

Lake Wise Info Sheet



Shoreland Best Management Practices for Lake-friendly Living

Benefits

- Water Quality
- Prevents Erosion
- Slow, Spread, Sink Stormwater
- Low Cost
- Low Maintenance
- Small Spaces
- Protection & Resiliency

Related Info Sheets:

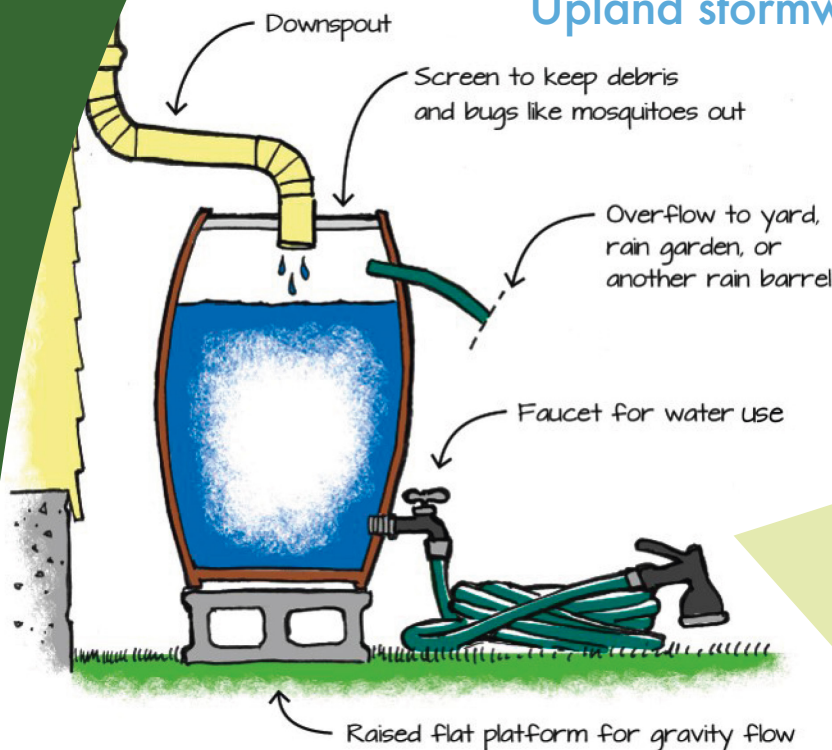
Rain Gardens
Dry Wells
Vegetated Swales
Lake-friendly Yard Maintenance



See NYS DEC for more information

DOWNSPOUT DISCONNECTION & RAIN BARRELS

Upland stormwater management



Section diagram of a gutter downspout emptying into a rain barrel. The VT DEC Guide to Stormwater Management for Homeowners and Small Businesses (2018).

Description

Roof downspouts can be disconnected from surface waters by disconnecting from underground drains or surface runoff and directing flow to a stable vegetated area, another stormwater treatment practice, or by capturing roof runoff in a rain barrel for water reuse.

Applicability

Management of concentrated stormwater flows from gutter downspouts by dissipating flow and directing runoff to a retention area to infiltrate, filter, or reuse water. Space requirements are minimal. Rain barrels allow for rainwater reuse for applications such as perennial plant irrigation and washing cars.

How to: Disconnection

1. Locate an area where roof downspouts could be redirected away from surface waters and towards a stable vegetated area or another stormwater treatment practice, such as a rain garden or dry well.
2. Direct flow from downspout to this identified area either via a downspout extension, vegetated swale, splash pad, or a small rock apron created with large washed crushed stone or on-site rocks to dissipate water flow.

A stable vegetated area is a densely planted area that is not susceptible to erosion. Filter strips or meadows of tall herbaceous perennials, such as grasses and flowers, provide good flow dissipation. Densely planted perennial gardens are also good places to direct roof runoff for passive irrigation.



Department of Environmental Conservation



VERMONT

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION



DOWNSPOUT DISCONNECTION & RAIN BARRELS

Upland stormwater management

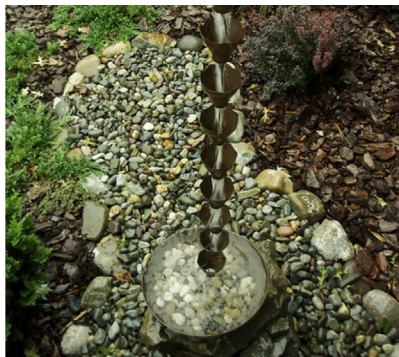
Rain barrels typically hold 55-75 gallons of water. An average roof size in the US is 1,700 square feet, which would yield 530 gallons in a moderate 1/2 inch rainstorm!

Materials

- ☀ Rain barrel(s) - plastic, wood, or clay
- ☀ Overflow hose
- ☀ Mosquito proof screen
- ☀ Raised platform, e.g., cinder blocks

Project Dependent:

- ☀ Downspout extension or elbow
- ☀ Washed crushed stone or local stone
- ☀ Tin snips, hacksaw, or a jigsaw with metal cutting blade for cutting downspout
- ☀ Drill and/or hole saw and parts for spigot and overflow hose barb if not included



A rain chain & rocky flow dissipator.



A rain barrel with gutter extension and splash pad for winter use.

Right: Rutgers Extension, Left: Clemson Extension

How to: Rain Barrels

5. Install a rain barrel under a roof downspout. The downspout may need to be cut to allow the downspout to drain to the barrel. Note that for larger roofs, several rain barrels in a series can be utilized to capture more stormwater.

6. Rain barrel(s) should be placed on a level platform capable of supporting the weight of full rain barrel(s). Note that a full 50-gallon rain barrel weighs approximately 400 pounds. Cinder blocks are a good choice for a platform.

7. Direct the overflow from barrel(s) to a subsequent rain barrel or a stable vegetated area via an overflow hose attached near the top of the barrel.

8. Install a mosquito proof screen on the top of the rain barrel(s) to prevent debris like leaves or insects from entering the barrel(s).

Maintenance

For disconnections to vegetated areas or other stormwater treatment practices, inspect the area for erosion following large storm events and repair any damage. Add stone to prevent further scouring. Plant with dense groundcover species.

Drain rain barrels between storm events to maximize the amount of storage available. Clean out gutters in fall and spring. Clean debris out of rain barrel(s) regularly. Drain and store rain barrels upside down in the winter and inspect for cracks each spring, which can likely be repaired.

More information

- 💧 [RethinkRunoff.org](https://rethinkrunoff.org) - Install a Rain Barrel video & step-by-step photo guide
- 💧 NYS DEC Stormwater Management Design Manual (2023, Ch. 5)
- 💧 Contact your County Soil & Water Conservation District for assistance



Department of
Environmental
Conservation

