

Healthy Streams: the Chesapeake Bay's Salvation

When you think of the Chesapeake Bay's watershed, you might think only of Maryland, Virginia, Delaware, and the District of Columbia, but the network of streams and other fresh water sources is vaster. The entire Bay watershed encompasses 64,000 square miles stretching from New York to Virginia. Healthy streams play a critical role in the health of the Bay. A network of more than 100,000 freshwater streams, rivers, and creeks



<http://www.fws.gov/chesapeakebay/Newsletter/Summer05/Streams/streams.htm>

feed into the Bay where they mix with the salt water of the Atlantic Ocean to



create a diverse estuarine habitat. The quality of each source directly impacts the Bay's ecosystem. The image to the left demonstrates how far the fresh water sources travel.

How do you know a healthy stream?

Observation and measurement of the physical and biological attributes of a water system help us assess its quality. Physical characteristics include parameters, such as dissolved oxygen and turbidity (a measurement used to determine the clarity of the water). Biological communities can also be a useful indicator of a stream's health. Scientists have been using



macroinvertebrates to determine a stream's ability to support the community. Macroinvertebrates are invertebrate organisms that are large enough to see. Most macroinvertebrates are insect larvae, but the category also includes snails and crayfish. Macroinvertebrates are considered biological indicators. The types of



<http://rockfordsquire.com/2010/07/15/cannon-township-calls-for-stream-study-volunteers/>

macroinvertebrates present in a stream directly correlate to the stream's health, since some invertebrates are more sensitive to pollution than others. Also, macroinvertebrates are a food source for insects and animals alike. If the insects at the bottom of the food chain are doing well, they can support the larger and usually less sensitive vertebrates that consume them.

Do you have what it takes to be a stream monitor?

You can do your part to improve the health of local streams and *Save the Bay* by becoming a stream monitor. There are several organizations that support volunteers to monitor and track stream health. The *Audubon Naturalist Society's* (ANS) program sponsors training and monitoring events for volunteers throughout the DC Metropolitan area. *Blue Water Baltimore* sponsors a similar program in the Baltimore Metropolitan area called Adopt-a-Stream. Through the Adopt-a-Stream program, volunteers are trained to identify problems in their own backyard or neighborhood. Each volunteer is given a quarter mile section of stream to check for evidence of degradation of water quality. The two programs aim to meet the same goal: healthy streams, and, ultimately, a healthy Chesapeake Bay.

Visit the websites below for more information on monitoring programs.

<http://www.audubonnaturalist.org/default.asp?page=520>

<http://www.bluewaterbaltimore.org/the-waterkeeper/programs/water-quality-monitoring/adopt-a-stream/>

<http://www.cbf.org/page.aspx?pid=285>

<http://mddnr.chesapeakebay.net/eyesonthebay/index.cfm>

