



## Tis' the Season to Conserve Water Conserving Water is Not Just for Summer

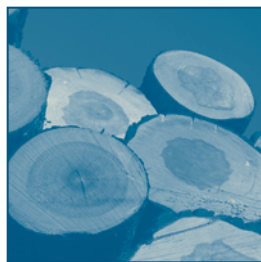


*Looking for ways to conserve water is an excellent thing to begin during the cooler months.*



Photo by DNERR

*The Blackbird Reserve is a wonderful place to go to enjoy the outdoors this fall.*



*The paper used to make this newsletter is certified that it was produced in an environmentally friendly way.*

Often we think about conserving water in the hot summer months, however, fall and winter are wonderful times to work on water conservation indoors. How we use water in our homes and workplaces can really make a difference for the environment and our wallets. According to the United States Geological Survey (USGS), the average American uses about 80 – 100 gallons of water a day but only a small amount of that is used for cooking and drinking, leaving room for a great deal of conservation. Conservation does not have to be expensive, difficult, or inconvenient; in fact, anyone can do it and everyone should do it! By saving water, you will protect the environment, and you will also save money on your water, sewer, and energy bills. Check out the tips below that will make a big difference in conserving water during the cooler months!

- Check for leaks in faucets and toilets. The USGS estimates that a leaky toilet can waste about 22 gallons of water per day. That's more than 8,000 gallons per year! To check for leaks in your toilet, drop food coloring into the tank. If after a few minutes color appears in the bowl, you have a leak.
- Install an aerator on each faucet and a low flow shower head which can reduce water flow by 50-75%.
- Put a quart size plastic bottle filled with sand or stones in your toilet tank to displace and save many gallons of water a day. Just be sure that it's not in the way of your flush mechanism.
- Don't use toilets as trashcans or ashtrays. Each unnecessary flush wastes water!

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Appoquinimink  
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# The Blackbird Reserve

## A Great Place to Explore the Outdoors

Looking for somewhere to go with your family this fall that is both fun and educational?

Then visit the Blackbird Creek Estuarine Research Reserve outside Townsend on Blackbird Landing Road. It is open all year round and contains sections that are open to the public to enjoy. The reserve is about 1,180 acres containing a variety of ecosystems. It contains the Blackbird Creek itself, tidal marches, wetlands, meadows, parts of the Blackbird State Forest, crop lands, and about 46 private homes. It has many varieties of wildlife such as deer, birds, aquatic animals and a thriving population of wildflowers, shrubs, and trees. The Blackbird Reserve is managed by the Delaware National Estuarine Research Reserve (DNERR) program, which is a cooperative program between the Delaware Department of Natural Resources and Environmental Control's (DNREC) Division of Soil and Water Conservation-Delaware Coastal Program and the National Oceanic and Atmospheric Administration. The purpose of the DNERR program is to protect and manage estuarine habitats for both education and research.

A newly constructed kayak and canoe launch has been added to the Blackbird Reserve and is open to the public. With the new kayak/canoe launch and the already existing trails, the Blackbird Reserve is a great place to get back to nature, whether you enjoy bird watching, boating, nature photography, hiking or simply taking a leisurely stroll to enjoy your natural surroundings! With the summer season ending soon and the fall season ready to produce all of its wonderful colors, there is still plenty of time to do some outdoor activities before winter settles in. So why not come to the Blackbird Creek Reserve? You may just find yourself in awe of nature's splendor!

For more information on the Blackbird Reserve, call DNERR at (302) 739-4403.



Photo by DNERR.

# Forest Stewardship Council

## How River Watch Has Become Greener!

As the world is embracing the concept of “going green” and phrases like “environmentally-friendly” are found on more and more products, it can be hard to know which products are truly helping to conserve our natural resources. That is why the Forest Stewardship Council (FSC) developed a unique environmental certification system for any product made of pulp or paper. This system allows professionals and consumers to know they are doing the right thing, and using companies that promote responsible forest management practices. In the end, the system's goal is to eliminate producers who cause habitat destruction, water pollution, displacement of indigenous peoples and violence against people and wildlife that often accompanies irresponsible logging practices.

