



# Rain Barrels: Environmental benefits and use in the home landscape

**Regina Kukola, AmeriCorps Watershed  
Ambassador**

**Host Agency: Rutgers University Cooperative  
Extension**

Adapted from the Northern Virginia Rain Barrel Program



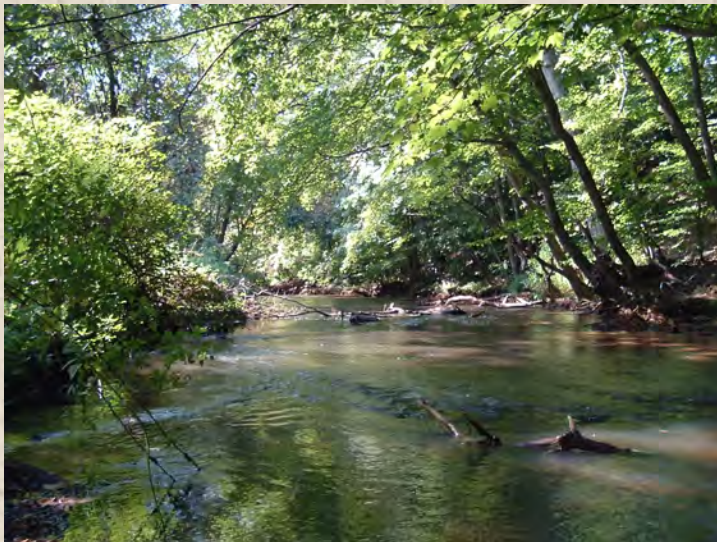
# Today's Workshop

## Sponsors:

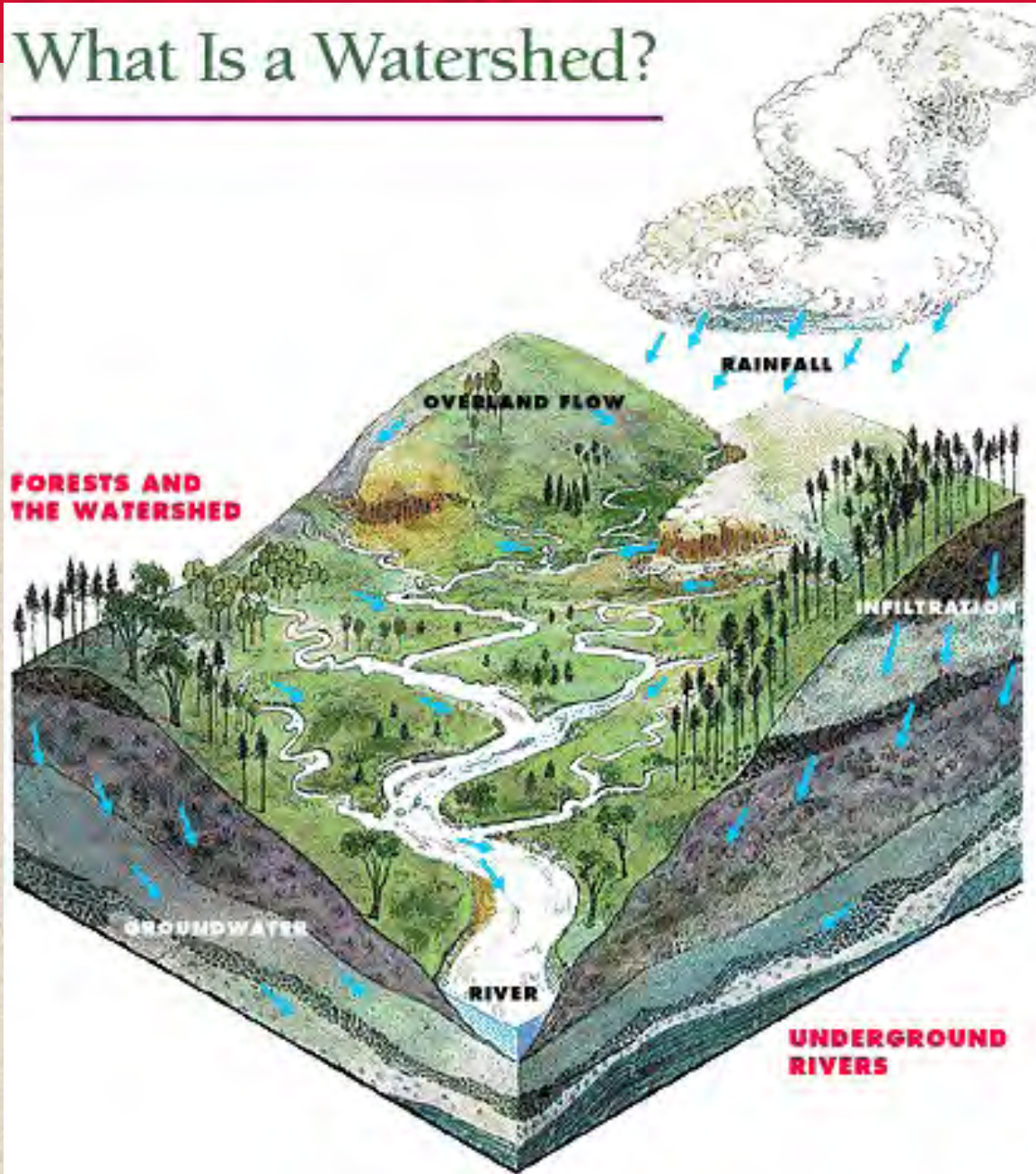
- **AmeriCorps Watershed Ambassador Program**
- **Gloucester County Community Impact Council**
- **Rutgers Cooperative Extension of Camden County**

