

Rain Barrel Workshop
Sunday, November 22, 3:00 p.m.
Sustainable Stillwater & Sierra Club Stillwater

How Much Water?

A 1,000 sq. ft. roof will collect 650 gallons of water during a 1” rain event, however you will be limited by your storage capacity.

Hershey’s Water Cost

- Approximately \$17 per month for about 5,500 gallons of water (includes outdoor water use for some landscape and potted plants; however, water is not currently being used on lawn and there is no vegetable garden yet).
- For a more typical household, lawn and garden watering make up nearly 40% of total water use during the summer

Hershey’s Water Savings

- At 17 cents per barrel, the Hersheys would need to use water from 100 55-gallon barrels to save \$17.
- A rain barrel will save most homeowners about 1,300 gallons of water during peak summer months [Source: Maryland Green Building Program].

Other Benefits

- The Hersheys will be adding a vegetable garden to their yard in spring, so the rain barrel water should cover this extra usage at no additional cost.
- Rainwater carries nutrients that plants love and does not contain chlorine or fluoride, which is added to tap water.
- Rainwater is naturally soft and contains no lime or calcium, which makes it ideal for gardens, flower pots, car and window washing.
- Using rain barrel water during droughts lessens the community’s burden.
- Water collected in rain barrels is kept from flowing over paved surfaces, picking up pollutants, entering a storm drain, and eventually discharging into local waterways.

Tips

- Use food-grade quality barrels.
- Use a screen to control mosquitoes and debris.
- Increase water pressure by raising rain barrels on blocks or a stand.
- Attach a downspout adapter (diverter) that will allow you to direct water to either the barrel or the downspout.
- Divert the ‘first flush’ of a rain event to the downspout to force the dirtiest of the runoff to bypass the barrels.
- Use a soaker hose to deliver rain water to soil around edible plants if there is concern about rooftop contamination.
- Route any overflow away from house foundation; overflow can be directed to a rain garden.
- Have a use for the rain water, even if simply draining slowly through a soaker hose. It should not sit in barrels indefinitely.
- Empty and disconnect barrels at least once per year and clean with soap and water.
- Periodically remove accumulated debris in the rain barrel.
- Periodically drop in a capful of bleach; this will not hurt plants.
- Rain water collected off the roof is not potable; take extra precautions when children are present and do not use for pets.
- Some roofs, such as old tar and gravel or old asbestos shingle roofs create too much contamination for rainwater harvesting as do gutters with lead soldering or lead-based paints [rainbarrelguide.com].
- Freezing water can cause barrels to crack or deform. When the temperature is below freezing, disconnect the barrels and divert water directly to the ground.

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Basic Configuration for a Double Barrel System:

Quantity	Description	Price
2	Food grade 55 gallon plastic barrels*	\$20.00
2	3/4" boiler drain spigots	17.66
1	90 degree PVC connector (for water outlet)	3.47
6"	3 inch PVC pipe (to form bridge between two barrels)	3.00
1	Stainless steel kitchen colander (to act as filter)	1.97
12	Concrete cinder blocks (1.18 each)	14.16
1	Pipe wrap insulation tape (to wrap outlet joints)	3.97
4	Hinges	1.52
1	Tube of gutter sealant	3.79
1	Black plastic flex hose (connect water outlet to downspout)	1.79
1	Aluminum Y-shaped diverter (divert water to barrel) est.	20.00
1	Black plastic Y adaptor (connects outlet to drainage pipe) est.	8.00
	Miscellaneous downspout sections and connectors, est.	30.00
	TOTAL →	\$129.33

Optional Additional Components:

Quantity	Description	Price
1	Spray paint for barrels (adheres to plastic)	\$4.97
1	Bag paver sand (to form foundation)	6.56
2	Bags gravel (3.47 each; to form foundation)	6.94
12'	Black plastic flex drain tube	7.98
1	Expanded metal (24" x 51") placed on top of cinder blocks	26.00
1	4 inch pop-up emitter (end cap for lawn drainage)	13.76
1	24" x 1/2" x 51" plywood (to cover barrels)	8.94

*Rain barrels from "Barrel Man" in Agra, on east side of main road (purchased several years ago).



Foundation of sand, gravel, cinder blocks, and a sheet of expanded metal.



Hole in barrel for water inlet. Colander strains leaves. Hinged half-moon access panel is cut in top of barrel.



Y-shaped diverter section in 3" x 4" downspout. Lever diverts water either toward barrels or underground drain.



Complete system with plywood guard on top of barrels to protect from leaves. Flex hose from barrel outlet connects to plastic Y-adapter.