NIH GREEN ZONE NEWSLETTER
The Newsletter of the NIH Environmental Management System

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The NIH Stream

One of the prominent features of the NIH Bethesda campus is the NIH Stream, which acts as a habitat for wildlife on campus while also serving as the main stormwater outlet. Since the NIH Stream connects to larger waterways after leaving campus, we must be very careful about the impact the stream could have on our surrounding community and all those downstream. Ensuring clean water in the NIH Stream is also crucial for maintaining the water quality standards set by the Clean Water Act. The Stormwater Management program within the Division of Environmental Protection diligently monitors the NIH Stream to maintain the health of this water outlet.

The NIH Stream begins near Building 21 and travels throughout the northeastern part of campus before eventually joining Rock Creek and the rest of the Chesapeake Bay Watershed (view the on-campus portion of the stream here). The NIH Stream receives water primarily from two sources: stormwater runoff from 210 acres of land across the Bethesda campus and from the discharge of water used for cooling by the NIH Central Utility Plant. The total daily volume of water through the stream averages 550,000 gallons in the summer and as low as 100,000 gallons in the winter.

The management of small water bodies, such as streams, creeks and rivers, plays a crucial role in determining the water quality of the larger water bodies they feed into. While pollution comes in many forms, the most common pollutant in rivers, streams and lakes is sediment.[1] Stream bed erosion causes sediment to be carried away in the flow of water and must be prevented to reduce sediment pollution. Soil erosion causes ecological damage in multiple ways, such as through blocking sunlight from penetrating water. This negatively affects underwater plants, which provide benefits like adding oxygen to water and holding down sediment.[2] Free sediment particles can also clog fish gills and make it harder for them to see and catch their food.[1] Additionally, sediment erosion contributes to more frequent flooding of waterways when sediment deposits to the stream bed and limits the retention volume of the waterway.[1]

In 2003, the NIH improved 2,300 feet of the on-campus stream (the length of 65 school buses). To do this, the NIH performed multiple "clean-up" actions, starting with removing unwanted debris. The banks of the stream were "armored" by adding boulders and by planting vegetation. Over 730 trees have been planted along the stream since 2003. Step pools were also created in the stream bed. These barriers help to slow the flow of water and reduce soil erosion, in addition to aerating water and promoting a healthy environment for aquatic life. The NIH Stream is now a much more attractive home to many local animal species and even houses herons and crawfish seasonally. As a result of this work, the NIH Stream is much more robust at preventing water pollution. The NIH Stream has been continuously maintained since these changes to ensure improved water quality.

The NIH Stream not only affects our campus, but also the entire watershed downstream. For this reason, we encourage everyone to take the personal responsibility to reduce pollution on campus whenever possible, such as through reporting hazardous spills or picking up trash on the ground. If you would like to see and enjoy a self-guided tour of the NIH Stream first-hand, read our "Take Action" article.

TAKE ACTION

Take Your Own Self-Guided Tour of the NIH Stream

Are you looking to experience nature on the Bethesda campus? Then take a self-guided nature walk along the NIH Stream! Inside we provide a route for the stream walk and a few points of interest along the way.

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EVENT

Earth Day Recap

Learn about the activities that were hosted across all NIH campuses for the 2019 Earth Day celebrations. We include lots of photos to help you experience the best parts of these Earth Day events!

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NEMS TRAINING

Did you know? The NIH Stream collects stormwater runoff from over 210 acres of land, representing the majority of the Bethesda campus. To learn more about stormwater management at the NIH, please visit the NEMS Training webpage to view a short (20 minute) NIH environmental awareness training video.