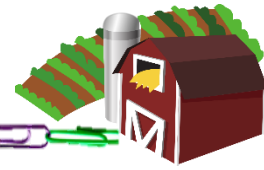


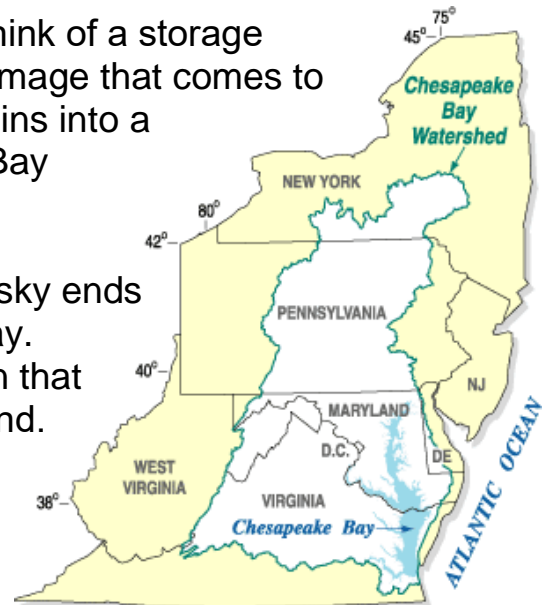


## Links to Agriculture Keeping the Watershed Well



When you hear the word “**watershed**” do you think of a storage building filled with water? For many of us, that is the image that comes to mind. A watershed is actually an area of land that drains into a particular body of water. We live in the Chesapeake Bay Watershed.

Every time it rains, the water that falls from the sky ends up eventually making its way into the Chesapeake Bay. Sometimes the rain comes down hard and fast. When that happens, the rain doesn't absorb slowly into the ground. Instead, it flows quickly across surfaces, often washing away **debris** such as soil, leaves and loose gravel. Raindrops that fall on pavement and other hard surfaces carry along oil, litter, and other **pollutants**.



For hundreds of years, humans didn't realize the **impact** they had on the quality of the Chesapeake Bay. They cut down trees and other plants along riverbeds. They used too many fertilizers. They didn't clean up animal waste. Fishermen would catch too many fish, crabs, and oysters without understanding how they were impacting the ecosystem. Eventually, they saw that the Bay was in trouble! Too many animals and plants were dying. People started coming together to help restore the Bay.

The quality of the Bay has begun to improve through education and enforcement of new laws. Farmers use **cover crops** with strong roots to keep soil or excess nutrients from running into the Bay. Areas along rivers and streams are planted with grasses and trees as a **buffer zone** to prevent runoff and erosion. Oyster farmers are helping to regrow the reefs. Restoration projects of all kinds are happening in schools and communities all over the watershed.

Bay water quality is regularly monitored for **pH** and **temperature**, as well as the amounts of dissolved oxygen, ammonia, and nitrates. A change in any of these could indicate trouble. Checking these numbers frequently allows people to correct problems sooner to minimize the effects on the Bay.

The Chesapeake Bay Watershed is our home. Remember that the next time you are feasting on crabs, shucking an oyster, or kayaking out on the river. We can all make a difference to keep the Bay healthy for generations to come!

## What Did You Learn?



- What is a watershed?

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- What happens to water that goes down a storm drain?

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- Name three things that are harmful to the Chesapeake Bay.

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- Name three things that are helpful to the Chesapeake Bay.

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- What is one thing that YOU can do to protect the watershed? List it and draw a small illustration to match.

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## Design-Your-Own Experiment!

### Modeling Bay Pollution



(Ask an adult for permission before beginning)

#### Materials:

- A small bowl or plastic container
- Water
- Spoon
- Choose 2-3 “pollutants” (vinegar, dish soap, salt, pepper, food coloring, shredded paper, grass clippings, soil, sand, coffee, or juice)
- Materials for filtering (your own ideas)

#### Steps to Follow:

1. Fill a small container half-full with water.
2. Choose 3-5 of the above items to “pollute” your water - just a few drops or sprinkles of each will do.
3. Stir to mix well.

#### Think About It:

- What has happened to your “Bay”?
- Do you think you might be able to remove the pollution?
- Which ones will be easy to remove?
- Do you think that the water quality (pH, dissolved oxygen, nitrates) have changed? Why or why not?

#### Solve It!

Now, try to design a filter of your own to help clean up the pollutants. What materials might you need? Search for options and try them out!



## Chesapeake Bay Facts

- The Chesapeake Bay is an **estuary**, a place where fresh water and salt water come together. This mixture is known as **brackish** water.
- The Chesapeake Bay watershed is more than 64,000 square miles and includes parts of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and Washington, D.C.!
- About one-half of the water in the Bay comes from the Atlantic Ocean. The rest comes from the more than 100,000 streams, creeks, and rivers in the watershed.

## Joke Time

What did the oyster say when he received a compliment?



**Joke Answer:**

!AwW Shucks!



## Did You Know?

*Natural Filters*

- Did you know that one adult oyster can filter up to 50 gallons of water in just one day? That's about the amount you use when taking a bath!
- Sea grasses and other plants both on the shore and in the water also act as natural filters. They're called SAV (submerged aquatic vegetation.)
- Not only does SAV absorb pollutants and prevent **erosion**, they also help produce oxygen and provide habitat for both aquatic and land animals.



For more agricultural education lessons and resources, visit:  
[www.maefonline.com](http://www.maefonline.com)