

...hexagon. Use the Hose Clamp to tighten the hose over the Nylon Hose Barb. You can also use a garden hose, which should screw into the Hose Barb like a spigot on the wall. If another overflow hose is needed for heavy rain events, add it next to the first hose about an inch to either side.

8 CUT YOUR DOWNSPOUT. Set up your Concrete Blocks or other platform material directly under the downspout that will be feeding the barrel, and make sure the platform is level. Place your barrel in the center of the Concrete Blocks. Cut your downspout 2 feet above where your barrel meets the downspout. Use a hacksaw (or reciprocating saw) to cut the downspout. Take your Downspout Extension and feed the existing downspout into the wider end of the Extension. The smaller end should fit snugly into the Downspout Adapter on the top of your rain barrel. It is optional but encouraged to secure the Downspout Extension to the existing downspout and Adaptor with screws for sheet metal. Also, tin snips can be very useful to assist cutting the aluminum downspout!

TIPS & FAQs

- ✓ **How can I use the harvested water?** Watering ornamental plants is a common use. You should not water vegetable gardens or other edible plants due to possible roofing material pollutants.
- ✓ **What do I do in the winter?** Remove the barrel in the late fall before the first freeze. Use a corrugated pipe to connect to your downspout to send water away from the building foundation.
- ✓ **Clean the screen.** In the fall and spring, clean out your screen once a week. Check periodically in the summer.
- ✓ **Roof area and rain accumulation.** 1,000 sq. feet x 1 inch rain = 600 gallons
- ✓ **Weight lifting.** 55 gallons x 8 lbs per gallon = 440 lbs. This means safety first. Keep the barrel level to avoid tipping!
- ✓ **Water stewardship.** Rain barrels can save the average homeowner up to 1,300 gallons of water during peak summer months.
- ✓ **Wrap happy.** We know rain barrels aren't always the prettiest thing, so consider painting a mural on your barrel. Or create a rain barrel wrap—think soup can label.

RESOURCES

Blue Water Baltimore hosts rain barrel workshops

www.bluewaterbaltimore.org

Prince George's County offers rebates on stormwater reduction techniques, including rain barrels

www.princegeorgescountymd.gov/sites/StormwaterManagement/Services/RainCheck/Rebates/Pages/default.aspx

Ready-to-install barrels for purchase

www.bowelions.org/rainbarrels.html

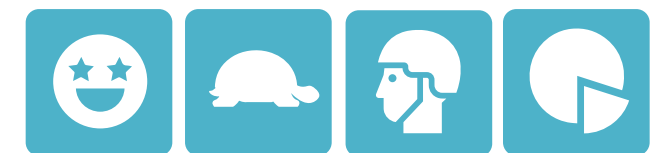
www.arlingtonecho.org/restoration-projects/rain-barrels.html

HOW DO I... BUILD & INSTALL A RAIN BARREL?

Rainwater harvesting has been around for thousands of years. Rain barrels are a great way for homeowners, schools and organizations to harvest rainwater. Techniques to conserve water and to capture stormwater, such as rain barrels, are critical to environmental protection. Of our planet's water, only 2.5% is freshwater. Some jurisdictions have incentives for installing water-saving devices, so find out if you qualify for financial assistance! This guide describes one way for constructing and installing a rain barrel at a typical residential home.

water.usgs.gov/edu/water/cycle/freshstorage.html

WHAT YOU NEED



ENTHUSIASM PATIENCE SAFETY BARREL PARTS
See table in this guide.

- ✓ SAFETY GLASSES
- ✓ EXTENSION CORD
- ✓ PERMANENT MARKER
- ✓ 3/4-INCH DRILL CORE BIT OR SPADE BIT
- ✓ JIGSAW, RECIPROCAL OR HACKSAW, OR OTHER AVAILABLE SAW
- ✓ HALF ROUND METAL FILE
- ✓ HOSE CONNECTED TO WATER SOURCE
- ✓ MALLET
- ✓ TIN SNIPS
- ✓ FLAT HEAD SCREWDRIVER

TOOLS

A proper workspace includes connection to a power source and space to comfortably move the barrel around on its side or standing up.

BENEFITS



GETTING STARTED

1 TRACE THE DOWNSPOUT ADAPTER. In the center of barrel top, place the Downspout Adapter circle side down. Remember to use a food-grade barrel! Firmly hold the Adapter in place and carefully trace a circle around it with a permanent marker.

2 ATTACH THE DOWNSPOUT ADAPTER.

Just inside the circle line you drew on the barrel top, drill a hole using the 3/4-inch bit. Insert the jigsaw (or reciprocating saw) blade into the hole you just made, and slowly and carefully cut the inner side of the circle you drew. You don't want to cut the center of the line because the hole will be too big for your Downspout Adapter. You want the Downspout Adapter to fit into the barrel top nice and snug. Test to see if the Adapter fits in the hole you just cut; if not, use your file to carefully and conservatively remove bits of barrel so the Adapter can snugly slide in. Set the Adapter aside for now.

3 CLEAN OUT THE BARREL.

Now that you have easy access to the inside of your barrel, use a garden hose to rinse it out. Most likely there will be residue from whatever was previously contained in the barrel. Dispose of the waste responsibly.