In order for the ARA to be able to use this designation on our newsletter, the management of the paper used had to be validated along the process of production from the FSC-certified forest, to a paper manufacturer, merchant and



finally the printer. Certification is done through an independent, third-party certifier that evaluates both on-the-ground forest management activities as well as the tracking of forest products. If interested, forest landowners contact an accredited FSC certifier to begin the certification process. The process entails assessing management practices against the FSC standard practices required, talking to the general public about the company's practices, signing a certification contract for a five year duration and monitoring the company's practices on an annual basis. For the companies that manufacture products from this wood, certification entails tracking materials back to a FSC-certified forest.

This system helps to promote a relationship between consumers and environmentally safe forest management processes, which the ARA believes is an important step towards much needed conservation. Keep in mind, in the United States, the largest market for paper products in the world, 25% of timber cut (by volume) annually is still used for paper production. So look for the FSC logo the next time you go to buy paper products and help conserve our natural resources!

## What Do I Need to Get Started?

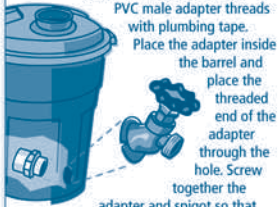
All of the following items can be purchased at your local hardware store for a **total cost of around \$30** depending on the type of trash can and brand of fittings you purchase.

- Outdoor trash can with lid (any size will work – the larger, the more water you will collect)
- Downspout flex-elbow
- 6 inch atrium grate
- Sump pump drain hose kit (kit includes: one ¼ inch, 24 ft. hose, and one 1 ¼ inch insert male adapter)
- 1 ¼ inch PVC female adapter
- ¾ inch spigot with sillcock
- ¾ inch PVC male adapter (do not get CPVC male adapter)
- Electric drill
- 1 inch drill hole saw (type of drill bit)
- 1 ½ inch drill hole saw (type of drill bit)
- File
- Silicon caulk
- Plumbing tape (also known as Teflon tape)
- Felt tip pen
- Utility scissors or utility knife
- Hacksaw (for cutting downspout if desired)
- 2-4 Concrete blocks

**STEP 1:** Trace the outline of the top of the atrium grate (largest circle) on the top of the barrel with a felt tip pen. Next, with utility scissors or a utility knife, cut a hole out of the lid by following the traced line. The hole should be snug enough to allow the atrium grate edge to sit on top of the barrel securely without falling in. This allows water to flow into the barrel and keep debris and animals out.



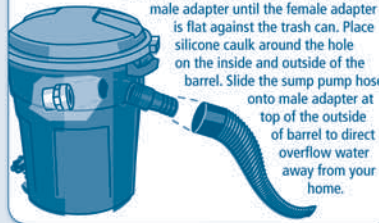
**STEP 2:** Drill a 1 inch hole about 1 ½ to 2 inches from the bottom of the barrel. Leave enough distance between the hole and the barrel's bottom to allow the barrel to sit flat on the ground without the spigot hitting the ground. Insert spigot on outside of barrel. Wrap the ¾ inch PVC male adapter threads with plumbing tape. Place the adapter inside the barrel and place the threaded end of the adapter through the hole. Screw together the adapter and spigot so that the spigot is tight against the trash can. Use silicone caulk to seal the hole on the inside and outside of the barrel.



## 5 Easy Steps to Make a Rain Barrel

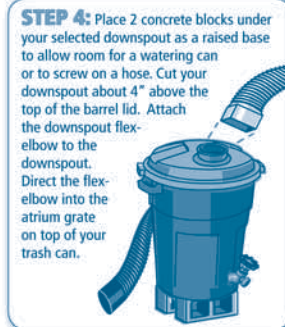
These steps serve as a guideline for the construction of your own rain barrel. Changes can be made based on your personal preferences.

**STEP 3:** Choose the side of the barrel that you want to place your overflow valve, and drill a 1 ½ inch hole about one to two inches below the top of the barrel. Use your file to enlarge the hole enough to insert the 1 ¼ inch male adapter from the outside of the hole. Screw together the 1 ¼ inch female adapter on the inside to the male adapter until the female adapter is flat against the trash can. Place silicone caulk around the hole on the inside and outside of the barrel. Slide the sump pump hose onto male adapter at top of the outside of barrel to direct overflow water away from your home.



