

# Installing a Rain Barrel for Non-spray Irrigation



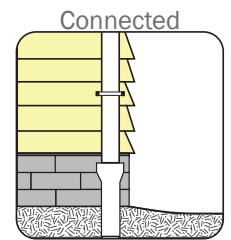
San Francisco  
Water Power Sewer  
Services of the San Francisco Public Utilities Commission

Rainwater harvesting is the age-old practice of collecting and using rainwater from your roof or other above-ground impervious surfaces. Rainwater harvesting is growing in popularity as our customers look for ways to conserve and use water resources more efficiently. By installing a rainwater harvesting system, you can reduce the volume of potable water you use for irrigation. In addition, you help to maintain the health and beauty of the San Francisco Bay by reducing the amount of stormwater entering the sewer system.

## Permit Requirements

### If your downspout is **connected** to the sewer system,

you will need a permit from the Department of Building Inspection (DBI), Plumbing Division. Permit requirements include a basic site map identifying the location of your rain barrel and the intended destination for overflow (a drain, garden, etc.). There is a permit fee, which covers the permit and site visit by a DBI Plumbing Inspector.

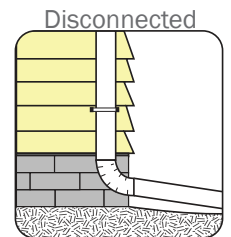


You may opt to install a diverter kit that attaches directly to your downspout and diverts water into your barrel. Once the barrel is full, water is diverted back into the downspout and sewer system. Using a diverter kit allows you to connect to the existing downspout while maintaining the connection to the sewer system. Diverter kits attach to metal or plastic downspouts only, not cast iron. For guidelines on installing a rainwater harvesting system with a diverter kit, please see reverse.

### If your downspout is **disconnected** from the sewer system,

you do not need a permit from DBI, as long as your rain barrel meets the following requirements:

- Under 5,000 gallons
- Height to width ratio is less than 2-to-1
- Only used for non-spray irrigation
- Supported directly on grade
- Does not require power or makeup water supply connection



## Rain Barrel Basics

- Rainwater should not be harvested from roofs covered with copper or treated with fungicides or herbicides.
- Rain barrels come in a variety of shapes, colors, and sizes, but must be opaque, watertight, and made of durable materials.
- The lid or screen on your rain barrel should be secured to prevent access to the stored water.
- Rain barrels must be equipped with an overflow.
- **Full code requirements can be found in Chapter 17 of the 2013 California Plumbing Code.**

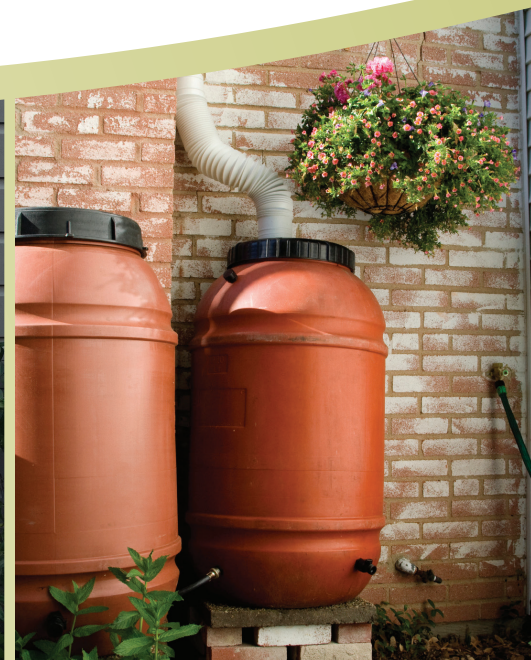
To find out more information about Rainwater Harvesting, please visit:

[www.sfwater.org/rainwater](http://www.sfwater.org/rainwater)

Questions? Contact us!

