

# Clean Water: A PRECIOUS RESOURCE

## ACTIVITY DESCRIPTION:

An overnight assignment to record the amount of water you use.

## OBJECTIVE:

To learn why water conservation is important.

## AGE GROUP:

Grades 6-8

## MATERIALS:

2 clean gallon jugs (i.e., milk jugs) per student (available at home)

## Introduction:

Do you ever think about how much water you use? 183 gallons are treated every day for each person in the United States. There are an estimated 2.0 million people living in the Albemarle-Pamlico watershed. We all need water to carry on our daily functions. We must remember that the water we use every day is the same water that many people reuse to drink, cook with, and bathe. It is also the same water in which we fish and swim as it reaches the Sounds.

## People and Water - It Adds Up

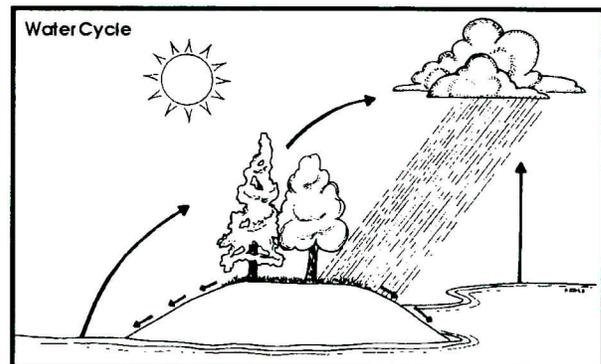
- A toilet flushes 5 gallons
- A dishwasher uses 16.5 gallons
- A bath uses 30-50 gallons
- A shower uses 5-10 gallons/minute
- Washing clothes uses 40-60 gallons (permanent press uses 12-18 more gallons)

## Water, Water Everywhere?

People today use much more water than they did in times past. Did you know the amount of water in the world today is the same as it was billions of years ago? While from a spaceship, our Earth looks like it is mostly water, only one percent of all water is freshwater we can use. Cities, industry, and agriculture have huge water demands. Our streams and rivers have limited amounts of water during dry weather. Some of our streams contain mostly treated sewage. Since these streams are home for wildlife and we use them to fish and swim, cleaning wastewater before it reenters our streams and rivers is of vital importance.

## Wastewater Treatment

For those of us living in a town, whenever we turn on a faucet or flush a toilet, we send water to a sewage (wastewater) treatment plant. A well-



engineered wastewater treatment plant that is not overloaded does an excellent job of cleaning wastewater. It is important to think about what you pour down the drain because wastewater treatment plants cannot take out all harmful things. Examples include paint products, solvents, or gasoline.

Human waste is also a big problem. Some homes use septic systems to handle their sewage. But if the septic tank is not cared for, it can overflow with nutrient-rich sewage. In more populated areas, human waste is treated at sewage treatment plants to produce clean water. Some sewage treatment plants clean the water well before returning it to our rivers, but some do not. These rivers, often containing nutrients, eventually flow into the Sounds.

## Clean Water = Clean Sounds

With so many people using water, some treatment plants have become overloaded. So much water is coming into these plants that it cannot be adequately cleaned. Remember, everything you pour down the drain goes to your septic system or a wastewater treatment plant, which may not be able to take out all of the harmful things. As a result, the water that enters the Sounds is not clean and can even be unhealthy.

### Why Conserve Water?

As droughts of past years have demonstrated, our water supply is not limitless. In many areas, water is difficult to obtain. And as pointed out above, wasted water is wastewater, which must be treated at no small expense. One solution is to build more treatment plants. But this is very costly and does not get at the root of the problem. Instead, we must be more careful with our precious resource. By conserving water, using it wisely, and not polluting it, we can ensure a safe and adequate supply for the future.

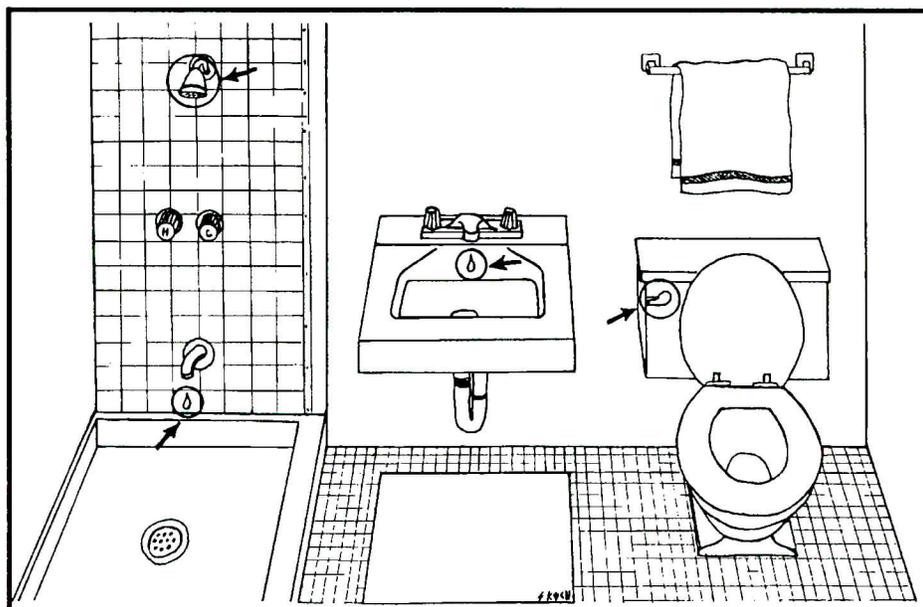
### Every Drop Counts!

#### How Much Water Do You Use?

We live in a country where finding clean water is not a daily difficulty. But this often leads us to take water for granted. To make you more aware of your water use habits, try this activity for an evening.

Fill two clean gallon jugs with water. This is your allowance for the night. Whenever you brush your teeth, drink a glass of water, or wash your hands, use only water from your jugs. Keep track of other uses as well--remember that flushing a toilet uses five gallons!

What do you think? Did this activity change how you use water? In what ways? How much water do you think you use in a regular day? Where can you cut back and save water?



## Water Conservation Around Your Home

By using less water yourself and helping others eliminate wasteful water practices, you can reduce the amount of water that must be treated by wastewater plants. This, in turn, will reduce water pollution and help restore the Sounds.

### Water Tips

- Don't let water run when you are brushing your teeth or washing dishes.
- Place a plastic jug filled with water in the toilet tank to reduce the amount of water flushed.
- Take a quick shower instead of a long bath.
- Make sure leaky faucets are repaired in your home and school. A steady drip can waste 20 gallons or more each day.
- Use the dishwasher and clothes washer only when they are full.
- While waiting for tap water to warm up, collect the cold water that flows and use it to water plants.

Illustrations by Sandra Koch