# Build Your Own Rain Barrel 

These instructions are for building a rain barrel from a 44-gallon trash can. However, they can be adapted to build a rain barrel that is smaller or larger, depending on need and resources available.

## Supplies Needed

- 44-gallon Rubbermaid Brute trash can with lid
- 36-inch wide fiberglass window screen
- 1" diameter x 1 1/4" long Sched. 80 PVC nipple (for overflow drain)
- $3 / 4$ " $\times 3 / 4$ " threaded bulk head union (for spigot)
- $3 / 4$ " male hose bib (spigot)
- $88 \times 1 / 2^{\prime \prime}$ sheet metal screws
- 8 \#10 flat washers


## Tools Needed

- permanent marker
- yard stick or tape measure
- electric drill
- $11 / 4$ " spade bit
- scissors
- $13 / 8^{\prime \prime}$ spade bit
- utility knife
- 7/64" drill bit
- screwdriver


## Optional:

- plumber's tape
- silicone sealant
- downspout extension (for connecting rain barrel to gutter)
- leader hose (if connecting rain barrel to soaker hose or watering bowl)



## Installing the Spigot

1. Using a permanent marker, mark a spot on the outside of the barrel (trash can) 3 " from the bottom. Before doing this step, consider where you will be placing your completed rain barrel and which direction you want the spigot to face in relation to the overflow drain. Be sure not to locate the spigot directly below the overflow drain.
2. Using a $13 / 8$ " spade bit, drill a hole through the marked spot.
3. From the outside of the barrel, insert the stem and soft washer of the bulk head union through the hole. From the inside of the barrel, thread the other washer and nut onto the stem. Hand tighten.
4. From the outside of the barrel, screw the spigot (hose bib) into the bulk head union. Optional: To make a tighter seal, wrap plumber's tape around the spigot threads before
 screwing it into the bulk head union.
5. To test for leaks, make sure the spigot is turned off. Fill the barrel with enough water to cover the bulk head union. If there is any leakage, tighten the spigot and/or bulk head union. Optional: Silicone sealant may be used to seal a leak around the bulk head union.

## Installing the Overflow Drain

1. Using a permanent marker, mark a spot on the outside of the barrel 3 " from the top.
2. Using a $11 / 4^{\prime \prime}$ spade bit, drill a hole through the marked spot.
3. Use a pair of scissors to cut an approximately 3 " $\times 6$ " square of window screen. Fold the window screen in half and wrap the folded window screen around one opening of the nipple. Screw the nipple and window screen into the hole about $1 / 4$ of the way (or as far as you can go). The window screen will keep bugs from getting into the barrel.


## Installing the Screen for Filtering Out Bugs and Debris

1. Using a permanent marker, mark 8 equally spaced spots for inserting screws into the top lip (not the lid) of the trash can.
2. Using a $7 / 64$ " drill bit, drill holes centered over each marked spot.
3. Using a pair of scissors, cut a section of window screen that is big enough to cover the top of the trash can without the lid on.
4. Lay the window screen on top of the trash can (without the lid on) so that it fully covers the opening. Drive a screw and washer into each marked spot while keeping the screen as smooth and taut as possible. Try to keep the screen taut as the screws are installed so that it won't dip down into the water when the barrel is full. Trim excess window screen.


## Creating the Opening for Water to Enter the Barrel

1. The opening should be sized to accommodate a gutter, pipe, or other conveyance that will direct water into the barrel. Using a permanent marker, draw the desired shape of the opening on top of the lid.
2. Using a utility knife, cut away the opening according to the shape drawn.
3. Place the lid on top of the barrel.


If a gutter will be used to supply water to the barrel, place the barrel on a level surface next to the gutter with the overflow drain facing a direction that slopes away from the barrel and any structures. Cut the existing downspout to the desired height and use a flexible downspout extension to connect the downspout to the rain barrel. If no gutter is available, place your barrel beneath a valley in your roof where rainwater will fall in a concentrated flow. Where the flow hits the top of your barrel will change depending on the amount of rain falling; therefore, you may wish to cut a larger opening in the lid to accommodate the change in flow.

Periodically check the screens (top and overflow drain) for tears or holes and, if necessary, replace the damaged screen. If any collected water will be or has been left unscreened for 7 days or longer, place dunks or granules containing Bti (Bacillus thuringiensis var israelensis) in the barrel to kill mosquito larvae. As with any insecticide, read and closely follow all instructions provided on the product label.

Placing the barrel on cinder blocks or a sturdy raised surface will make it easier to fill a watering can or bucket. If desired, a leader hose can be screwed onto the spigot and connected to a watering bowl for pets or wildlife or a soaker hose for watering a garden bed.

Adapted from TCEQNews. "Building a Rain Barrel." YouTube video, 7:00. August 18, 2014. https://www.youtube.com/watch?v=MBlqT94y5QI.

Tip - To determine how many gallons of water can be harvested from your roof, use this formula:
[ ____ Inch(es) of Rain] x [ ____ Square Feet of Roof] x [0.623 Gallons/Square Feet]
Example: [1 in. of rain] $\times[1,000$ sq. ft.] $\times[0.623]=623$ gallons

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