# NJ AmeriCorps Watershed Ambassador Program

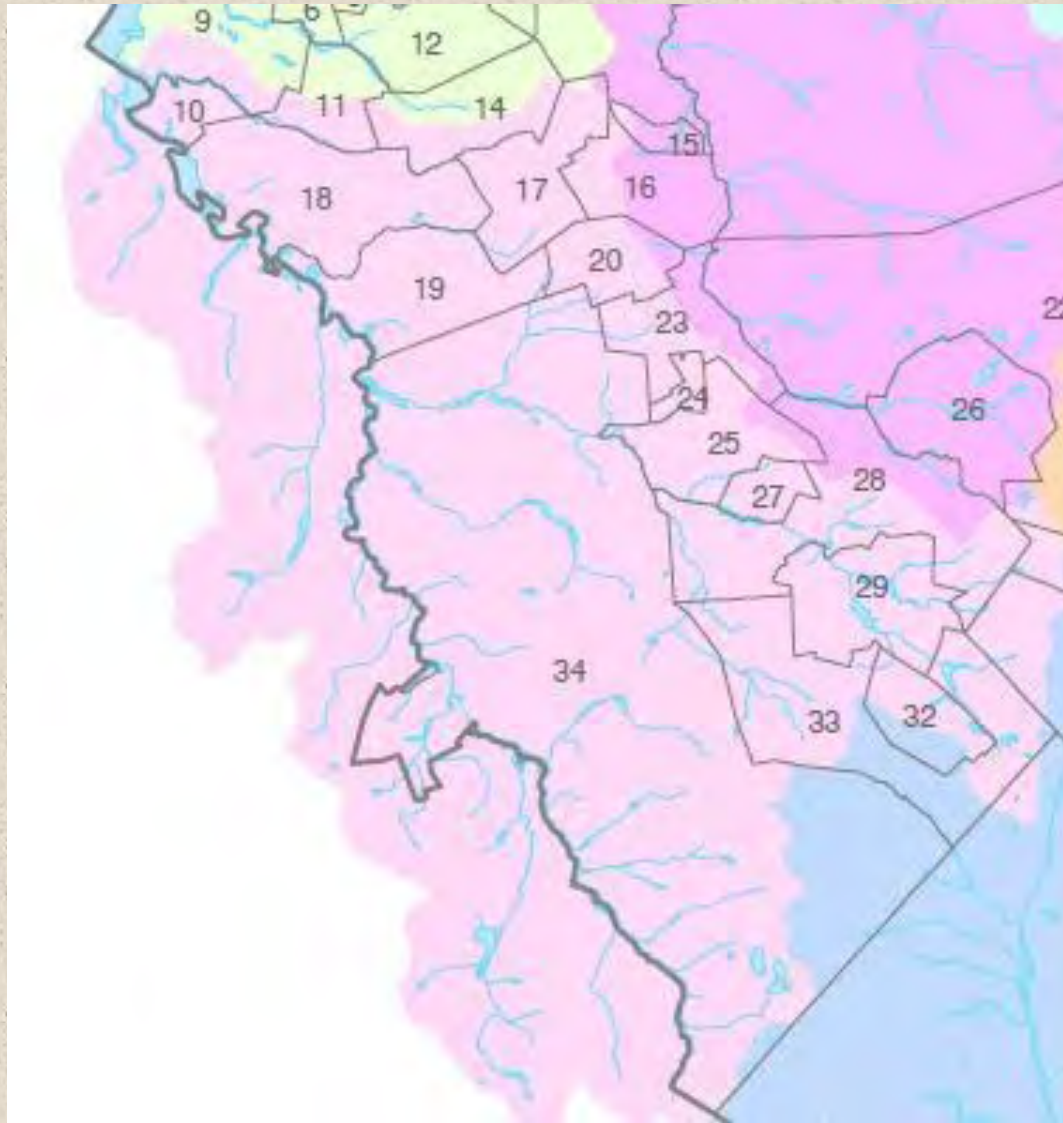
- Environmental Education
- Stream Monitoring
- Community Outreach



