



NATIONAL AQUARIUM IN BALTIMORE.

Conservation Education Department
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Fast Facts

- ◆ The Chesapeake Bay is North America's largest estuary and the third largest in the world.
- ◆ About 16 million people live within the Chesapeake Bay watershed.
- ◆ The Bay holds 18 trillion gallons of water.

Key Terms

Watershed: An area of land whose water drains into a specific body of water.

Estuary: A semi-enclosed body of water composed of freshwater from rivers and streams as well as saltwater from the ocean.

Dead Zones: Areas too low in oxygen to "support" a healthy ecosystem.

Ask the Aquarium

Fact Sheets from the
Conservation Education Department

Chesapeake Bay

THE CHESAPEAKE BAY WATERSHED

The Chesapeake Bay watershed covers an astounding 64,000 square miles and includes six states and the District of Columbia. It begins in Cooperstown, New York and travels south into Virginia. There are more than 100,000 major rivers, streams, and creeks within the watershed. These bodies of water contribute freshwater to the bay while salt water from the Atlantic Ocean mixes to form an estuary.



THE IMPORTANCE OF THE BAY

The Chesapeake Bay serves humans, animals, and plant life alike. The estuarine ecosystem of the Chesapeake Bay is so rich in nutrients that over 3600 species of plants and animals call it home. Plant life flourishes in this habitat because runoff from the land often carries essential, natural nutrients for plant growth. Many fish, shellfish, and birds find the estuary to be an excellent location to raise young. In addition, many migratory birds find the Chesapeake Bay to be a good resting spot during migration trips. Humans also benefit greatly from the Bay. The bay provides mankind with about 500 million pounds of food per year and also serves as a transportation route for cargo ships. If the Bay is not properly maintained, plants, animals, and humans could suffer from the effects.

The word "Chesapeake" is derived from the Native American word "Tschiswapeki," which loosely translates into "great shellfish bay."

HABITATS OF THE WATERSHED

The Chesapeake Bay and its watershed offers a variety of habitats allowing for a diverse population of animals and plants. The Bay is filled with vegetation characteristic of an estuarine ecosystem including a variety of submerged aquatic vegetation. In addition, it is in the Bay's habitats that we can find animals such as the infamous blue crab, the American bald eagle, and the diamondback terrapin.

Riparian Forests

This habitat includes forests next to streams that act as sponges or filters. Riparian forests capture rainfall, reducing runoff and allowing for harmful chemicals to be filtered out of the water.

Organisms both in and out of the water benefit from the effects of riparian forests.

Islands

Islands in particular serve as a safe place for a variety of residential and migratory bird species. Some bird species found in the Chesapeake Bay region that utilize islands include, heron, osprey, and bald eagles. As the temperature of the earth increases, glaciers melt resulting in an increase in sea level. Unfortunately islands are quickly eroding due to this rise in sea level.

Freshwater Tributaries

Rivers, streams, and creeks make up this freshwater habitat which is especially essential for certain species of fish that live their adult lives in the salt water, but return to freshwater to spawn. Freshwater tributaries offer an excellent spawning ground for these fish species that include striped bass and Atlantic sturgeon.

Shallow Water

Shallow water offers a suitable habitat for many small invertebrates. This small invertebrate population serves as a food source for larger predators including certain species of bird, fish, and crab. In addition, animals find that the bay grasses that thrive in this habitat serve as an appropriate nursery ground for offspring.

The Chesapeake Bay offers a variety of habitats to a diversity of wildlife. If we do not take action to preserve this natural wonder we risk losing the habitats, plants and animals within the Chesapeake Bay watershed.

WHAT IS THE PROBLEM?

The 100,000 rivers, creeks, and streams that comprise the watershed often carry in them various pollutants that flow into the Bay. These pollutants enter the water when excess water cannot be absorbed by the soil. This excess is referred to as runoff. Runoff carries nutrients such as phosphorus and nitrogen, chemicals frequently found in fertilizers, as well as sediment. An abundance of these chemicals can cause algal blooms that block sunlight from submerged aquatic vegetation. In addition, excess sediment settles on the Bay floor, killing bottom dwelling organisms such as oysters. If the sediment remains suspended in water, it can also block sunlight from vegetation.

When sunlight is blocked due to algal blooms or sediment build up the vegetation is unable to carry out the process of photosynthesis. This leads to the death of many plant organisms. In addition, when the plants die valuable oxygen is used by bacteria for their decomposition. These two factors lead to areas with very low oxygen levels referred to as "dead zones". Unfortunately many areas of the Bay are now suffering from extremely low oxygen levels.

Other sources of pollution including pesticides, bacteria, and heavy metals are also negatively impacting the Bay. In 2006 the Chesapeake Bay Foundation's State of the Bay Report gave the Bay a health rating of a D.

HOW YOU CAN HELP!

In order to help protect the habitats of the Chesapeake Bay we must each do our part. Here are some ways you can help!

Reduce Your Nutrient Use
Try to use fertilizers sparingly. A good way to avoid using large amounts of fertilizer is by planting native plants. They do not require as much fertilizer or water. In addition, maintain your septic system to insure that it is working efficiently and properly.

Reduce The Use of Toxic Materials
Materials such as pesticides, anti-freeze, motor oil, and paint are toxic to animals and the environment. You can decrease pesticide use by employing alternative methods of pest control. For example, planting a variety of native plants will result in fewer pests. When dealing with toxic chemicals, be sure to dispose of them properly.

Get Involved
You can take action by involving yourself in efforts to restore the Bay. Organizations like the Chesapeake Bay Foundation, www.cbf.org, and the Alliance for the Chesapeake Bay, www.alliancechesbay.org, coordinate Bay clean-ups, tree plantings, and oyster restoration projects. In addition many states within the Chesapeake Bay watershed have organizations devoted to restoring the bay.

You can make a difference!

Please visit www.aqua.org for more information.