


# Building your own rain barrel



There are many ways to make your own rain barrel or series of rain barrels. The following is just one example:

## parts

<b>A</b>	Rain barrel <sup>(1)</sup> .....	\$ 30 (varies)
<b>B</b>	Mosquito netting or screen.....	\$ 5 (varies)
<b>C</b>	Male electrical conduit adapter <sup>(2)</sup> .....	\$ 0.85
<b>D</b>	Rubber washer .....	\$ <1
<b>E</b>	Female electrical conduit adapter <sup>(2)</sup> .....	\$ 0.85
<b>F</b>	Reducer (Red Bush SXT SCH 80) .....	\$ 1.25 - \$7
<b>G</b>	Nipple (X close SCH 80) .....	\$ 0.35 - \$1.50
<b>H</b>	Hose bibb/ pipe thread shutoff .....	\$ 4 (varies)
<b>I</b>	Overflow hose (flexible PVC) <sup>(2)</sup> .....	\$ 3 / ft. (varies)
<b>J</b>	Safety sticker.....	free
<b>K</b>	Steel straps (3/4-inch, 24-gauge) <sup>(3)</sup> .....	\$ 1 / ft. (varies)
<b>L</b>	Sheet metal screws and anchors <sup>(3)</sup> .....	\$ <0.25

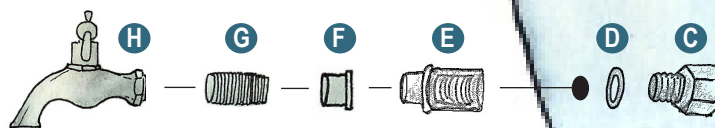
<sup>(1)</sup> To increase the storage capacity of your system, add more barrels. Barrels can be easily linked together. If subsequent barrels are sealed, install an air vacuum relief valve (\$5 - \$10). See our manual for installing a daisy chain system for more details. 

<sup>(2)</sup> Make sure your overflow adapters and hose are at least 1.5" in diameter for contributing roof areas of 1000 sq. ft. or less. A larger hose diameter is recommended for larger contributing areas.

<sup>(3)</sup> You will need these items to secure your rain barrel to a supporting wall for seismic safety. For more detailed information, please see our Rain Barrel Installation Fact Sheet.

## putting it together

- Drill a hole on the side of the barrel with a standard twist bit for both the hose bibb and overflow.
- Use the Teflon tape to wrap once around the threads of the hose bibb, counter clock-wise.
- When threading nipple into reducer, DO NOT OVER TIGHTEN — this will strip the threads and your barrel will leak.
- You will need a friend to hold the washer and male electrical conduit on the inside of the barrel, while you screw in the female electrical conduit.
- Apply PVC cement to attach the female electrical conduit to the reducer.



## tools

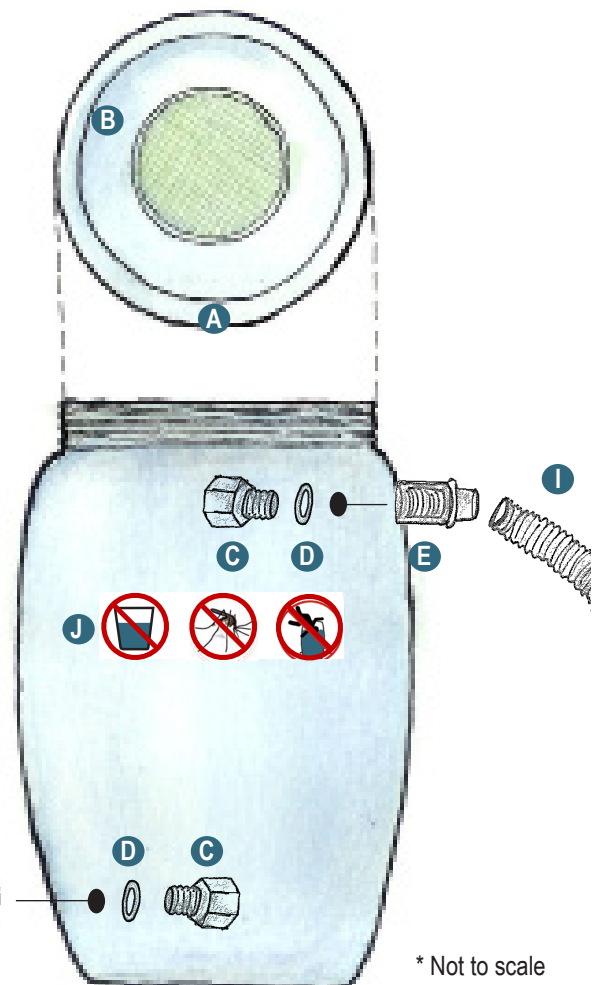
- Drill
- Drill bits
- Drill hole saw
- Hand saw
- Teflon tape
- PVC cement