# What Is a Watershed?







# Gloucester Township Community Impact Council

- Volunteer organization open to all residents of Gloucester Township.
- Open forum meetings are held monthly at the Gloucester Township Municipal Building
- Every idea is welcomed and will be heard, whether it is an neighborhood area or within the township, such as a park, field or empty lot, that may need attention.
- The CIC also partners with other groups and organizations from Gloucester Township to participate and assist with various projects and events.
- [communityimpactcouncil@comcast.net](mailto:communityimpactcouncil@comcast.net)

# Rutgers Cooperative Extension

- **Master Gardeners Program**
- **Soil Testing**
- **4-H**
- **Nutritional Programs**



**Rain barrels collect water for use in gardens and around the home.**



**Helps manage water coming out of your gutters**

# Rain Barrel Benefits

- Your plants will love it
- Conserve water
- Reduce runoff
- Convenience
- Protect your landscape
- Save Money



# Rain Barrels Conserve Water

How many gallons of rain water comes  
from a single rooftop?



Photo by: SharkeyinColo

**1<sub>in</sub> rainfall event = 500 gallons**

**1 – 50 gal rain barrel saves 10%**

**42<sub>in</sub> rainfall per year = 20,950 gallons**

Based on a Roof area of 800 ft<sup>2</sup> (40' x 20' )

# Reduce Rain Water Runoff



# Reduce Rain Water Runoff



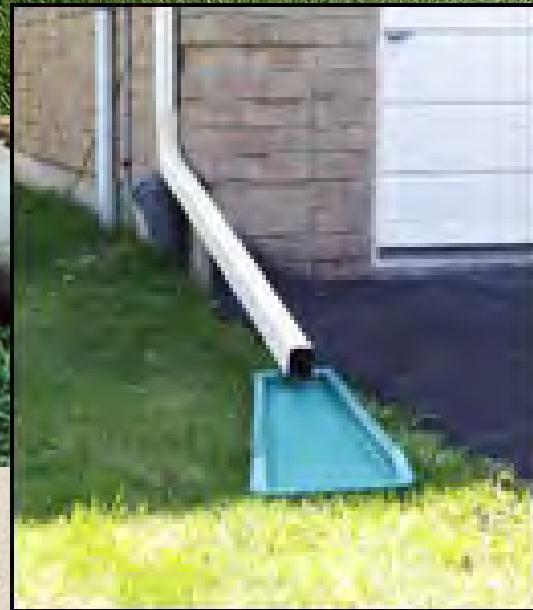
# Reduce Rain Water Runoff



For example:

$$\begin{array}{r} 20 \\ \text{Rain Barrels} \end{array} \times \begin{array}{r} 1300 \\ \text{gallons/} \\ \text{year} \end{array} = 26,000 \text{ gallons/} \\ \text{year saved!!}$$

