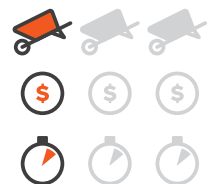


CHAPTER 2

Rain Barrels

Rain barrels typically consist of a water-tight container, a spigot and an overflow pipe to allow excess water to drain. They are usually placed beneath downspouts which are modified to direct stormwater into them. Water captured by a rain barrel is highly oxygenated and generally lacks chemicals found in treated tap water. It is ideal for gardens and ornamental plants, contributing to healthier root structures. By installing rain barrels, you can save thousands of gallons of water annually while reducing your utility bill and helping to decrease the amount of stormwater being sent to the sewer. The MWRD sells rain barrels and shares a video of a rain barrel installation on its website at mwrld.org/rain-barrels. If you would like to collect and store more water than a typical rain barrel allows, you can consider installing a cistern with larger capacity instead.

Water collected by a rain barrel should not be consumed but can be used to water plants and wash cars, bikes and tools. You can paint your rain barrel if you first gently buff the surface with sand paper and apply a primer formulated for plastics.



INSTALLATION INSTRUCTIONS

TOOLS & MATERIALS

In addition to the items included with your rain barrel, you will need the following tools and materials:

- | | | |
|---|--|--|
| ☐ Hacksaw | ☐ Sheet metal screws | ☐ Hammer |
| ☐ Marker | ☐ Drill | ☐ Concrete blocks or rain barrel stand* |
| ☐ Straight-edge ruler or T-square | ☐ Tin snips | ☐ Pavers or pea gravel* |
| ☐ Safety glasses and safety gloves | ☐ Flat-head and Phillips screwdrivers | ☐ Standpipe Cap |
| | ☐ Level | ☐ Splash Block |

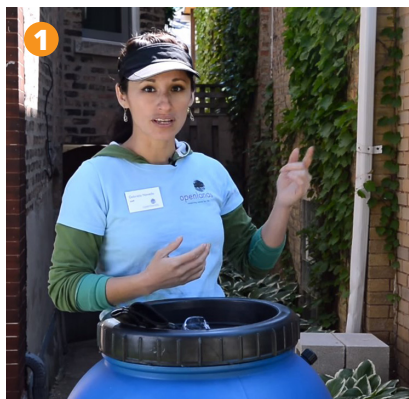
*Optional, but recommended

STEP 1

Pick a location for your rain barrel

Determine which downspout is best suited for your rain barrel. When selecting a site, consider the following:

- Pick a site closest to the area(s) you want to water.
- Select a location where the rain barrel can be elevated so that you can fit a watering container underneath the spigot or attach a hose.
- Choose a site that is mostly flat to help in leveling the rain barrel (see Step 2).
- Do not choose a site that will impede doors, driveways, paths, or equipment such as air conditioning units.
- Make sure your site slopes away from the house so water will not seep into the house foundation.
- Avoid locations near ground-level basement windows or window wells.



STEP 2

Level the base

Create a flat, level surface on which to place the rain barrel. This can be done by installing a 3-inch thick layer of pea gravel or by placing a 3-foot-by-3-foot paving stone on a level surface.

Use a level to ensure the surface is fairly flat.



If using concrete blocks, a pea gravel base surface is recommended; if using a rain barrel stand, a paver base surface is recommended.

Place your rain barrel on the stand to elevate it enough so a watering can may be placed underneath, or a hose can be attached to the spigot.





STEP 3 Measure and mark the downspout

Assemble, if required, the rain barrel according to manufacturer's instructions.

Rainwater can be diverted from the downspout to the rain barrel using a flexible, extendable plastic elbow. (You can also reuse the existing rigid elbow at the bottom of the downspout.) To measure where the downspout needs to be cut, first place the barrel beside the downspout (and on the stand if you are using one). Using a straight edge or T-square, draw a line on the downspout at the same height as the top of the barrel. Draw another line at least 8 inches above the first line. The section of downspout between these two lines will be cut out in the next step.

Extend the flexible elbow and place one end at the upper line on the downspout and the other end at the top of the barrel. Check to make sure that there is adequate height for

the installation of the elbow and for the water to flow from the downspout to the barrel. Redraw the higher cut line if necessary.

Alternatively, you can choose to install a variety of downspout diverters available on the market. Some diverters allow you to reuse the existing lower portion of the downspout as an overflow; some have added screen to filter out debris; and some have a damper to turn on/off flow diversion. For the installation of a diverter, follow manufacturer's instructions specific to the diverter you purchased.

STEP 4 Cut the downspout

Using a hacksaw, cut and discard the section of downspout between the two marked lines. Place cardboard behind the downspout while cutting to protect the exterior wall of your house.

STEP 5 Attach the flexible elbow to the downspout

Attach and secure the flexible elbow to the top portion of the remaining downspout with sheet metal screws and a drill. You may need to add an additional aluminum strap to secure the downspout to the exterior wall. You can remove and discard the lower portion of the downspout. Alternatively, if the downspout is already disconnected from the sewer and you are not too concerned about the aesthetics, you can leave it in place. When you put the rain barrel away for the winter, you can reconnect the top and bottom portions of the downspout with the flexible elbow (See Step 8).

STEP 6 Attach the lid and place rain barrel

Place the mosquito-proof screen-lid on the rain barrel and tighten using the provided hardware. Place the stand or concrete blocks (if used) and place the rain barrel on top of the stand.

Adjust the flexible elbow so that its end is pointing toward the screened inlet at the top of the barrel. Place the end of the overflow hose away from the foundation of your house.

STEP 7 **Finished!**

Congratulations! You have now installed your rain barrel. You will be collecting a lot of water from your roof. A common wet weather event will likely fill or overflow an empty rain barrel. Therefore, it is critical to empty your rain barrel to restore its capacity prior to a rain event. This alleviates any potential basement seepage issues or foundation damage caused by the overflow of excess water.

You may also consider connecting your rain barrel to a series of rain barrels or installing a larger cistern, so you can capture more rain water for reuse.

STEP 8 **Maintenance**

Leaves and debris collected by the gutter and downspout will clog the screened inlet over time. If the inlet is clogged, water will overflow and may cause basement seepage or lead to foundation damage. Erosion (washout) of soil around the barrel is often indicative of an overflowed barrel. Check the screened inlet monthly and keep it free of debris.

You will need to store the rain barrel over the winter. Freezing water will expand and damage the barrel. Follow these steps for the winterization of your rain barrel system:

- Drain the water from your rain barrel by opening the spigot. A full barrel is much too heavy to move – do not attempt! Allow the water to drain from the barrel; you



- may need to tip the barrel some to allow more water out of the spigot before moving it.
- Connect a temporary extension to the downspout that feeds the rain barrel. Position the extension to direct rainwater away from the house. If you have left the lower portion of the downspout intact during installation, reconnect to it with the flexible elbow.
- Flip the barrel over to drain any remaining stagnant water and decaying material, e.g. leaves, dirt, etc.
- Rinse out the inside of the barrel and remove any sediment by rinsing with a hose or light pressure washer.
- Clean the inside of the barrel with a hard-bristled brush and a mixture of water and a few drops of mild dishwashing detergent.
- Let the rain barrel dry.
- Inspect the rain barrel for any cracks or holes. Patch any damage using an adhesive drywall patch and waterproofing sealant.
- Store the rain barrel in a dry location while temperatures are at or below freezing.

ANATOMY OF A RAIN BARREL