## safety

- Cover the overflow hose opening and the rain barrel lid with mosquito netting to prevent mosquitoes from breeding in the rain barrel.
- Label the rain barrel with safety stickers (shown below), provided by the SFPUC at 525 Golden Gate Avenue.

## installation

For instructions on how to install your rain barrel, please see our Rain Barrel Installation Fact Sheet online at <http://stormwater.sfwater.org> in the Rainwater Harvesting section.



## RAINWATER HARVESTING

Rainwater harvesting is the practice of collecting and using rainwater that runs off of hard surfaces, such as roofs. It is an age-old technology that is growing in popularity as people look for ways to use water resources more wisely.

By harvesting rainwater you:

- Keep relatively clean water out of the combined sewer system and make it available for use;
- Reduce the energy and chemicals needed to treat stormwater in San Francisco's combined sewer system, while also reducing the energy used to transport water from distant reservoirs;
- Decrease the volume of stormwater entering the sewer system, thereby minimizing flooding and combined sewer discharges;
- Decrease the volume of potable or "drinking" water used for non-potable applications.

## MAKING IT HAPPEN

It is now legal to divert stormwater from San Francisco's combined sewer system. The relevant Plumbing Code is Section 306.2., which reads: "Roofs, inner courts, vent shafts, light wells or similar areas having rainwater drains, shall discharge directly into a building drain or building sewer, **or to an approved alternate location based on approved geotechnical and engineering designs.**"

## RAIN BARRELS

Rain barrels are storage containers designed to capture rainwater runoff from your roof for use in irrigation or other non-potable applications. Rain barrels are inexpensive, easy to install and maintain, and are well-suited to small-scale residential sites. They typically range from 50 to 100 gallons in capacity, and the water they collect is most often used to irrigate plants.

## PERMIT INFORMATION

If your downspout is disconnected from the combined sewer system, you do not need a permit to install a rain barrel. However, if your downspout is connected to the combined sewer system, you will need a permit from the Department of Building Inspection, Plumbing Division. Permit requirements include a basic site map identifying the locations of your rain barrel, an approved storm drain, and the intended destination for overflow (a drain, garden, etc.). The permit fee covers the permit and site visit by a DBI inspector.

For more information on permits, visit DBI's website at: <http://www.sfdbi.org>, or call **415.558.6570**.

## WHERE CAN I GET A RAIN BARREL?

You can easily make your own rain barrel, as described on the other side of this handout. You can find low-cost barrels on Craigslist and visit your local hardware store to purchase the other pieces you need. Make sure you only use food grade barrels. Do not use barrels that may have contained hazardous or contaminated materials. You can also purchase rain barrels with the fittings already installed. There are many types of fully outfitted rain barrels available online. The SFPUC strongly encourages customers to purchase barrels that are being reused, rather than those that are being manufactured new.

## QUESTIONS? CONTACT US

If you are interested in learning more about rainwater harvesting, please contact us:

San Francisco Public Utilities Commission  
Urban Watershed Management Program  
Email: [greenstormwater@sfgwater.org](mailto:greenstormwater@sfgwater.org) | Phone: 415.554.3289  
<http://stormwater.sfgwater.org>