# Downspout Disconnection



# Other ways to save water

## *Outdoor*

- Native plants
- Mulch around plants
- Low flow garden hoses



## *Indoor*

- Look for EPA WaterSense logo
- WaterSense toilets (20% less water)
- Energy efficient dishwashers and washing machines (50% less water)
- WaterSense showerheads (40% less water)
- Faucet aerators

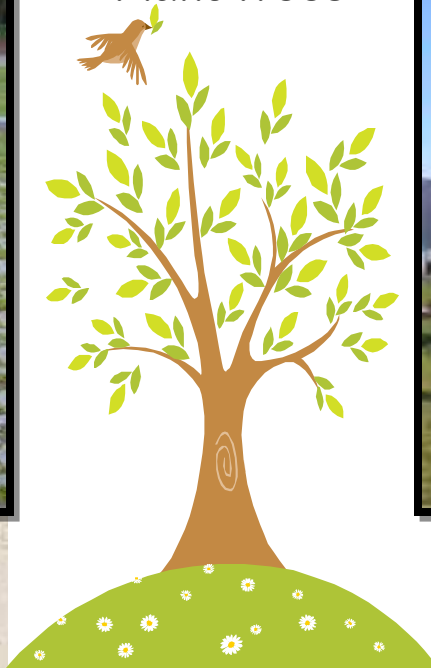




# What are some other ways you can do your part?



Plant Trees



Install Porous Pavers

Install Rain Gardens

Photo Credit: *Karen Firehock & Dave Hirschaman*

# Use of the Water

- Do not use rain barrel water for cooking or drinking
- Do not collect rain water if you have used a moss-killer on your roof



Photo by: BugSpray.com

# Use of the Water

- Water your ornamental gardens, rain garden or indoor plants
- Use water within a week or two to discourage algae growth
- Use water before next rain is expected or connect to soaker hose in garden
- Wash the dog, car or muddy feet
- Use in birdbaths