(415) 551-4730

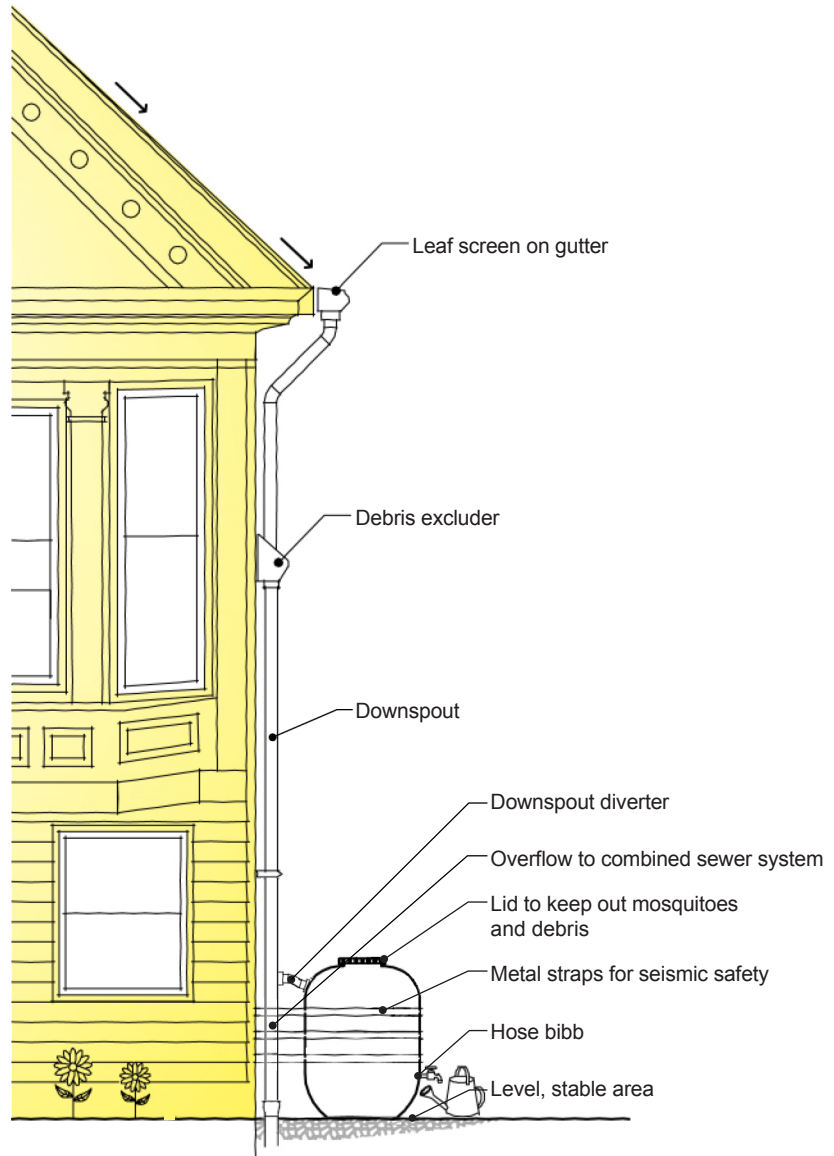
[landscape@sfwater.org](mailto:landscape@sfwater.org)



## Installing Your Rain Barrel With a Flexifit Diverter Kit

The installation of a rain barrel with a Flexifit diverter kit directs rainwater from the downspout into the barrel. When the barrel is full, excess water flows through the downspout to prevent overflow. Before installing your system, review the manufacturer's directions for specific installation requirements.

- Install leaf screens or debris excluders on your gutters, especially if you have overhanging trees.
- Locate barrel on a level and stable area within 3' of the downspout.
  - If elevating your barrel, place it on a stable brick, concrete or wood platform.
- Depending on manufacturers suggested height, measure and mark the barrel to install the spigot hole and the barrel's drain hole. Drill 1-1/4 inch holes over the marked areas and insert threaded rubber seals. Attach spigot connection.
- Locate the water inlet mark on the rim of the barrel, measure 3 inches down and mark the barrel. Drill a 1-1/2 inch hole over the mark and insert the threaded rubber seal.
- Install the Flexifit diverter kit to your downspout:
  - Mark a line on your downspout that is level with the top of the rain barrel.
  - Measure 2-1/2 inches down from the line and indicate a mark on the center of the downspout.
  - Drill a 2-1/8 inch hole in the center of the marked downspout using a hole saw that is rated for the material, such as plastic or metal. Do not attempt to drill into a cast iron drain pipe.
  - Pinch and insert the Flexifit diverter valve into the downspout with the arrow facing UP and secure valve to the downspout with screws.
- Connect the corrugated hose to the diverter valve and to the barrel's water inlet.
- Adhere the warning label to your barrel:



## Operation and Maintenance

There are simple steps you can take to ensure your rainwater harvesting system functions at its best:

- Ensure all inlets and overflow pipes have screens installed to prevent insects, birds, or rodents from entering.
- Equip your system with a first-flush diverter. After a dry spell, this device diverts the first, most polluted flow of rainwater roof away from your rain barrel. The recommended minimum rate of diversion is 1 gallon per 100 square feet of roof surface.
- Install a 100 micron filter if you are using rainwater for drip irrigation to ensure the drip system will not clog.
- Before and after the rainy season (typically Oct-Apr), ensure downspouts are clear, and clean roof gutters, screens, overflow outlets, and filters on your barrel to prevent clogging.
- Repair leaks or holes immediately.

