

Rain Barrels:

*Capturing and
Using Roof Runoff*



A BayScapes publication produced by



Stormwater and your community.

How rain barrels help manage stormwater.

In an urban setting, much of the native landscape has been replaced with roads, buildings and parking areas. These “impervious” surfaces are non-porous areas that prevent water from entering the soil. Heavily compacted soils beneath lawns, sports fields and pastures also create unexpected impervious areas.

When it rains, these surfaces generate large volumes of surface runoff. This unfiltered runoff — often contaminated with pollutants such as pesticides, sediments and heavy metals — flows into the watershed’s streams and rivers through storm drains. Installing rain barrels helps reduce the velocity and volume of runoff by capturing and confining the water before it enters the watershed.

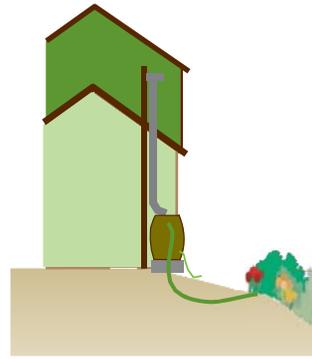
Rain barrels are a centuries-old conservation technique used by many cultures to collect rainwater from rooftops for later use.

Some of the benefits of using rain barrels:

- Free water! Rain barrels conserve water and money (a rain barrel can save approximately 1,300 gallons of water during peak summer months).
- Rain barrels reduce water pollution by decreasing stormwater runoff, which can contain pollutants like sediment, oil, grease, bacteria and nutrients.
- Rain barrels increase groundwater recharge by slowly releasing the collected rainfall into areas that can soak up the water.
- Rain barrels store chemical-free water for use in the garden during dry periods. Water collected in a rain barrel is not for human consumption.

Water from a rain barrel can be used for watering lawns and gardens, washing cars and household windows — even bathing the family pet. In an urban setting more than 40% of the domestic water supply is used outside the home.

Rain barrels are most effective when combined with other innovative storm water management techniques such as rain gardens, roof gardens and green roofs.



Installing your rain barrel.

Pre-installation tips:

- Decide the location of your rain barrel. Many use gutters and downspouts to channel rainwater. However, if you don't have gutters, you can place the barrel under any roof area that discharges a concentrated flow of rainwater. Locate the barrel

so it will be convenient to your flowerbeds and gardens.

- The barrel must be placed on a flat and level surface, and should be raised about two feet off the ground in order to enhance gravity flow into a hose, easily fill a watering can or to empty it for cleaning and winter storage. Cinder blocks, landscaping blocks, or a well-built wooden box or platform will provide a good base for the barrel. Be aware, a barrel filled with water can weigh 400 pounds or more!
- The barrel's overflow hose must be directed into a landscaped bed or lawn area on your property at least four feet from the building's foundation.
- After preparing the site, install the hose fittings per the instructions that come with the barrel.

How to install your rain barrel.

The following are general instructions to retrofit a downspout to the barrel. This may vary depending on the position and style of your downspout. A hacksaw will be needed to cut the downspout material to size.

Step 1: Measure the height of the barrel while it is on the platform. Measure the height of the elbow. Add two inches clearance. Mark the downspout. This is where you will cut. Check your measurements. Remember, measure twice, cut once!

Step 2: Remove the strap/bracket that fastens the lower section of the downspout to the house. Use a fine-toothed hacksaw to cut the downspout based on the measurements in step one.

Step 3: Remove the elbow fixture from the excess spouting and reinstall it. Position the rain barrel under the downspout. Attach the downspout to the building with the clamp.

Step 4: Attach a hose to the top overflow connection to divert excess water into a landscaped area. Make sure the overflow valve is kept open, allowing water to drain and not spill over the top of the barrel.

Safety note: To prevent the barrel from tipping over if you have children or pets, consider securely strapping the barrel to the house. Also, make sure the screen is securely attached to the top of the barrel.

The BayScapes principles.

1. Plan for the Long Term
2. Create Diversity
3. Use Beneficial Plants
4. Conserve Water
5. Practice Conservation Landscaping

Learn more about how you can BayScape by visiting the Alliance for the Chesapeake Bay on the Web at www.allianceforthebay.org. Check out the publications link to download fact sheets and publications.

Maintenance tips

- Clean your gutters on a regular basis to prevent the buildup of organic debris such as leaves. This will reduce debris from filtering into the rain barrel.
- Make sure your gutters are draining properly to prevent mosquitoes from breeding in the gutter. Mosquito eggs and larvae may be flushed into the barrel during a rain event. However, the screened lid provided with each rain barrel will reduce the likelihood of contamination.

Early spring

- Place the rain barrel under the downspout and begin collecting water for the growing season.
- Do not use the spigot or any fitting as a means to lift and move the barrel. This may cause damage, requiring repairs to the rain barrel.

