

Why use rain barrels?

They irrigate your lawn and garden

During the summer months it is estimated that nearly 40 percent of household water is used for lawn and garden maintenance. A rain barrel collects water and stores it for those times that you need it most — during the dry summer months. Using rain barrels potentially helps homeowners lower water bills, while also improving the vitality of plants, flowers, trees, and lawns.

Rain is naturally soft and devoid of minerals, chlorine, fluoride, and other harmful chemicals. The chemicals and hard water from many of our municipal water systems can add to chemical imbalances in soil and damage sensitive plants. Water collected from the roofs of houses picks up very little contamination, and is very healthy for plant life.

Use native plants to increase water infiltration and decrease time consuming maintenance

A wonderful way to complement your rain barrel and increase your property's ability to absorb runoff is through a rain garden. Rain gardens can be a fun and easy way to learn about beautiful native plants and also help to improve water quality and reduce flooding. Rain gardens typically absorb 30 percent more water than the same size

area of lawn, they are drought resistant, and are less prone to destructive insects and diseases. Rain gardens create a preferred habitat for birds, butterflies and dragonflies. These specialty gardens are versatile — they can be any size or shape, but to maximize their benefit, they should be built in an existing low spot or near the drainage area of a rain barrel. Please refer to the "How to Build Your Own Rain Garden" brochure for more information at www.marc.org/Environment/Water.



What is a rain barrel?

A rain barrel is a container that collects and stores rainwater from downspouts and rooftops for future use watering lawns and gardens. Generally a rain barrel is made using a 55-gallon drum, a vinyl garden hose, PVC couplings, a screen grate to remove debris and keep insects out, and other materials found at most hardware stores.

Rain barrels can be constructed in a number of ways, but they all serve the same purpose — to collect rainwater and decrease the amount of stormwater runoff that leaves your property. Using rain barrels is one way to decrease your household's impact on local waterways and to become a good steward of the local watershed.

*For more information, visit
www.marc.org/Environment/Water*

Why use rain barrels?

They redirect water from your roof to your lawn or garden

The average rainfall of one inch within a 24-hour period can produce more than 700 gallons of water that runs off the roof of a typical house. Much of this water runs from gutters onto surfaces that do not allow water to soak into the ground. These are called **impervious surfaces** and include concrete, asphalt, and compacted soil. Even commonly used sod has a very low infiltration rate and can be a major cause of increased runoff.

As it flows, runoff collects and transports soil, pet waste, salt, pesticides, fertilizer, oil and grease, litter and other pollutants. This water drains directly into nearby creeks, streams and rivers, without receiving treatment at sewage plants.

Polluted stormwater contaminates local waterways. It can harm plants, fish and wildlife, while degrading the quality of water.



Build your own Rain Barrel

Tools

- 7/8" spade drill bit
- Electric jigsaw
- Electric drill
- Utility knife
- Marker



Cutting the top hole

Supplies

- 1 - 55-gallon plastic barrel
- 2 - 3/4" plastic faucets
- 1 - 3/4" female coupling
- 1 - Skimmer basket like those found in garden ponds and pools
- 1 - Roll of teflon tape
- 1 - All purpose caulk or plumbing sealant
- 1 - 5-ft. section of garden hose
- 4 - Hose couplers
- 1 - 12" x 12" piece of fiberglass window screen



Hose and Coupler



Skimmer Basket



55-Gallon Barrel

Top hole

- Use basket to trace template on barrel
- Pre-drill small hole using 1" spade bit
- Make sure to drill inside the line
- Use a jigsaw to cut out hole using the inside line as a guide



Trace a hole for the basket

Basket

- Cut fiberglass window screen to fit basket
- Affix screen to lip of basket using caulk/plumbing sealant
- Allow several hours to dry and place in top hole



Cover basket with screen

Lower drain

- Mark holes at least two inches from bottom of barrel
- Use 1" drill bit to drill hole
- Screw plastic faucet into hole
- Use utility knife, as needed, to increase hole size
- Remove faucet, wrap threads in tape, caulk threads, replace faucet
- Caulk area where faucet and barrel meet to ensure no leakage



Lower Drain

Hoses

- Cut 2' section of hose
- Push each end of hose into a hose coupler and tighten screws
- Screw 3' section onto top overflow faucet and 2" section to bottom faucet