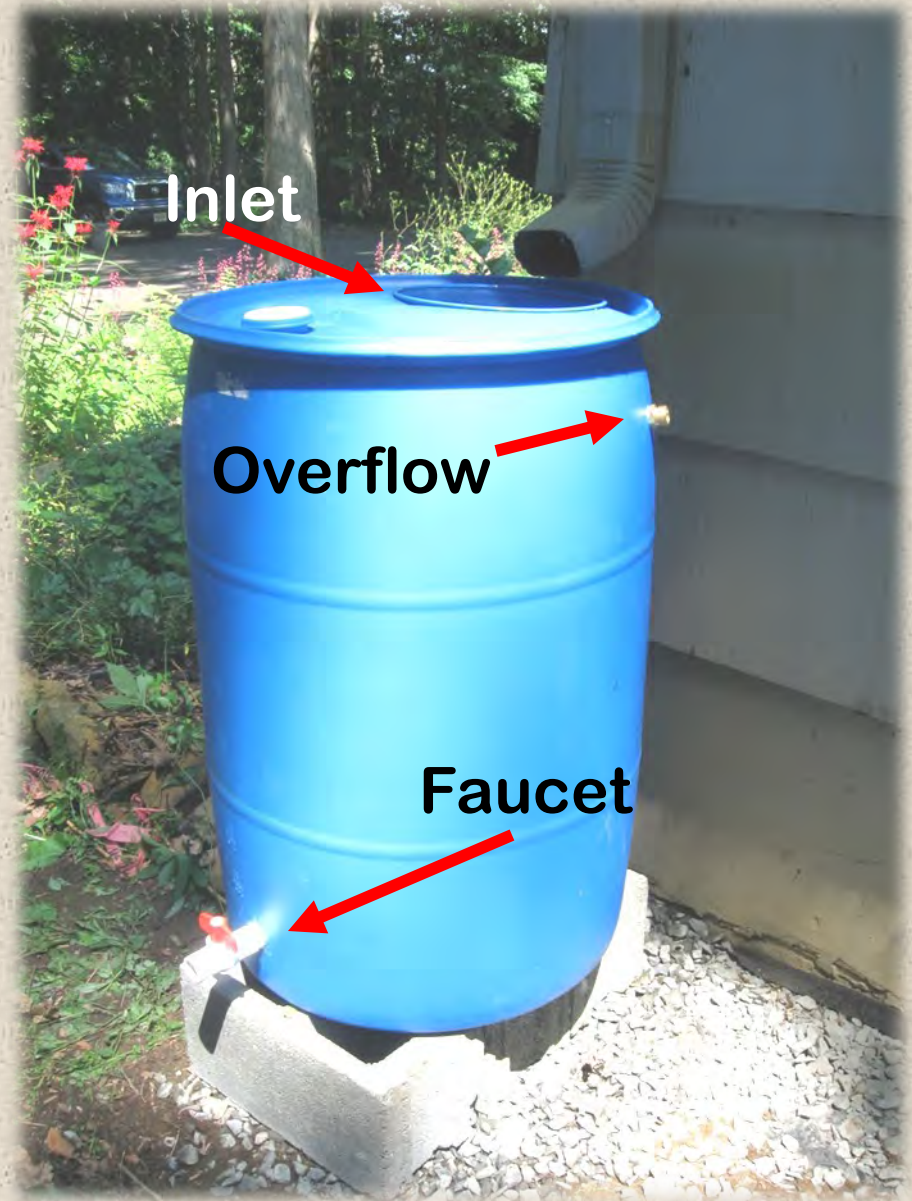


# Use of the Water

- Vegetable Gardens and/or Koi Ponds  
Have water tested before use



# Let's Build a Rain Barrel!



**Two types of plastic food grade 55 gallon barrels are typically used to make rain barrels:**

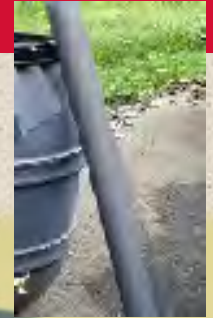


**closed top and screw top.**

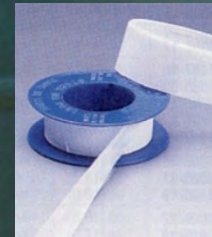


**Closed top (left) and screw top (right)**

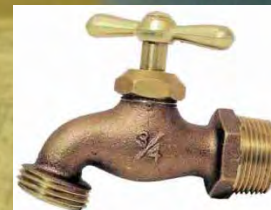
# Supplies



- ✓ 55 gallon plastic drum
- ✓ For top of barrel:
  - ✓ Dome food cover (optional)
  - ✓ Gray fiberglass screen
- ✓ For overflow at top of barrel:
  - ✓ Hose adapter (male, 3/4 in.)
  - ✓ Sealing locknut, 3/4 in.
  - ✓ Thread seal tape
  - ✓ Silicone caulk



- For faucet at bottom of barrel:
  - ✓ Brass faucet (male, 3/4 in.)
  - ✓ Sealing locknut, 3/4 in.
  - ✓ Thread seal tape
  - ✓ Silicone caulk



# Tools

✓ For top of barrel:

- ✓ Jigsaw (aka sabresaw) to cut opening on top of barrel
- ✓ Scissors to cut screen

✓ For faucet at bottom of barrel:

- ✓ Drill with hole saw (1" diameter) for drilling faucet hole
- ✓ Pliers for tightening adapters
- ✓ Gloves for spreading caulk
- ✓ Paper towels for excess caulk

✓ For overflow at top of barrel:

- ✓ Drill with hole saw (1" diameter) for drilling overflow hole
- ✓ Pliers for tightening adapters
- ✓ Gloves for spreading caulk
- ✓ Paper towels for excess caulk





# Safety first !

Wear safety glasses and gloves when cutting or drilling your barrels.



