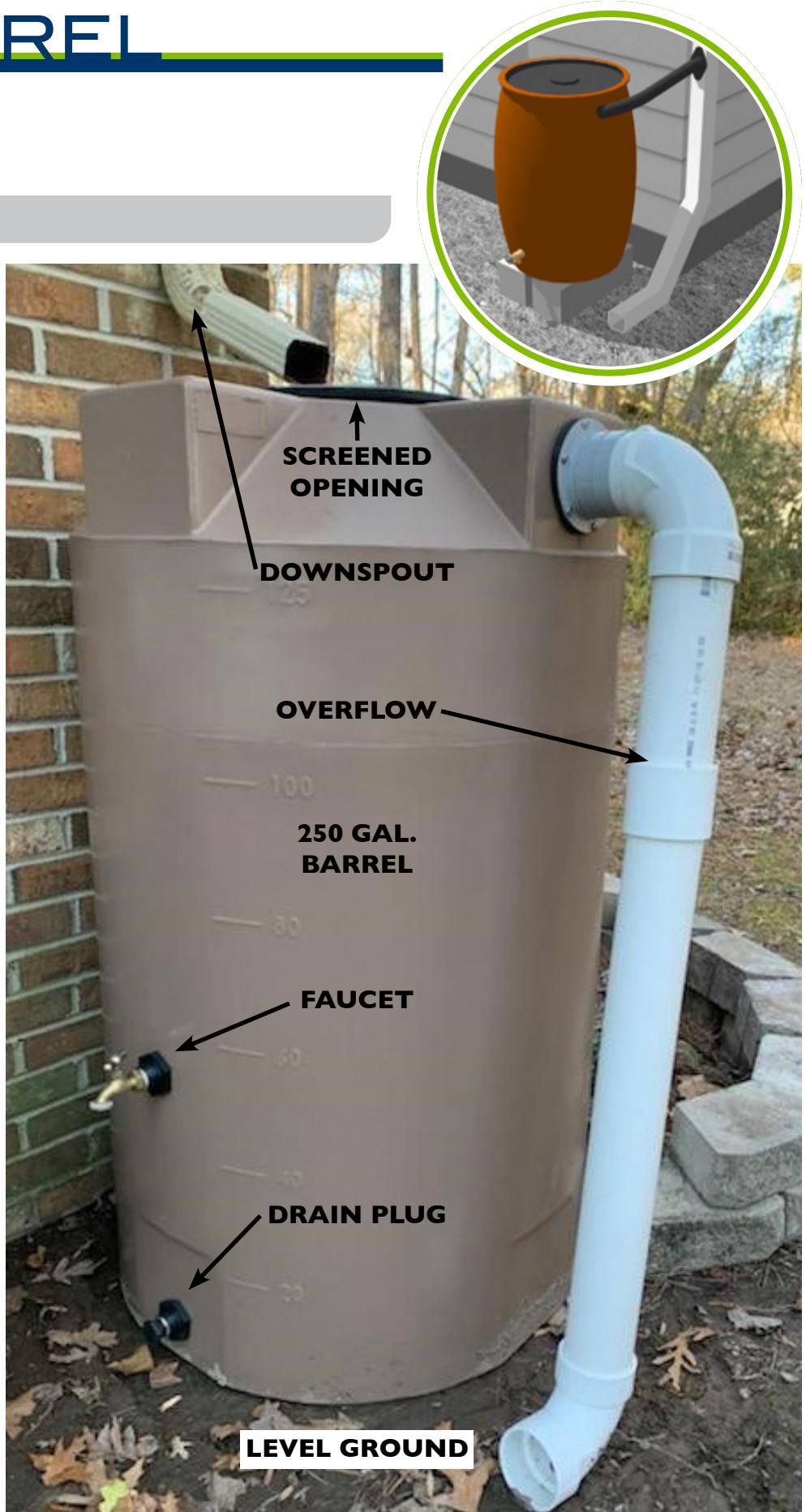


RAIN BARREL

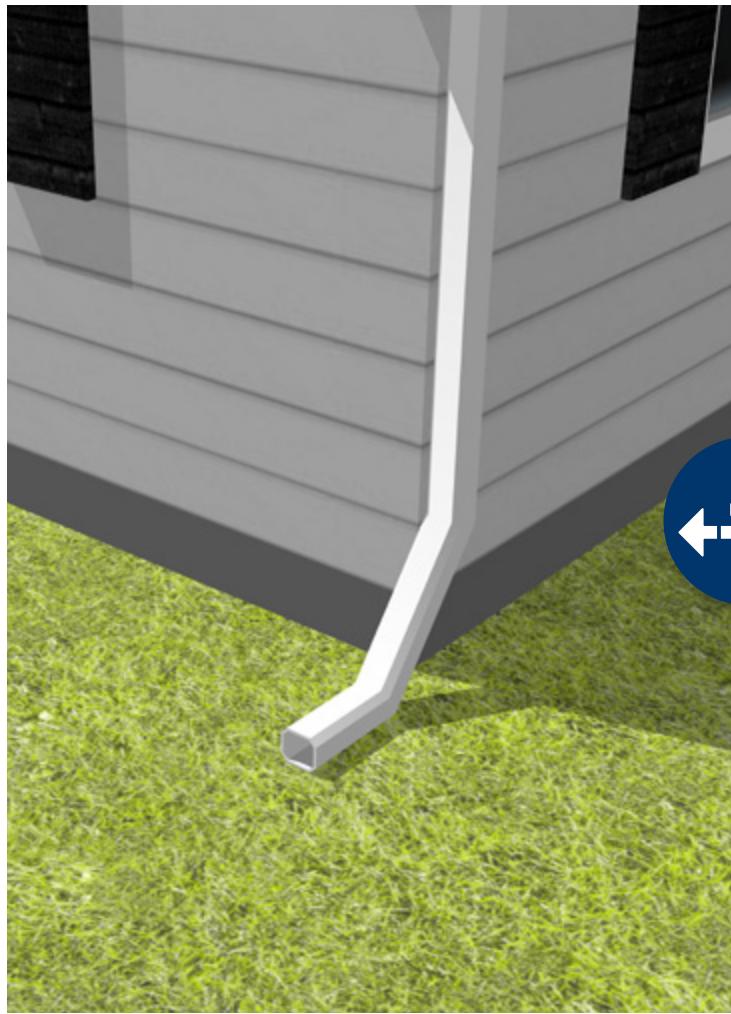


DEFINITION

A tank or barrel that collects and holds rainwater from the roof of a structure. The water from the container can be used for watering plants and for general yard or home maintenance. It should be used as a non-potable water source (not to be used for drinking water). The water is intended to be used or emptied out BEFORE the next rain event. A full container during a rain event does NOT have added benefit in reducing the amount of water going into the storm drain during that rain event.

