

# Rain Barrels

Rain barrels collect rainwater from roofs. One inch of rain falling on a 1000 square foot roof over a 24-hour period produces 600 gallons of rainwater. The average U.S. household uses 146,000 gallons of water per year; up to half of this is used on landscapes in the summer. Harvesting rainwater saves water, energy and money. It also helps to reduce erosion and stormwater runoff. This protects water quality and aquatic habitats.

## Safety Tips for Using Your Rain Barrel

1. Do **not** use collected water for drinking, cooking or bathing.
2. Keep lid secure so children and animals cannot fall in.
3. Securely attach rain barrel to the building to prevent it from tipping over. Teach children not to climb barrel.
4. If a moss killer has been used on the roof, wait a couple of rainfall events before collecting runoff.
5. Prevent mosquitoes from breeding by keeping the screened lid in place. Seal any gaps. Use a mosquito brick (*BTI*).
6. Disconnect rain barrel and drain it in the fall before freezing weather and reattach in spring.

**Please read the instructions completely. Practice safety while using tools.**

## Setting up a Rain Barrel System

There are two basic options: (1) purchase pre-made rain barrels at a garden center or garden supply company, or (2) construct a rain barrel for approximately \$30 to \$50-(2008 dollars). There are many design options for any building style.

### Supplies:

55 gallon food grade plastic drum	PVC plumbers pipe 1½ inch diameter 6 feet long
Krylon plastic paint (optional)	3 PVC 90 degree elbows, 1½ inch
Mesh screening	PVC pipe cleaner and cement
½ inch Threaded brass faucet	3½ foot vinyl hose
2 to 4 Concrete Blocks	Silicone caulk or glue
Diverter kit (optional)*	
Small soft plastic flower pot 5-6 inches with bottom cut out	

Mosquito brick ( <i>BTI Bacillus thuringiensis subspecies israelenses</i> )
Plumber's pipe strap and deck screws (to prevent unit from tipping over) (optional)
Linking kit to join multiple barrels for additional capacity (optional)*

\*Diverters and linking kits may be purchased from online garden supply companies. See **Rain Barrel Sources List**.

### Tools:

Saw (hack, router, jig saw)	Measuring tape
Drill	Heavy duty shears
½ inch hole saw	Small torch or butane lighter
1 7/8 inch drill hole saw	Rags

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# Rain Barrel Construction

## Step 1

Cut out the center of the bottom of your flowerpot with heavy shears.

Cut a circle of mesh screening large enough to cover the hole and glue to pot with silicone caulking or glue.



You may also want to scrub the outside of your barrel, rough it up a little with sand paper, and paint it with a base color and/or design of Krylon paint before you start. This will eliminate paint overspray if you plan to keep your finished rain barrel close to the house.

## Step 2

Use a 6 inch hole saw or saber saw to cut a perfectly round 6 inch hole on the top of your container.

Clean barrel thoroughly through the 6 inch hole you have just made.



## Step 3

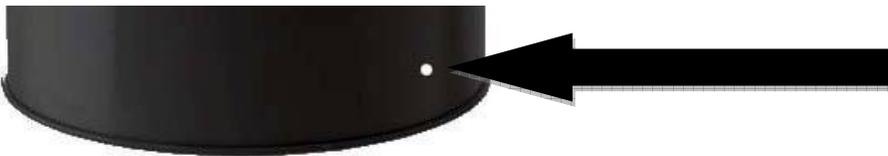
Mark your container near the top by tracing around the elbow you are going to use as an overflow.



Drill a hole near the top in the side of the barrel with a  $1\frac{7}{8}$  inch hole saw for the top of the overflow.

## Step 4

Mark and cut a hole near the bottom of your container with a  $\frac{1}{2}$  inch hole saw for your faucet.



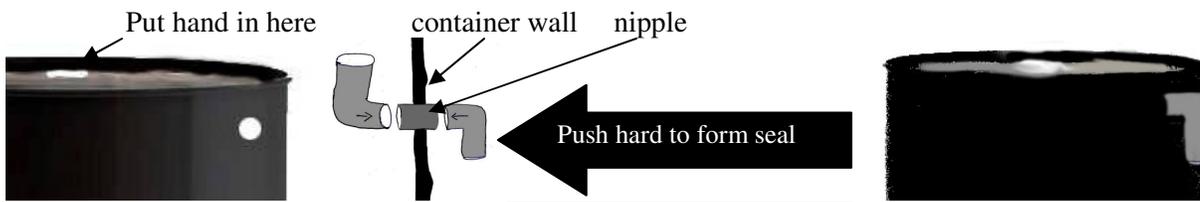
## Step 5

With a butane lighter, heat the bottom hole 3 to 4 seconds then immediately thread on the faucet.

When the heated plastic cools around the faucet threads it will be watertight.

## Step 6

To insert the overflow, mark off a  $1\frac{5}{8}$  inch piece on the 6 foot piece of PVC pipe and cut with the hacksaw to make the nipple. This will hold the 2 elbows together. Apply cleaning solvent to one side of elbow and nipple. Apply cement to the same areas and immediately join together by holding the elbow and putting your hand through the top hole of the barrel. From the inside, insert nipple through the overflow hole and into the elbow. Apply solvent and then cement to nipple and another elbow and join together with the elbow facing the direction you want the overflow to go.



**Tip: Be sure to hold the inside elbow against the container and press the new elbow against it to form a watertight seal.**

## Step 7

Make a base for the rain barrel to give you easy access for a bucket or watering can by placing 4 concrete cinderblocks under the downspout. Make sure the blocks are level and steady. Measure the length for the PVC pipe needed for the overflow and cut it from the 6 foot piece, then prime and cement it to the upper elbow.



Place the flower pot with screening in the top hole. It should fit tightly but be removable for cleaning out debris.

## The Downspout

The easiest way is to cut your downspout a few inches above the barrel and use downspout elbows to reach the flower pot. However, your placement may call for a more creative approach depending on the location of your downspout and rain barrel. Every rain barrel differs depending upon your preference for its placement.

Add a short hose to the faucet to fill a watering can or attach to a soaker hose.

To increase rainwater storage capacity, consider joining multiple barrels using a linking kit.

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*The information on pest management for New York State contained in this publication is dated May 2011. The user is responsible for obtaining the most up-to-date pest management information. Contact any Cornell Cooperative Extension county office or PMEP (<http://pmep.cce.cornell.edu/>), the Cornell Cooperative Extension pesticide information website. The information herein is no substitute for pesticide labeling. The user is solely responsible for reading and following manufacturer's labeling and instructions*