# Use jigsaw to cut opening

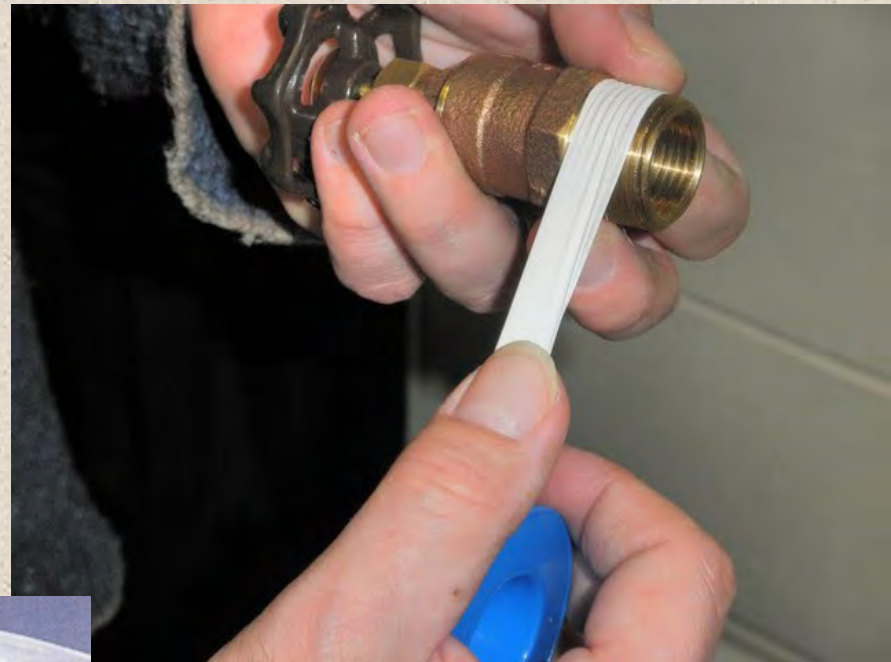
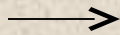


# Drill hole for faucet



**Think before you drill – measure twice, cut once!**

# Put thread seal tape on faucet



# Caulk around threads on top of tape



# Screw faucet in

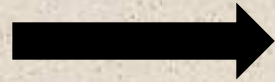


**Keep the faucet straight as you screw it in**

Put caulk around threads, then screw  
lock nut on inside of barrel



But  
how?



# Lock nut being put in place (using fingers and pliers)



Technique for screw top and closed top barrels.



# Faucet is done!



# Where do you want to put the overflow?



# Drill hole for overflow



# Put thread seal tape on hose adapter fitting



# Caulk around threads of overflow fitting



# Screw overflow in



# Caulk around threads on inside of overflow fitting and screw lock washer on



# Cut gray window screen to desired length





**When you  
get your  
rain barrel  
home...**



# 1. Prepare the Area Under Your Downspout for the Rain Barrel



- ✓ Level the dirt under your downspout
- ✓ Add some sand, gravel or crushed stone as needed

# Create a Raised Platform to Set Your Rain Barrel On



- ✓ Rain barrel needs to be higher than ground level
- ✓ Build a platform using bricks, cinder blocks, or pressure treated wood