4 ADD THE SCREEN.

Cut a 1-foot by 1-foot screen square from your roll of Vinyl Screen and center it on top of your cut circle. Take your Downspout Adapter and slowly force-fit the circular end into the barrel with the Screen folded around the Adapter. The circular part of the Adapter should be halfway in the barrel with the corners of the Screen poking out of the top. The Screen catches debris and eliminates mosquito larvae.

5 ATTACH THE 3/4-INCH HOSE BIBB.

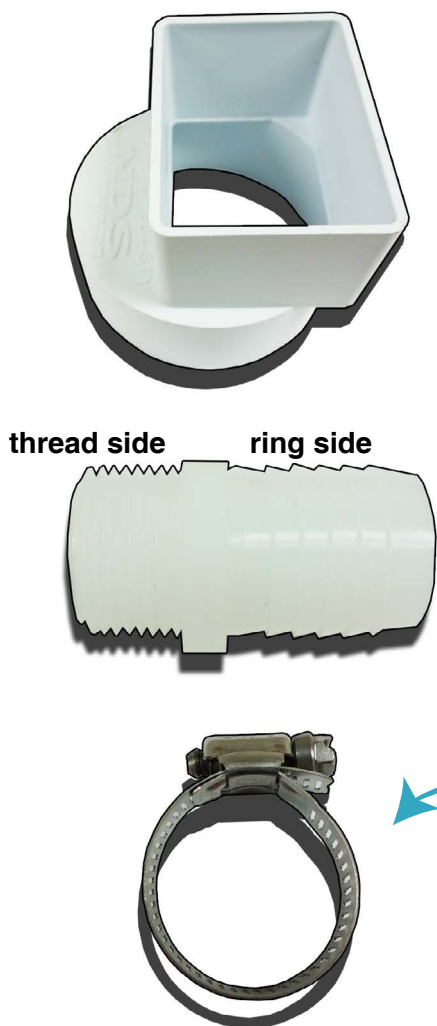
3 - 5 inches from the bottom of the barrel, use the 3/4-inch drill bit to create a hole. You don't want the hole higher than this because water that sits below this point will be hard to access. Wrap Plumber's Tape around the Hose Bibb thread about 3 times. Screw in the Hose Bibb so that the "collar" (often hexagonal) fits snugly against the barrel's exterior wall.

6 ATTACH THE 3/4-INCH NYLON HOSE BARB.

2 - 3 inches from the top of the barrel (either on the left or right side of the barrel), drill a hole with the 3/4-inch bit. Use the location of the Hose Bibb as the "center" and the "left" or "right" as a quarter of the way around the barrel from the Hose Bibb. You should choose which side by knowing the final location of the rain barrel. This is where the overflow hose will be attached, which will direct water away from any building foundations. With the mallet, insert the Hose Barb thread side out so the hexagonal part fits tightly against the barrel's exterior wall. An additional overflow hose may be needed for heavy rain events.

7 ATTACH THE OVERFLOW HOSE.

The overflow hose should be at least 6 feet in length to direct water away from any building foundations. Attach the Vinyl Braided Tubing by twisting over the Nylon Hose Barb until the hose meets the...



BARREL PARTS	Qty.	Where to Find	~Price	Use	Notes
55 Gallon Food-Grade Barrel	1	Local beverage companies (e.g., Pepsi, Coca-Cola)	\$10-\$50	The collection vessel that will hold the stormwater.	A food-grade barrel is incredibly important. It should've contained only food products and NOT held bleach, pesticides or harmful chemicals.
Downspout Adapter	1	Plumbing section of hardware store	\$2.50	Directs the downspout shape snugly into barrel.	Most downspouts should fit the square top adapter.
Vinyl Screen Roll	1	Hardware store	\$6.50	Screening will protect debris from entering the barrel.	May need to purchase a new roll or use an old screen door.
Plumber's Tape	1	Plumbing section of hardware store	\$3	Prevents leaks at the Hose Bibb connection.	Also called thread seal tape. Should be wrapped around the threads of the Hose Bibb when installed.
3/4-inch Hose Bibb	1	Plumbing section of hardware store	\$6	Where water volume can be controlled for garden use.	Also called a spigot. Install 3-5 inches from the bottom of the barrel.
3/4-inch Nylon Hose Barb	1	Plumbing section of hardware store	\$4	Connects the overflow hose to the barrel.	Should be installed 2 inches from the top of the barrel, a quarter of the way around the barrel from the Hose Bibb.
1/2-inch Vinyl Braided Tubing (or garden hose)	1	Plumbing section of hardware store	\$20	Diverts overflow water from buildings or areas that could pond.	3/4-inch outside diameter and 1/2-inch inside diameter. Ask the hardware store to cut you a length that will get overflow water to where you want it. 6 foot min.
Hose Clamp (if not using garden hose)	1	Plumbing section of hardware store	\$1	Keeps the overflow tube tight to the Hose Barb.	You will need a flat head screwdriver to tighten the hose clamp.
8x8x16-inch Concrete Blocks	2-8	Hardware store	\$1.50	To elevate barrel for watering can to fit beneath hose bibb.	These can be found at salvage stores or purchased new at a hardware store. You can make your own platform; blocks are just commonly used.
Downspout Extension	1	Roofing & gutters section of hardware store	\$9	Directs water from the downspout to the barrel top.	Choose a length that allows you to properly direct water from the downspout to your barrel. Often the extender will need to curve or bend.