

# How to Build a Rain Barrel

## Supplies

- 45-55 gallon drum, rinsed and fully sealed
- Spray adhesive
- Plumber's tape
- Silicone sealant
- Spigot
- Rubber O-ring
- 1/2" metal nut
- 1/2" PVC elbow
- 6" long 1/2" diameter PVC pipe
- 2 4" circular drain covers
- 2 4" circles of insect netting

## Tools

- Drill
- 4" circular drill bit
- 3/4" drill bit
- 5/8" drill bit

Rain barrels are an easy, low maintenance way to conserve water and reduce water pollution. These barrels reduce stormwater runoff and store rain captured from roofs for use in gardens or lawns.

This guide will walk you through the steps necessary to build, install and maintain a rain barrel at your own home or business.



Please be careful when using power tools.

Large plastic drums can be thick and difficult to drill. You may need a second person to help steady the barrel during the drilling process.

# Assembly Instructions

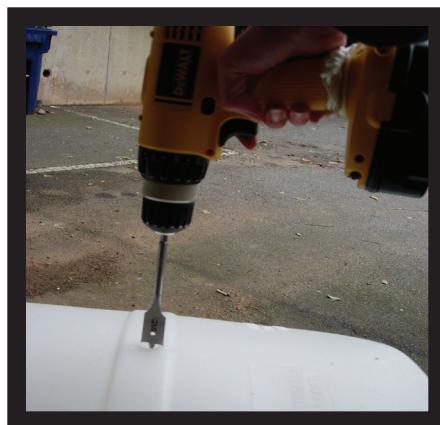
## Step 1

Use the 4" circular drill bit to drill two 4" holes in the top of the container on opposite edges, as shown. You may need to drill in reverse for barrels made of high density polyethelene (HDPE).



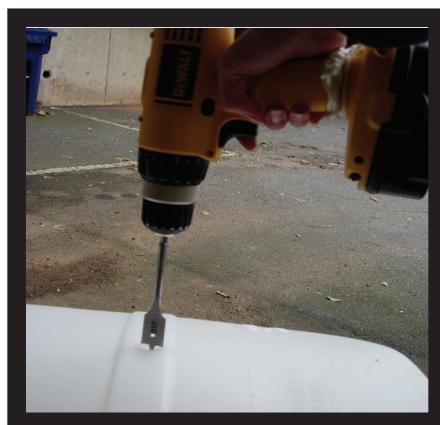
## Step 2

Use the 3/4" drill bit to drill an opening about two thirds of the way down the barrel. This opening is for the spigot. You will use one of the 4" holes at the top of the barrel to reach into the barrel to assemble the spigot, so be sure the spigot opening is not so low that you cannot reach it.



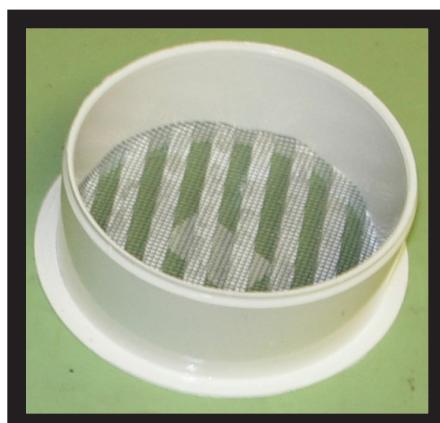
## Step 3

Use the 5/8" drill bit to drill an opening at the bottom of the barrel. This opening is for the outlet and will be fitted with a rubber stopper.



## Step 4

Using the spray adhesive, line the drains with the circles of mosquito netting.



## Step 5

Wrap plumber's tape once or twice along the threads of the spigot. Do not over-wrap the plumber's tape: one or two layers will be sufficient.



## Step 6

Slide the rubber O-ring over the spigot threads and up against the edge of the spigot. The O-ring will end up on the outside of the barrel.



## Step 7

Twist the spigot into the spigot opening as far as possible.



## Step 8

Stick your arm through one of the 4" circular holes at the top of the barrel, and screw the metal nut onto the spigot threads. Make sure the metal nut grips the plastic, so screw the metal nut on with the concave side facing the wall of the barrel.



## Step 9

With your hand still in the barrel, screw the PVC elbow onto the spigot. Leave the PVC elbow pointing up right as the elbow becomes difficult to screw on further.



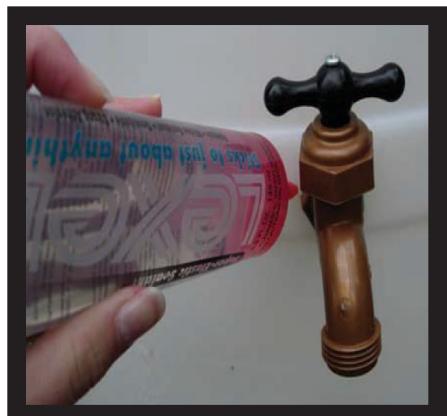
## Step 10

Stick the 6" long PVC pipe in to the PVC elbow and give the elbow one last half turn down so that the PVC pipe can draw water from the bottom of the barrel.



## Step 11

On the outside of the barrel, bead the silicone sealant around the spigot. Let the sealant sit for 24 hours before installing and using the barrel.



## Step 12

Using spray adhesive, line the inside of the drain covers with insect netting. Pop in the drain covers to the top holes and rubber stopper in the bottom hole.



# Installation

Channel water from your roof into your barrel by connecting the barrel to the down-spout through a flex pipe or by using a rain chain to direct water into the barrel. You will need a hacksaw to cut your drain pipe.

Add an overflow valve to allow excess water to spill over into another barrel, or to direct the excess away from the foundation to a rain garden.

Since the water is gravity-fed, consider placing the barrel on concrete blocks to raise it. The barrel will be very heavy when full, so be sure whatever it is placed on can bear the weight.

# Maintenance

1. Mosquitoes - Prevent mosquitoes by maintaining the insect screens over the drain covers. If these screens prove insufficient, adding larvicide briquettes can prevent mosquitoes from breeding in your barrel.
2. Algae - If the barrel starts to smell, or if you notice algae build up, rinse out the barrel with soap and a mild detergent. Let the barrel dry for 24 hours before use. Routine barrel cleaning should occur at least once or twice a year.
3. Leaks near the spigot - If you notice a leak near the spigot, reapply the silicon gel sealant. Let the gel set overnight before using the barrel.

# Safety

Rain barrel water is not potable. Do not drink water from your rain barrel, and use caution when using the rain barrel water on edible portions of plants.

Barrels provided by Athens-Clarke County Stormwater Management Program do not have removable lids. If you create a barrel, be sure to secure the lid to prevent children or animals from drowning.