## 2. Put the Rain Barrel in Place



# 3. Cut Off Part of Downspout



Hacksaw

- ✓ Measure twice, cut once!
- ✓ Use hacksaw

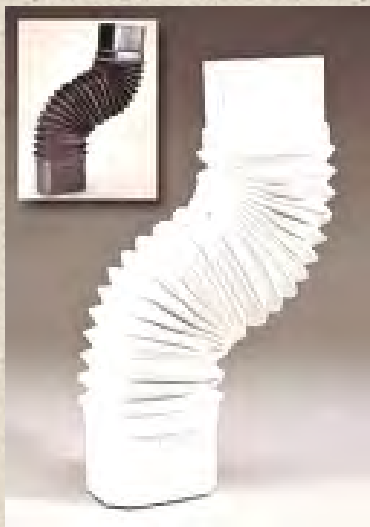
# Use Hacksaw to Cut Downspout



## 4. Re-attach the Curved Downspout End Piece



# Flexible downspout option



<http://www.clermontswcd.org/Rain+Barrel+Care+and+Installation.pdf>



<http://www.clermontswcd.org/Rain+Barrel+Care+and+Installation.pdf>





## 5. Re-attach the Downspout Strap



## 6. Attach Garden Hose to Overflow

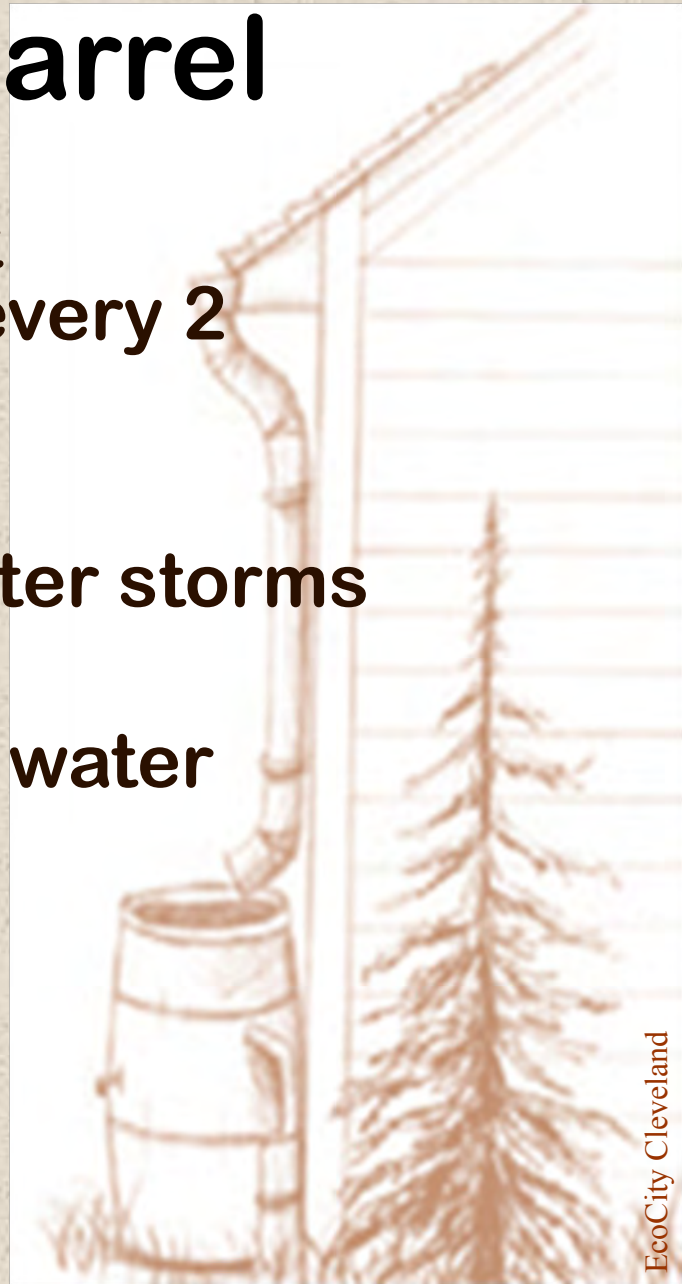


# 7. Add Mosquito Dunk or Vegetable Oil



# Care of Your Barrel

- **Keep screen on top to prevent mosquitoes – change screen every 2 years**
- **Remove debris from screen after storms**
- **Clean out with long brush and water**
- **Diluted 3% bleach solution**
- **Winterize rain barrel**



# Winterizing Your Rain Barrel

- **Disconnect downspout from rain barrel;**
- **Drain rain barrel & leave faucet open;**
- **Store barrel inside, turn upside down, or cover top;**
- **If left outside, tie down to prevent blowing over.**