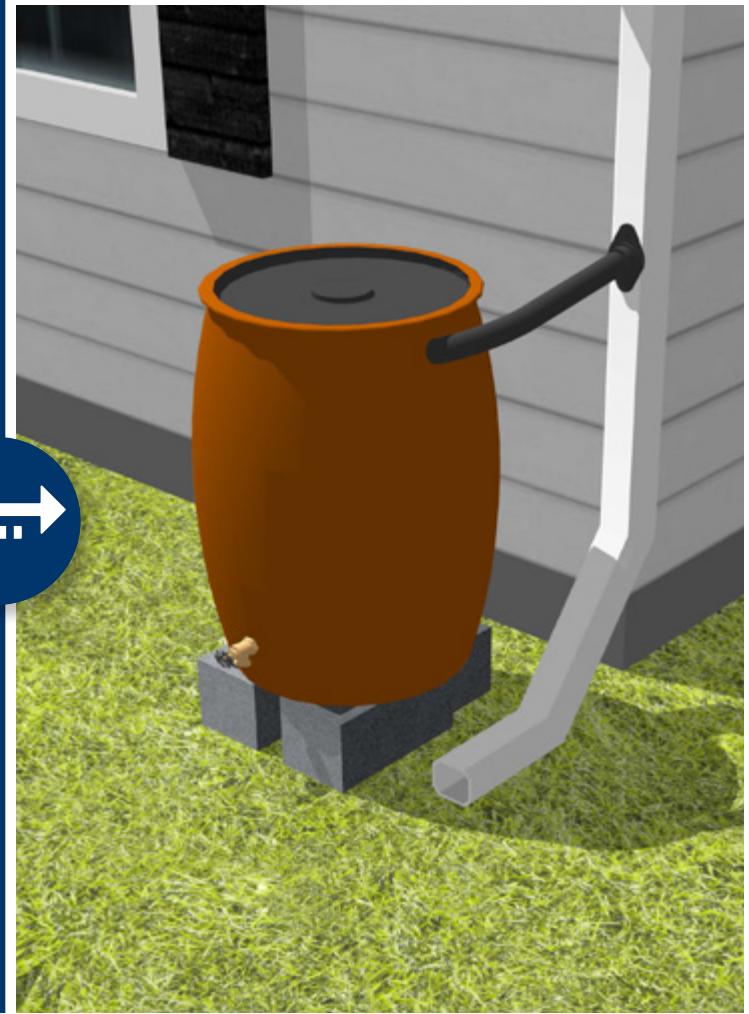


BEFORE



DOWNSPOUT

AFTER



INSTALLED RAIN BARREL

EXAMPLES

SINGLE RAIN BARREL



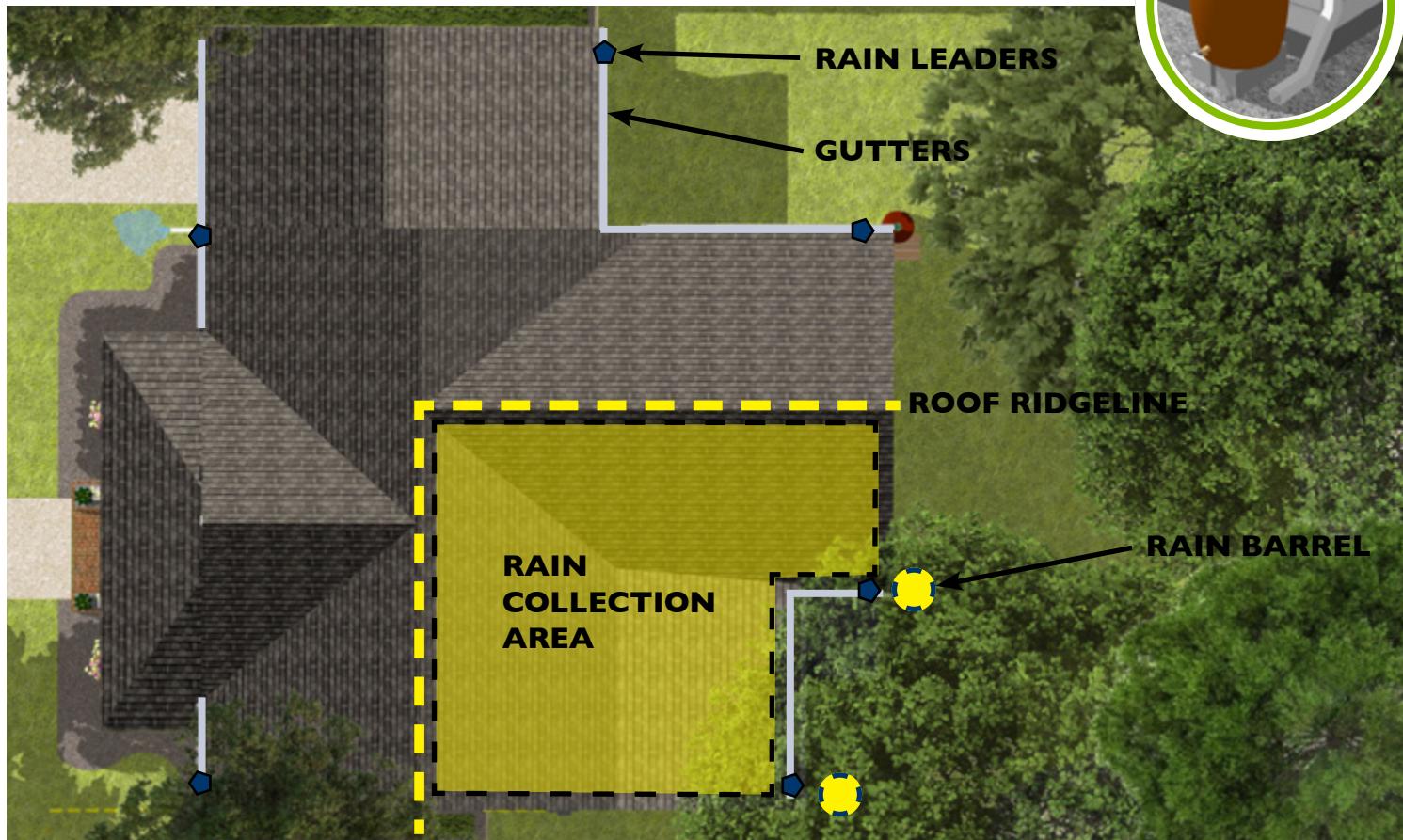
RAIN BARREL

CONNECTED RAIN BARRELS (110 gallons)



RETAIN YOUR RAIN • Page 26

BE MINDFUL OF PLACEMENT



The **RETAIN YOUR RAIN APP** is an application intended to be used by **CITY OF NORFOLK** residents to estimate the amount of rain runoff generated from the rooftops of buildings. Runoff amounts are displayed in the number of typical sized bathtubs for rain event at half-inch increments up to three inches of rainfall. A typical bathtub filled with water is approximately **50** gallons and an average sized rain barrel is **100** gallons.

In the example, the area for the **ENTIRE** roof area is given. As in the above diagram, you will have to calculate the amount of water that a section of roof will generate. You can locate your property visiting the link below.



Norfolk Retain Your Rain APP

<https://orf.maps.arcgis.com/apps/webappviewer/index.html?id=7e8dc203eadf45b2b-4422095f44b194c>

RETAIN YOUR RAIN

Green Infrastructure Zone: **Storage**

Approximate number of bath tubs per inch(es) of rain:

0.5" = **5** Bath Tubs

1" = **10** Bath Tubs

1.5" = **15** Bath Tubs

2" = **20** Bath Tubs

2.5" = **25** Bath Tubs

3" = **30** Bath Tubs

[Click here to find out the best home project for your property.](#)

Above is an example from the **RYR** app of a typical residential property. Use these numbers for your calculations.



Calculating Rain Barrel Size:

The calculations, as follows, use the chart from the **RYR** app and the house diagram as the example of your home. With a **1"** rain event we get **10** bathtubs. **10** bathtubs equals **500** gallons of water to account for. The roof design is divided into **4** quarters. Taking the bottom quarter of the roof, in yellow, we divide **500** by **4** giving us **250** gallons of water to capture. This tells us that having two rain barrels that hold **100** gallons each will be adequate for yard water needs.

You will not capture all of the rainwater! Consider a second barrel or larger storage container depending on your watering needs.

Have a bypass or overflow for full tanks!