Upper drain

- Mark holes at least two inches from top of barrel
- Use 1" drill bit to drill hole
- Screw plastic faucet into hole
- Use utility knife as needed to alter hole
- Wrap 3/4" coupling threads in Teflon tape and caulk and screw onto faucet inside the barrel



Upper Drain/Overflow Valve

Final Steps

- Build a base to elevate the rain barrel
- Adjust downspout to flow into rain barrel
- Always keep overflow valve open



Finished rain barrel at work

Tips for using your rain barrel

- Cover the top basket with screen, and make sure that all other openings are secured to **prevent mosquitoes and other disease-carrying insects from entering the barrel**
- Elevate your rain barrel with cinder blocks, railroad ties or decorative stones to increase pressure and flow
- Make sure your barrel is clean and free of chemicals before using
- Disconnect the barrel from downspout during winter months to avoid the formation of damaging ice
- Paint or decorate your rain barrel to make it a distinct part of your yard or garden
- During severe storms it may be necessary to open both valves to prevent overflow.

Finding a 55-barrel

For help locating a 55-gallon barrel for constructing a rain barrel, e-mail rainbarrels@marc.org, call MARC Water Resources at 816/474-4240, or visit www.marc.org/Environment/Water.

Prefabricated rain barrels can be found at some local lawn and garden stores, and on the Internet.

MARC
Mid-America Regional Council

How to Build a Rain Barrel

Walter Reeves The Georgia Gardener

A rain barrel is easy to build, and it gives you the opportunity to capture and store rainwater that might otherwise drain into a gutter.

You'll need:

Plastic food-grade barrel
2" PVC plastic pipe and fittings
Inlet filter (a plastic food storage tub or a slotted pot used for aquatic plants in a backyard pond)
Faucet with 3/4" threads
gutter downspout piece at least 16" long
Corrugated plastic gutter extender

Tools:

Electric drill
Spade bit - 15/16"
Hole Bit - 2 3/8"
Electric jigsaw
Teflon pipe sealing tape
PVC pipe glue

1. Cut an opening in the top of the barrel 1/4" smaller in diameter than the chosen inlet filter. The hole should be big enough for the filter to be supported by its rim.
OPTION: If you have a barrel which has a completely removable lid, you can stretch fiberglass window screen across the top and hold it in place with elastic cord.

2. Use the hole saw to drill a hole 2 3/8" in diameter just below the rim of the barrel. The threads of the 2" PVC to male pipe thread fitting will fit through the hole. Wrap them with several layers of Teflon pipe tape and screw the fitting into place. Secure it with the threaded end of a 2" female threaded PVC fitting



3. Use the 15/16" spade bit to drill a hole in the side of the barrel 2" above the bottom edge. Screw the threads of the faucet into the hole.



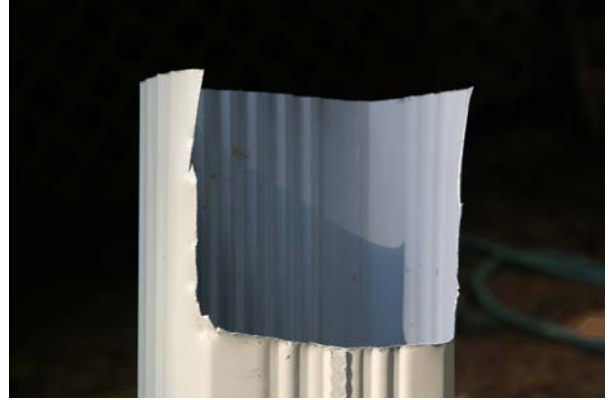
4. Use a hacksaw to cut a twelve inch gap in your gutter. Make the top cut 24" above the top of the barrel when it is in its final position.



5. Cut a 16" piece of downspout from the new piece you purchased. One end should be crimped as shown.



6. Cut an opening into the other end of the 16" piece of downspout as shown here.



7. Attach one end of the corrugated gutter extender to the home downspout. Position the other end over the barrel inlet filter.



8. Glue 2" PVC fittings and pipe as needed to direct overflow water away from your home's foundation. When the barrel is full (or when you do not need to store water), you can slip the 16" piece of downspout into place on your home gutter downspout to direct water through it and away from the house.