**STEP 5:** Congratulate yourself on your hard work and for making a difference in reducing stormwater pollution. Make sure to let all the caulk dry thoroughly before using. Enjoy your rain barrel!

**STEP 4:** Place 2 concrete blocks under your selected downspout as a raised base to allow room for a watering can or to screw on a hose. Cut your downspout about 4" above the top of the barrel lid. Attach the downspout flex-elbow to the downspout. Direct the flex-elbow into the atrium grate on top of your trash can.



## Save Water and Money

### Build Your Own Rain Barrel

Delawareans are embracing rain barrels as a way to save both water and money throughout the year. Rain barrels are containers that collect and store the water from roofs and downspouts for future uses such as watering lawns, gardens, and house plants; cleaning off gardening tools; and washing your car. Rain barrels help to lower your water bills by collecting thousands of gallons of free water a year!

Rain barrels are also important for our environment because they help reduce water pollution by decreasing the amount of stormwater runoff reaching our streams and rivers. Think about it. The average rainfall of one inch within a 24 hour period can produce more than 700 gallons of water that run off a typical house! While it's running from our homes and lawns, this stormwater picks up anything on the ground such as litter, excess fertilizer, pet waste, and motor oil and transports it to storm drains that DO NOT treat the water before dumping it directly into our waterways. So, rain barrels play an important role in protecting our water resources by collecting the stormwater runoff from our homes before it reaches our local streams and rivers.

Using rain barrels is a great way to decrease your household's impact on local waterways and to help you become a good steward of our local waterways. Check out the graphics above to learn how to make your own rain barrel by following a few simple steps.

## Conserving Water

*Continued from page 1*

- Keep drinking water in the refrigerator instead of running water from the faucet until it is cold.
- Add garbage to the trash or composter instead of using a garbage disposal, which uses lots of water and adds unnecessary solids to waste systems.
- Run full loads in your dishwasher and don't pre-rinse your dishes before putting them in. Do both and you'll save up to 20 gallons of water per dish load, or 7,300 gallons over a year. That's as much as the average person drinks in a lifetime.
- Instead of letting the water run when you brush your teeth, brush while you're waiting for the water to get hot for your shave. You could save up to 1,825 gallons of water per "brushsaver" each year. This much water would fill your bathtub more than thirty-five times.

# Just for Fun . . . . . A CRYPTOGRAM

A cryptogram is a puzzle where a sentence is encoded by substituting the actual letters of the sentence with numbers. The challenge of the puzzle is to 'decode' the letters to reveal the sentence.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
		9												15	13			5							

$\overline{1} \overline{20} \overline{11} \overline{23}$      $\overline{2} \overline{20} \overline{1} \overline{1} \overline{25} \overline{19} \overline{5}$      $\overline{10} \overline{25} \overline{19} \overline{13}$      $\overline{9} \overline{15} \overline{23} \overline{5} \overline{25} \overline{1} \overline{14} \overline{25}$      $\overline{21} \overline{20} \overline{8} \overline{25} \overline{1}$      $\overline{20} \overline{23} \overline{3}$   
 $\overline{1} \overline{25} \overline{3} \overline{16} \overline{9} \overline{25}$      $\overline{5} \overline{8} \overline{15} \overline{1} \overline{12} \overline{21} \overline{20} \overline{8} \overline{25} \overline{1}$      $\overline{1} \overline{16} \overline{23} \overline{15} \overline{6} \overline{6}$   
 $\overline{16} \overline{5} \overline{25}$      $\overline{8} \overline{10} \overline{25}$      $\overline{1} \overline{20} \overline{11} \overline{23} \overline{21} \overline{20} \overline{8} \overline{25} \overline{1}$      $\overline{8} \overline{15}$      $\overline{21} \overline{20} \overline{8} \overline{25} \overline{1}$      $\overline{26} \overline{15} \overline{16} \overline{1}$      $\overline{13} \overline{19} \overline{20} \overline{23} \overline{8} \overline{5}$

**Answer:** Rain barrels help conserve water and reduce stormwater runoff. Use the rainwater to water your plants!



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