Rain Barrel recommendations include:

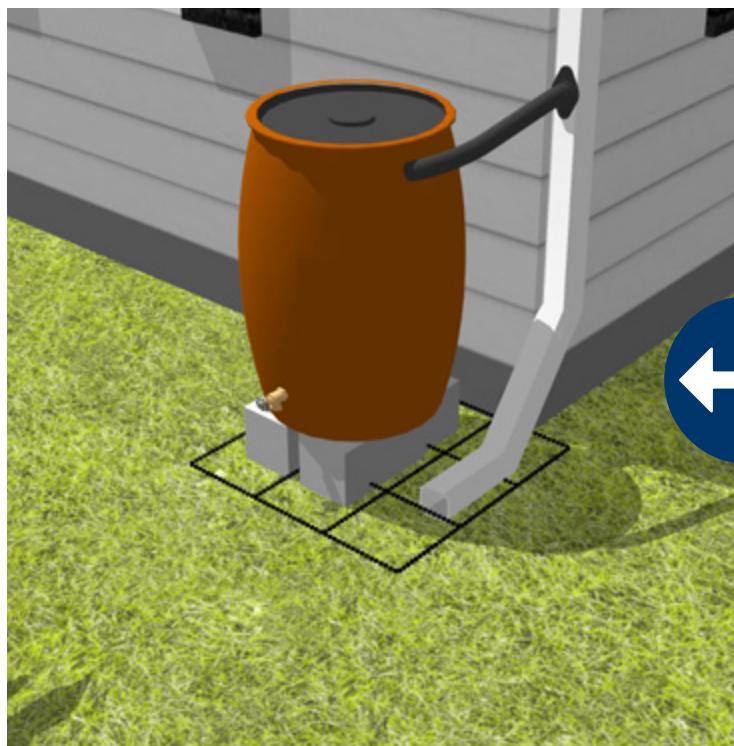
- Must have a gutter with a downspout
- To avoid unnecessary piping, locate barrel or storage tank close to the downspout
- Check that water will flow away from the house
- **50-300** gallons in size
- Each tank collects from one downspout
- Gravity-fed overflow or bypass for full tank
- Has basic screening for filtration (e.g., leaf screens on gutters)
- Use a screen at barrel inlet, if open, to filter material out of downspout before it enters the barrel or tank.
- Use of mosquito dunks (seasonally) or screen to keep insects out.

Be mindful Water is Heavy!
24 gallons = 200 pounds

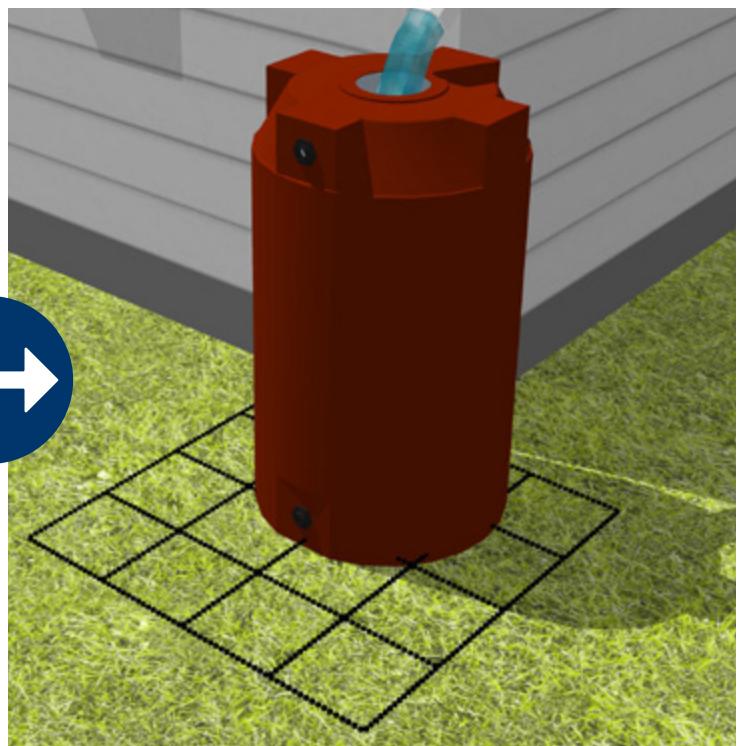
SIZE

The size of space needed for a rain barrel can be as little as nine square feet to install.

