



# The Benefits of a Rain Barrel

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## What is a Rain Barrel?

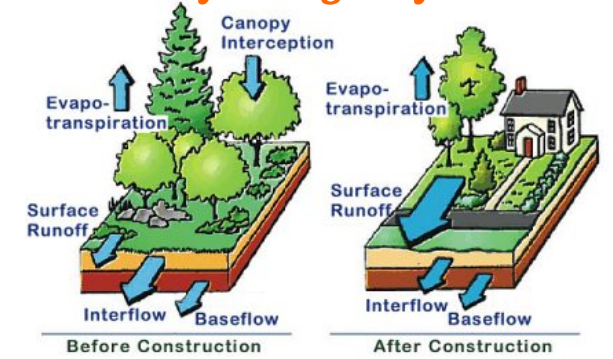
A  
rain  
barrel is  
a rainwater  
collection system  
that stores rooftop  
runoff to be used later  
for activities such as lawn  
and garden watering,  
even car washing and  
window cleaning  
!!!!!!

## The Benefits!

- ◆ Clean, Pure Water
- ◆ Protect Our Natural Resources
- ◆ Reduce Stormwater Runoff

- ◆ Lawn and garden watering makes up 40% of total household water use during the summer.
- ◆ Your plants will love it. Rain Barrels provide pure, natural rainwater.
  - ◆ Rain Barrels help promote infiltration of water into the water table. Water that would otherwise be lost to stormwater runoff.
- ◆ What is Stormwater? Stormwater is the water that is shed from impervious surfaces.
- ◆ Impervious surfaces (like rooftops, sidewalks, roads, and parking lots) repel water and prevent precipitation from being absorbed by the ground. This causes stormwater runoff.
  - ◆ Stormwater Runoff has detrimental effects on our streams. Stormwater causes accelerated erosion, contributing to increased sedimentation in our streams.
  - ◆ Stormwater also picks up pollutants as it flows across roads, sidewalks, and driveways and then carries it to our local streams and eventually to the Chesapeake Bay.

## Hydrologic Cycle



<http://www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/home/index.asp>

The hydrology of a site changes during the clearing and grading that occurs during construction.

Trees, grasses and crops that intercept and absorb rainfall are removed and are replaced with impervious surfaces which reduces groundwater infiltration and increases stormwater runoff.



Areas in **RED** indicate impervious surfaces in a typical neighborhood.

One inch of rain that falls over 1 square feet of impervious surface creates .6 gallons of water. A roof of 2000 square feet would produce 1200 gallons of water per 1 inch storm.

## Materials Supplied

- 1- 32 Gallon Trash Can
- 1- Hose Bib or Spigot
- 1- Rubber Gasket O-ring
- 1- Nut
- Screen- Mosquito Control

## Tools Needed

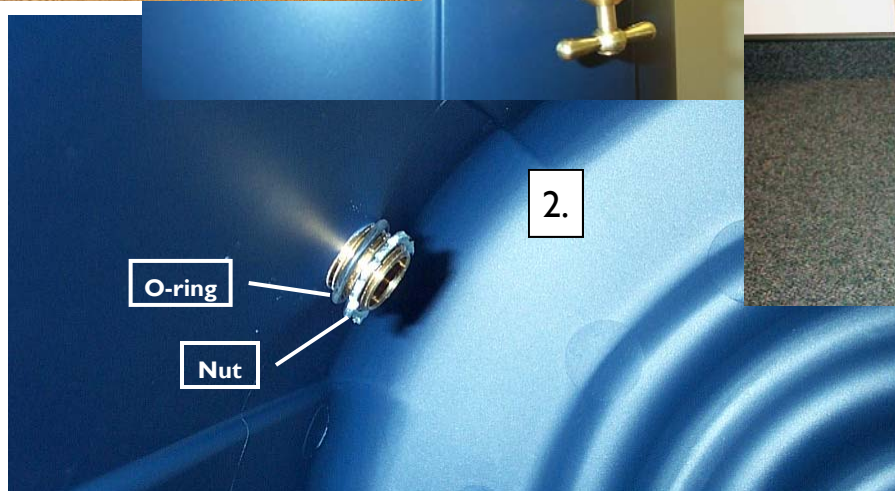
- Wrench
- Hack Saw
- Utility Knife
- Elbow Grease



4.



1.



2.

O-ring

Nut

## Construction

1. Screw hose bib into hole that is drilled near the bottom of the trash can.
2. From the inside of the trash can, insert O-ring, thread nut onto hose bib, and tighten.
3. Place the trashcan on some cinderblocks, pavers or other stable surface underneath of downspout. The rain barrel will weigh over 250 lbs when full. The higher the trash can sits, the more “head pressure” or force exerted on the water from the spigot. Cut an opening in the lid with a utility or other sharp knife to accept the downspout.
4. Place the screen over the top opening of your rain barrel and secure the lid tightly over the screen.
5. Redirect downspout into opening in the lid. Cut downspout as necessary. Remember to check and clear the screen of any debris on a regular basis.

## Mosquito Control

Mosquitoes carry West Nile Virus. You have been provided with screen for mosquito control. The screen will prevent breeding mosquitoes from laying eggs in your rain barrel. A screen will also filter any debris that may get washed down from your gutters as well.

To control mosquitoes after they have hatched, use Bacillus thuringiensis israelensis or Bti. Bti is a highly selective bacterial toxin that affects only mosquito and black fly larvae before they hatch out of the water. Bti will not control the adults. Bti can be purchased from any home and garden supply store.



## Other Options

You can attach another hose bib near the top of the rain barrel as an over flow valve. The over flow can either be directed away from your house and foundation or to another rain barrel for more collection.

## CAUTIONS

Rain barrels will need to be managed. If you don't have an overflow, make sure you empty the rain barrel before a rain event. For winter, be sure to empty the rain barrels and re-attach the downspout.