# Flexible Pipe Is Very Handy



[www.nerainbarrel.com/FAQ.html](http://www.nerainbarrel.com/FAQ.html)



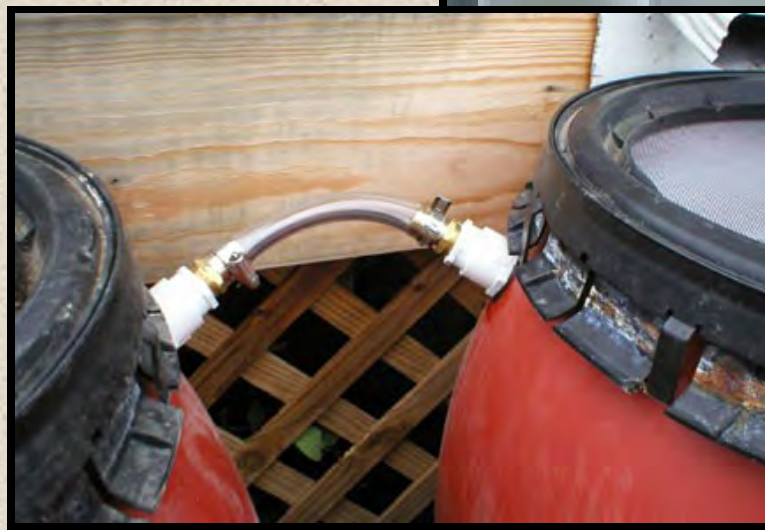
[www.clermontswcd.org/Rain+Barrel+Care+and+Installation.pdf](http://www.clermontswcd.org/Rain+Barrel+Care+and+Installation.pdf)

# Barrel Options

Increase storage capacity by using rain barrels in a series

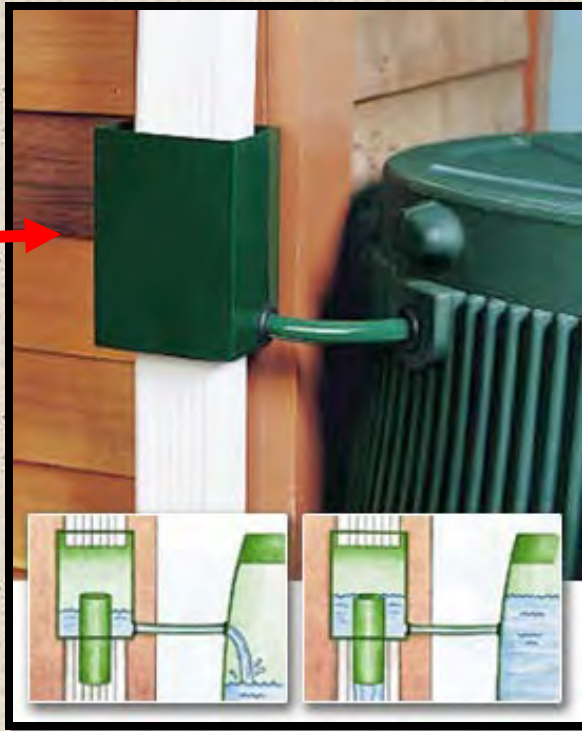
Elevate the barrels for better water pressure

Modify the installation design for your needs



# Some Tips

- Use a diverter
- Automatic or manual



Example of automatic diverter



Example of manual switch diverter



# So Many Barrels to Choose From...



# Be creative!

Paint or landscape around your rain barrel



## Painting your rain barrel :

- 1) clean outside with 50/50 vinegar & water mix
- 2) go over outside with mild abrasive pad
- 3) base of primer for plastic
- 4) exterior enamel paint or paint for plastic



Mild abrasive pad



Primer for plastic



Paint for plastic



## Non-paint example of Rain Barrel Decoration



# Questions?



# Credits

- Arlington County Department of Environmental Services
- Clean Virginia Waterways
- Rutgers Water Resource Program, *“Stormwater Management in Your Backyard”*.
- New Jersey Water Conservation Program
- New Jersey Sea Grant
- USDA CSREES Regional Water Program