9 SQUARE FEET



16 SQUARE FEET



GETTING STARTED

Evaluating the cost and materials of your project is a good start. Design and construction is simple and can be done by handy homeowners, volunteers, or contractors with a little guidance. The most difficult part of assembly may be cutting and re-routing downspouts and installing hardware at bottom end of Rain Barrel. Below are suggested items to help you get started.



DO IT YOURSELF (DIY)

If you intend to perform this work yourself, see the lists for general tools and materials you may need to help you get started.



Tools & Materials:

- Personal Protective Equipment (PPE)
- Marker

- Compass or circle template
- Ruler
- Drill
- **1/2"** spade bit
- **3/4" & 1 5/8"** hole saw
- Screwdriver
- Pliers
- Jigsaw
- Recycled Barrels
- Plastic colander
- **1 1/4"** barbed fitting w/ female threaded end
- **1 1/4"** male coupling
- **5'** section of sump pump hose
- **1/2"** barbed fitting with male threaded end

- Hose coupler for **5/8" & 3/4"** garden hose
- Shutoff valve w/ male & female threaded ends
- **1** hose clamp fits **3/8" to 3/4"** hose
- **1** hose clamp fits **3/4" to 1 1/8"** hose
- **10" x 10"** piece of screening material to cover holes
- Silicone sealant
- PVC glue
- Elbow for downspout



HIRE OUT THE WORK

You can also find a local handyman or contact a [CBLPro](#) contractor to do the work for you. Prices will vary on complexity and time needed to complete job.



KIT or SPECIALTY ITEM

You can purchase a downspout disconnection kit from home improvement stores and Online. Wherever you purchase it, check your kit to ensure all parts needed are included.



MAINTENANCE

Seasonal

- Check gutters, screens, and downspout for debris and clogging
- Check mosquito screens and patch holes or gaps
- Add mosquito dunks or similar for short-term control of larvae

Yearly

- Inspect and clean storage tank lids, clean screens and spigots
- Inspect tank for sediment buildup
- Inspect structural integrity of tank, pump, pipe, and platform
- Replace damaged

