle from the spigot location.



Screw the sump pump hose barb into the hole; it should be a snug fit.



Attach an 8' section of the sump pump hose over the hose barb.

3. INSTALL SCREEN



Use the 4" hole saw to drill a hole in the lid of the barrel. Drill slowly and with caution, as a 4" hole saw creates lots of torque—drilling too quickly could cause damage to the barrel or to you.



3. INSTALL SCREEN



Drop the soffit vent into the hole (it may be a loose fit) to prevent debris from entering your water supply.



Congratulations, it's time to start collecting rain water and reducing stormwater runoff!

4. CONNECTING THE RAIN BARREL TO YOUR DOWNSPOUT

There are many methods of attaching a rain barrel to your downspout. This is one of the easiest and most affordable. You can research other methods online or chat with folks at your local hardware store to assess options.

TOOLS:

- Hacksaw
- Drill
- Tape measure
- Screwdriver or nut driver
- Pliers or crimpers
- Downspout elbow to route the downspout to the barrel
- Clincher strap (attaches downspout and barrel to house)
- Small pieces of wood blocking to use behind clincher strap (if necessary)

Cut the downspout with a hacksaw so that the elbow will sit just above the rain barrel inlet. Attach the elbow over the downspout with a screw and secure the downspout to the house with the strap. Or you can simply cut your downspout about 4" above the top of the barrel (on top of cinder blocks or another foundation), add an elbow, and make any final adjustments to the base and barrel.

MAINTENANCE AND EFFICIENCY

- Clean gutters will allow the rain barrel system to perform as intended
- Make sure gutters are tilted to direct water to downspouts and fix low spots or sagging areas along the gutter line
- Make sure roof flashing directs water into the gutter.
- Clean out the rain barrel and check for leaks at once a year. Check and clear downspout elbows, rain barrel screening, and overflow to prevent clogging. Caulk any gutter, downspout, barrel, and overflow leaks and holes.
- If overflow is to a surface infiltration area, monitor the overflow area. Make sure water drains away from structures and does not flow onto pavement, sidewalks, or neighboring properties.
- To avoid problems with freezing, remove rain barrel and store empty for the winter

These plans were developed by the Rethink Runoff Stream Team in Chittenden County, Vermont. If you use these instructions to build a barrel, drop us a line—we'd love to see photos of the finished piece. Tag us on or send us an email at rethinkrunoff@gmail.com.

To learn more about reducing stormwater runoff and how to get involved visit: rethinkrunoff.org