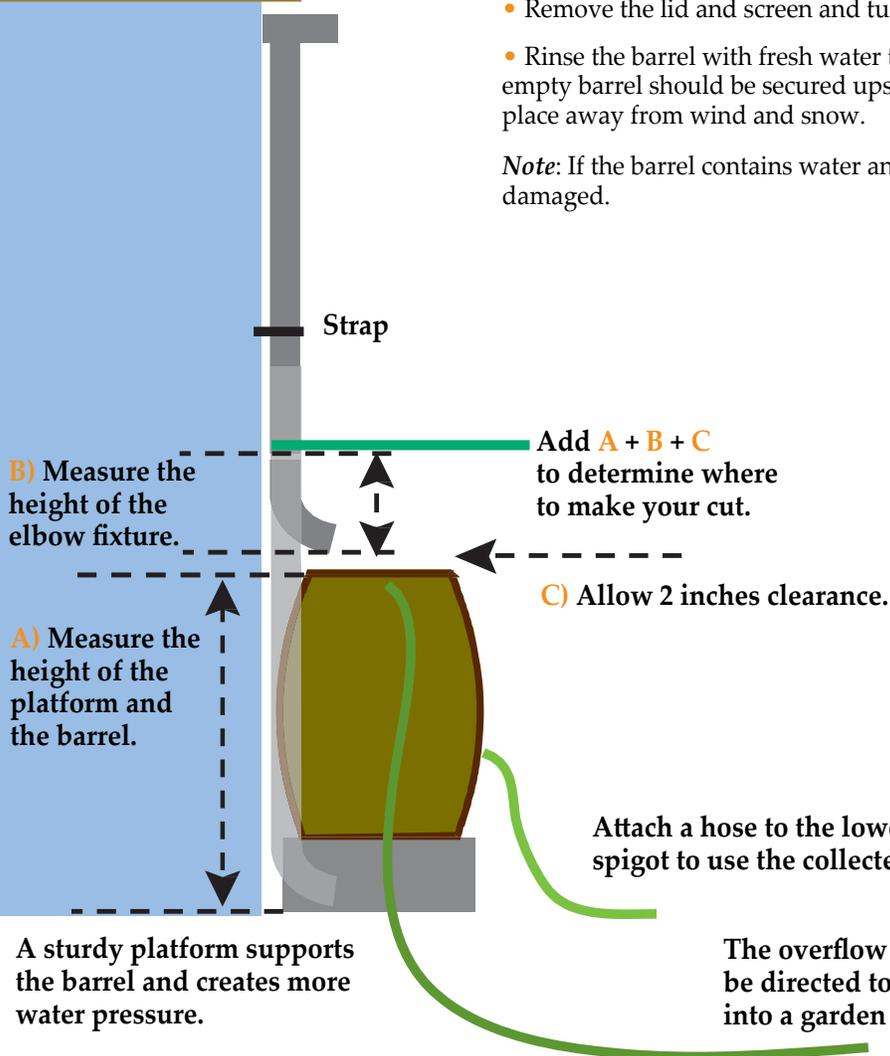
Late spring through early fall

- Visually inspect the barrel to make sure that connections and fittings are in proper working order and the screen is clean of pollen and debris from the gutter.
- When the rain barrel is full, make sure the overflow connector and top valve is open, allowing excess water to overflow into a landscaped bed or lawn area on your property.
- Make sure the screen is securely attached to the barrel to prevent mosquitoes (eggs) from entering the rain barrel.

Late fall before the first hard freeze

- Fully drain the barrel by first opening the water spigot, and then opening the bottom drain plug (if present).
- Remove the lid and screen and turn the barrel upside down to finish draining.
- Rinse the barrel with fresh water to remove any organic debris. The empty barrel should be secured upside down or stored in a protected place away from wind and snow.

Note: If the barrel contains water and freezes, it may crack or become damaged.



Use collected rain water to maintain your gardens. The plants love it!



Open the water spigot and fully drain your barrel before the first winter's freeze.

Resources

Build Your Own: Rain Barrel

Clean Virginia Waterways
www.longwood.edu/cleanva/RainBarrelDirections.html

Take Action: How to Install a Rain Barrel

Chesapeake Bay Program
www.chesapeakebay.net/videos/clip/take_action_rain_barrel

Build a Simple Rain Barrel

Maryland Environmental Design Program
<http://www.dnr.state.md.us/ed/rainbarrel.html>

Learn the issues: Stormwater Runoff

Chesapeake Bay Program
www.chesapeakebay.net/issues/issue/stormwater_runoff

Rain Gardens: A How to Manual for Homeowners

University of Wisconsin-Extension
<http://learningstore.uwex.edu/assets/pdfs/GWQ037.pdf>

RainScapes Four-Part Video Series

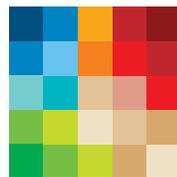
City of Rockville, Maryland
<http://www.rockvillemd.gov/environment/watersheds/rain-scapes-videos>

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www.allianceforthebay.org

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Altria

BayScapes promote environmentally-sound landscaping practices at homes, businesses, and public spaces that conserve water, prevent pollution, and create wildlife habitat for the benefit and restoration of our local waterways and the Chesapeake Bay.



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