or defective system components

- Drain tank before long periods of freezing temperatures

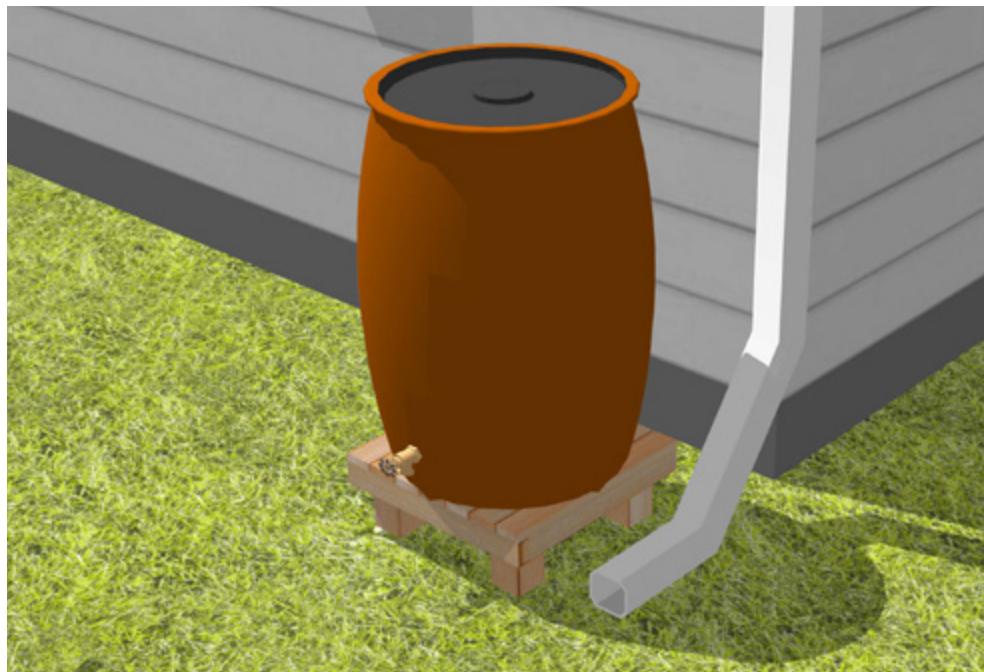
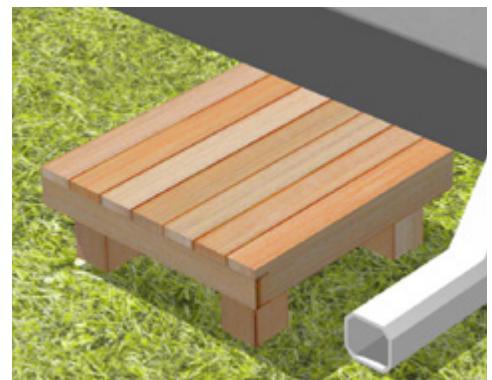
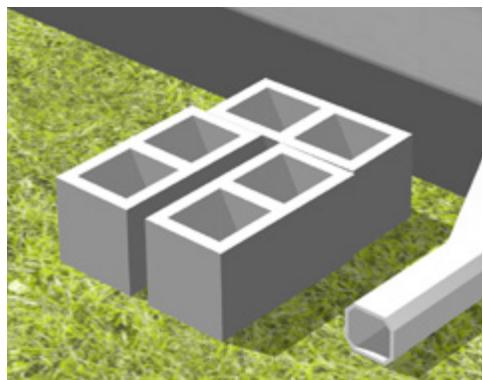
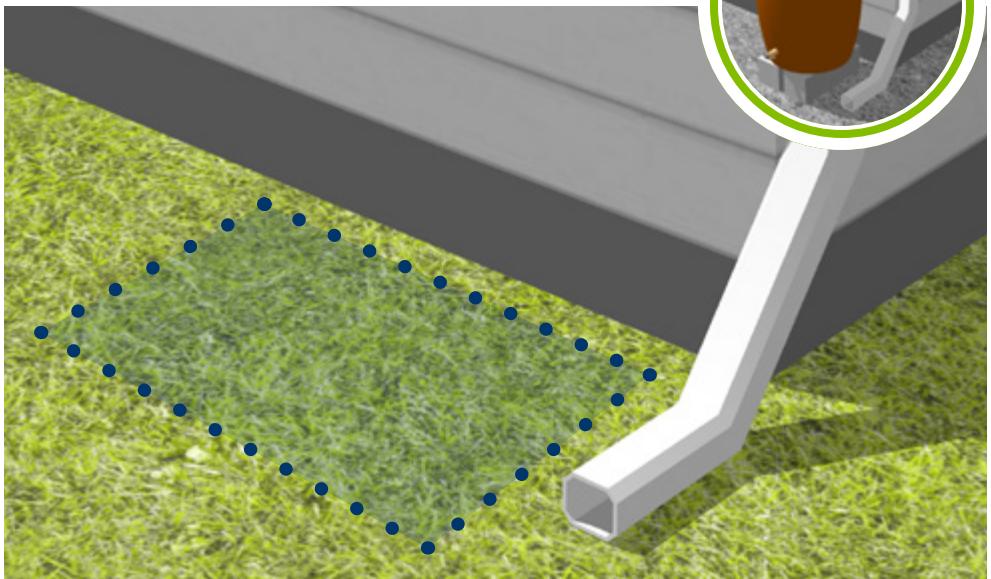


HOW TO

Step 1: Ground Prep

Create a level surface with a rake or shovel that will support the heavy weight of a full container. Dirt or sand can be added to help level the ground. The container can be placed directly on the ground or on a platform to elevate for ease of use.

- Pavers, cinder blocks, or a wooden platform make good supportive base for rain barrels.



Step 2: Set Up

Place your barrel onto the prepared surface or platform while empty. To prevent damage to the bottom be sure no rocks or hard objects are under the container. Have the parts and tools ready for the next step.

Step 3: Install

Connect downspout to the barrel.

- Use a drill with a hole-saw attachment to make a hole in the downspout and the rain barrel for the diverter. Follow any instructions that may have come with the parts.



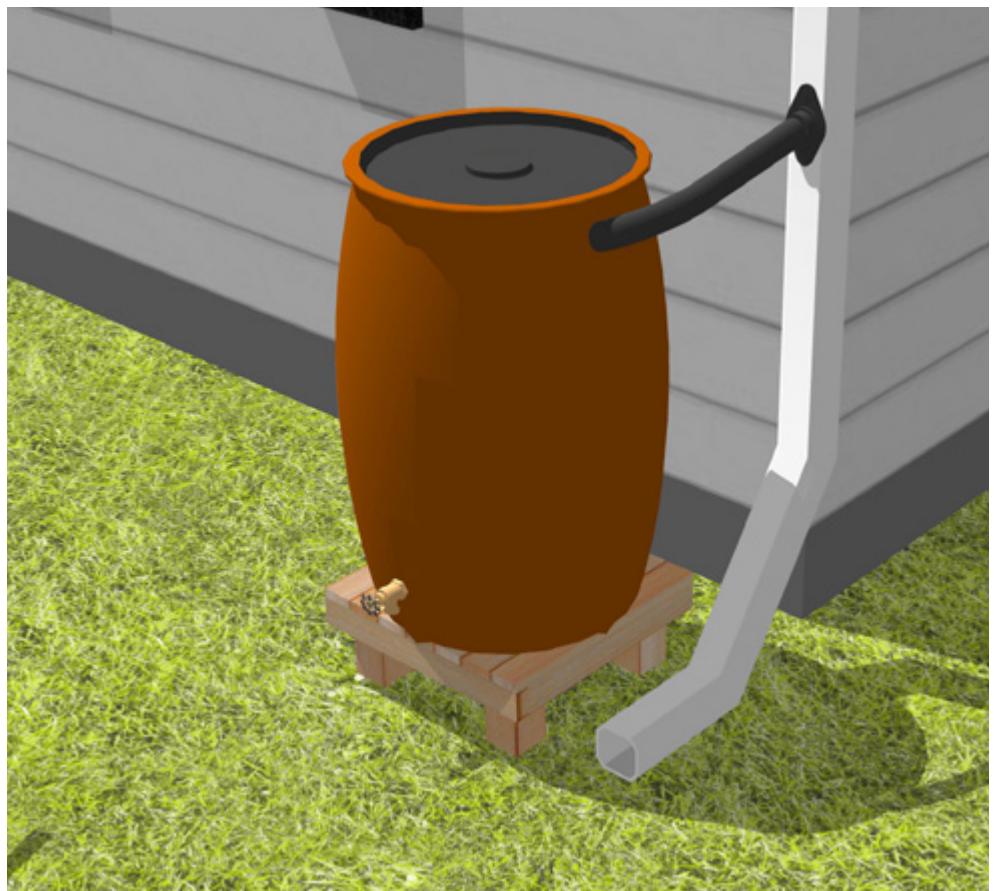
- Install downspout diverter and faucet to rain barrel.
- Ensure any openings are sealed or covered with screening material.



Step 4: Inspect & Follow-up

Check that all connections are secure and functioning with no leaks.

Monitor during/after first rain event and make adjustments as needed.



Rain Barrels & Water Harvesting

[Https://www.Norfolk.Gov/documentcenter/view/28621](https://www.Norfolk.Gov/documentcenter/view/28621)

American Rainwater Catchment Systems Association

<https://www.arcsa.org/default.aspx>

Watershed Stewards Academy

<http://aawsa.org/rain-barrels-and-cisterns>

Bay Star Homes Program

<https://www.norfolk.gov/3304/Rain-Barrels>

Project Completion!

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